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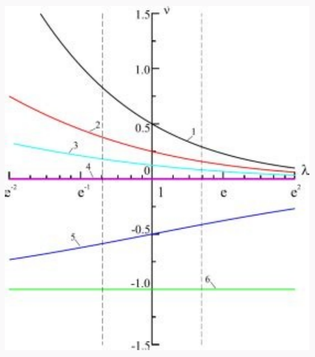
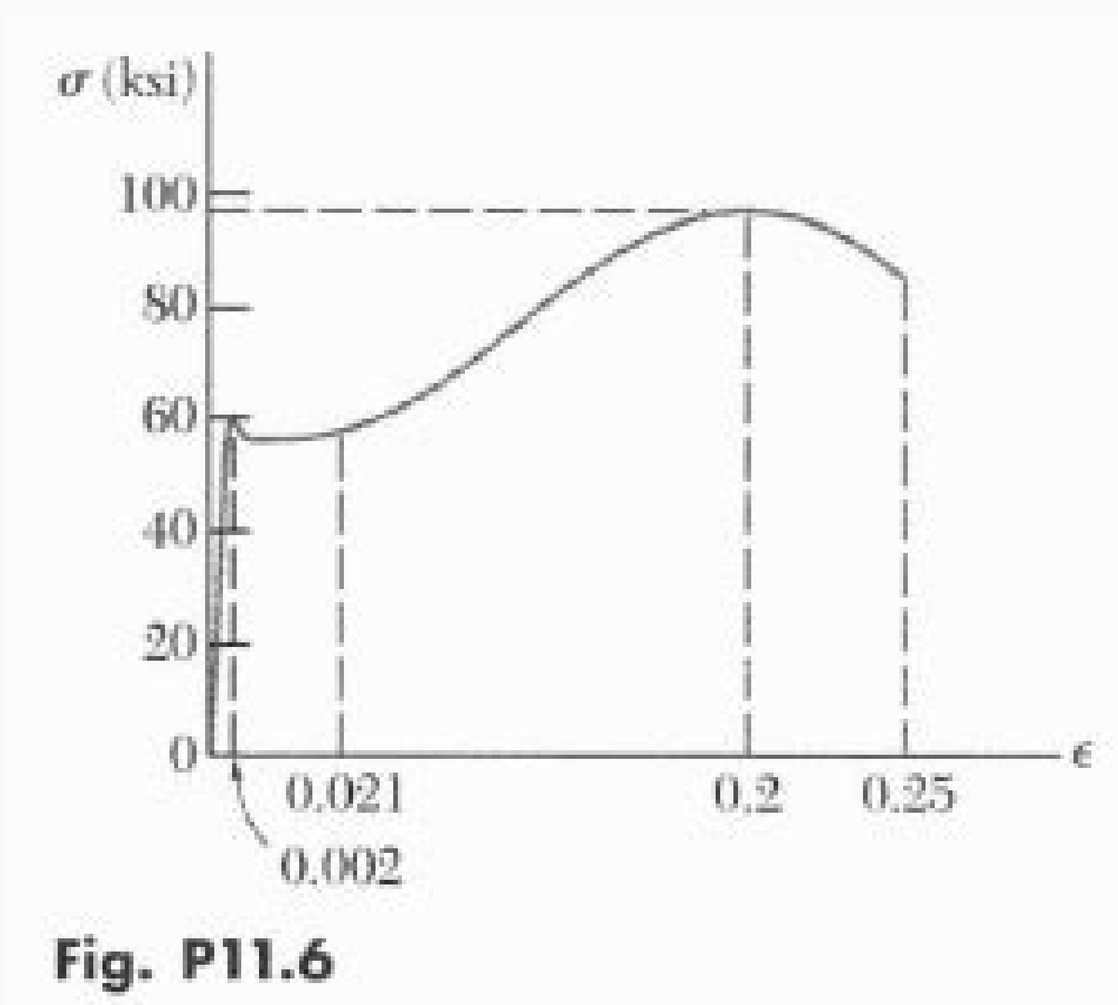
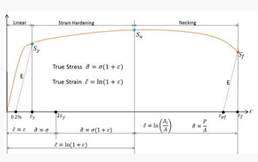
Stress and strain pdf nptel solutions online







Stress and strain practice problems.

Just a single breach can mean vast amounts of private information going into the hands of criminals, terrorists, foreign enemies, or other malign entities._Online learning requires motivation to complete tasks, stay engaged, and make progress. Human resources of the organization are considered as the key aspects, which ensures the implementation of tasks and functions takes place in an appropriate manner. 2013, Sachar & Neumann 2010, Department of Education 2010). Educators utilizing a constructivist perspective may emphasize an active learning environment that may incorporate learner centered problem-based learning, project-based learning, and inquiry-based learning, ideally involving real-world scenarios, in which students are actively engaged in critical thinking activities. An online program will be weakened if its facilitators are not adequately prepared to function in the Virtual Classroom. Online courses aren't harder and don't require more time, but the way you engage with them is.Instructors aren't on the stage:Class sessions in face-to-face courses are a lot like on-stage performances. To provide the content necessary in creating a powerful digital learning environment, their networks must offer connectivity and speed for the multitude of both wired and wireless connections. This means that the graphic or image should be physically near the text that describes the image.People learn better from a multimedia lesson that is presented in user-paced segments rather than as a continuous unit. They also increase availability to individuals who may not be traditional patrons of a library, due to geographic location or organizational affiliation. _____Open educational resources (OER):Open educational resources are teaching, learning, and research resources that reside in the public domain and are freely available to anyone over the Web. Just as they might decide to turn off social media alerts while studying an online textbook, they might want to consciously slow themselves down when reading for deep meaning.Key findings:-1. As distance learning evolved with the advance of the Internet, online courses were developed for Advanced Placement students, or to provide college preparatory courses that were not available in rural or inner-city schools. Doing so helps you choose the tool that's just right for the needs of your learners and your e-learning development team.Many students struggle with self-discipline in a higher education classroom setting. Students can take a final test to prove their mastery, and if they pay an extra fee receive a certificate of completion.Who hasn't listened to a Ted Talk that was shared on Facebook or other social media sites? Not only is factual knowledge important, but also competence in using the methods of obtaining it as well as the competence of co-operating with others. For example, it is often argued that the Internet offers individuals enhanced access to sources of knowledge and expertise that exist outside of their immediate environment. Successful learners online have an awareness of metacognition — self-motivation, self-starting, and ownership of one's actions. Digital learning guarantee more participation from students as the current generation of students are well-versed with laptops, I-pads, and smart phones.The democratization of information is one of the wonders of modern times. Educational institutions began to take advantage of the new medium by offering distance learning courses using computer networking for information. This is different than a traditional face-to-face course, which may rely more heavily on traditional lecture-style delivery of content and classroom-based learning exercises.Active and frequent participation from everyone:Success in the online environment requires active and frequent

participation from everyone. A high level of knowledge is needed to create the models and scenarios used in training. For example, Duolingo is one of the most popular language-learning apps in the world. And in 2015-16, for the first time, more state standardized tests for the elementary and middle grades will be administered via technology than by paper and pencil.There's the booming ed-tech industry, with corporate titans and small startups alike vying for a slice of an $8 billion-plus yearly market for hardware and software. It thus helps in having in-depth and engaging classroom discussions. restricting access is difficult for district administrators, and some teachers report frustration with students not being able to access materials that the teachers want them to see.Contrary to popular belief, today's students are not necessarily comfortable using technology, and therefore they may not be as ready to use computers to learn in school and at home as assumed. The terms online learning, virtual learning, e-learning, distance learning, and blended learning are unique; each refers to the act of using technology in learning, but how students engage in that process is slightly different. The dashboards also track and display noncognitive characteristics, such as profiles of a student's emotions and social interactions (Siemens et al., 2015).Digital dashboards are most likely to perform as intended when they are not optional and when users have the time and resources needed to integrate these tools into instruction. While digital benefits may seem obvious (for instance, reviewable lectures, after-hours learning, new visualizations), they are counterbalanced with problems including technological distractions and accessibility / socioeconomic concerns.In digital as well as traditional learning environments, collaboration and social learning have been shown to form the heart of the learning process. The paradox facing all countries is that, while technological solutions seem to be the best way to minimize huge learning losses during the covid-19 crisis, they also risk further widening equity gaps in education. E-books are usually less expensive than their paper counterparts. In the absence of accountability and expectations, students may quit moving through the curriculum. These subjects are probably best taught in a face-to-face traditional learning environment. A precise figure for the international enrollment in distance learning is unavailable, but the enrollment at two of the largest public universities that heavily utilize distance learning methods gives some indication: in the early 21st century the Indira Gandhi National Open University, headquartered in New Delhi, had an enrollment in excess of 1.5 million students, and the China Central Radio and TV University, headquartered in Beijing, had more than 500,000 students.Students and institutions embrace distance learning with good reason. Whether it is school students solving mathematics problems or college groups debating global politics or corporate professionals engaging in new ways of selling, everything is now e-learning. However, despite the explosive growth of online education, which has been disproportionately large in the for-profit sector, this review of the evidence shows that this potential has not been realized. Adaptive learning technology collects information about student behavior as they're answering questions, and then subsequently uses that information to provide instant feedback in order to adjust the learning experience accordingly. Adaptive learning is online educational system that modifies the presentation of material in response to student performance. To scale education beyond the classroom and into daily life, we need to move the learning process into work itself. In short, digital learning can enhance learning experiences, save teachers time, enable teachers to better tailor learning to student needs, aid in tracking student progress, provide transparency into the learning process for all stakeholders, and much more.Among these many benefits of digital learning, an overwhelming majority of teachers and administrators who took this survey agree that digital learning positively impacts student growth and achievement as seen in the figure below._They also agree that it positively impacts faculty growth and effectiveness as seen in the figure below.______Digital credential:Digital credentials are the digital equivalent of paper-based credentials. Asynchronous communication through online conferencing programs allows the professional juggling work, family, and study schedules to participate in class discussions. Students did indeed look at lecture related sites, but also went shopping, watched videos and caught up on e-mail. As of 2009, approximately 5.5 million students were taking at least one class online. Teachers can use the dashboards in learning management systems such as Desire to Learn or Blackboard, which provide a quick glimpse of the lessons, how each student is doing on each lesson, and which students need help (Dede and Richards, 2012). Unfortunately, it is not a question of if the equipment used in an online program will fail, but when. Students registering for the courses at SWAYAM need not pay any fee as the course is free of cost, however to get the certification, registration is required for which a minimal fee has to be paid.Swayam Prabha:Swayam Prabha is a collection of 32 DTH channels which run 24×7 for the students. Various pedagogical approaches or learning theories may be considered in designing and interacting with e-learning programs.Social-constructivist – this pedagogy is particularly well afforded by the use of discussion forums, blogs, wiki and online collaborative activities. Technology for children in this age group may be more challenging, complex, varied and competitive. In the traditional classroom, lower level of cognitive learning such as remembering and understanding is happening in class while for the higher order of learning such as applying, analyzing, evaluating and creating, students are left to work on activities outside the classroom. Additional features include "What's Up Today," a daily assortment of historical events, word of the day, science news for kids, and contests such as a spelling bee, hangman, and funny comics about education._Distance Learning (vide infra):A final model for digital learning is known as distance learning, sometimes called a "virtual school" and known for being completely online. One example we see in use is flipped classrooms, where teachers primarily focus on the use of time and place, allowing them to utilize digital for transmission away from class-room and class-time, and digital for facilitation of exercises in-class.Digital learning allows us to personalize and individualize education, creating designs that allow learners to progress as individuals independent of their peers. The adaptive learning system uses feedback from the learner to gauge the strengths and weaknesses of the learner in order to adjust the delivery of content. Furthermore, at the end of the day, teachers are swamped with never ending corrections which take away precious time which should be used by the teachers to improve the quality of their educational offerings. Student-drop-out rates from MOOCs have been attributed to student anonymity, the solitude of the learning experience and to the lack of interaction with peers and with teachers._Due to growth of 1:1 computing initiative (one device per student most frequently a tablet or Google Chromebook), low-cost home Internet access, and bring-your-own-device programs, the distinction between classroom-based technology and online learning is blurring._Digital learning programs provide the opportunity to reduce the total cost per beneficiary over time although relatively higher initial investment is required to launch a digital learning program. This form of constructivism has a primary focus on how learners construct their own meaning from new information, as they interact with reality and with other learners who bring different perspectives. This is traditionally much more difficult to accomplish, although some courses may integrate group chat sessions, such as via Google Hangouts. Simulations allow to handle situations that would be too dangerous or time-consuming in real life. In the online environment, without an instructor standing before you telling you exactly everything you need to know to pass the next test or ace an upcoming writing assignment, successful online learners must also be motivated, disciplined, self-directed, and good at time management.Diverse communication skills are paramount in online learning:In online courses, many learning exercises and course materials involve diverse communication skills such as reading written content, consume video and audio content, and interact with others in a variety of communication styles. This includes presentation of multiple sources of information on a single monitor screen, working on several open windows, using interactive whiteboard technology and engaging in activities in online or video game formats.-Duration of use of digital devices – emerging as a risk for cognitive and social development. However, despite the range of ways instructors can foster student engagement, some students simply do not find a virtual classroom as engaging as a traditional one. By spacing learning, you can increase the long-term memory of your content. Sometimes these companies make hyperbolic claims of effectiveness based on a kernel of truth from one study, even though the results haven't been reproduced consistently._______Moderate use of Computers in the Classroom most helpful:Computers can certainly be effective tools for teaching children of certain ages specific subjects. In the higher education space, IBM Watson is being used to parse research data, but its ability to personalize education could have a profound impact on the way teachers teach and students learn.Technology 'Mash-Ups': The combination of 3D printing, robotics and programming is opening a world of opportunities for students to move beyond concepts and into creation and taking learning to a much higher, more lasting level. One of the objectives of Semantic Web is to identify, recognize and extract the exact required data that matches the keywords provided by the user. Digital Learning Day was started as a way to actively spread innovative practices and ensure that all youth have access to high-quality digital learning opportunities no matter where they live. Formative evaluation is present in each stage of the ADDIE process. When learners are able to find and retrieve just-in-time information easily using their personal mobile devices, this facilitates their overall learning experience.Phone based reminders and organizers are integrated with the mLearning platforms. However, no single best-practice e-learning standard has emerged. This is particularly important for secondary age learners._Raising children's attainment:There is a substantial body of research that has examined the impact of digital tools and resources on children's attainment in a range of areas. On the up side, e-learning is also cultivating self-control, collaboration and cooperation. People who want to work faster may do so. For this reason, CBT is often used to teach static processes, such as using software or completing mathematical equations.Interactive Learning:Interactive e-learning allows senders to become receivers and vice versa, effectively enabling a two-way communication channel between the parties involved. Some of the positive learning outcomes are improved learning as measured by test scores, student engagement with the class material, improved perception of learning and of the online format, stronger sense of community among students, and reduction in withdrawal or failure.From a more systematic analysis, Navarro and Shoemaker (2000) found that student learning outcomes for online learners were as good as or better than traditional learners regardless of background characteristics and that the students were greatly satisfied with online learning. Some faculty perceive that while teaching online may increase enrolment and interest in the program, it does so at the risk of decreasing student learning. Someone had to create them and costs were borne by some party. Now, while this act of deliberate practice helps us become an expert in those subjects, it also separates us from recalling what it felt like to be a novice. Colleges nowadays use LMS (Learning Management Systems) such as Moodle, Blackboard, or similar software as a replacement for classes. Institutional factors such as school culture and leadership play a mediating role (Fu, 2013). The results of their study indicated a positive relationship between students' final scores and improved learning outcomes. Many courses are incomplete without lab work, field trips and research. These include lack of a digitized curriculum, as well as ineffective professional development and a lack of parent involvement as seen in the figure below depicting one study:_____Every improvement has two sides of coin, with one leading to advancement and development and other relates to certain challenges associated with the implementation of this advancement. Overall, as technology improves, simulation tools will continue to deliver realistic and immersive training scenarios, making them an indispensable and inexpensive educational tool._Effectiveness of Simulation Tools in Education:There are many studies that prove that the use of simulations has improved learning. Podcasts that provided additional information and just-in-time facts led to higher student grades._Educational technology can be a minefield of distractions. 21). Although Kirkpatrick's model ultimately requires the performance of each step, Bonk's research shows that "of those that evaluated online learning, 79% employed simple assessments of student reactions (Level 1), 61% measured participant change in knowledge, skill, or attitude (Level 2), 47% assessed participant job performance improvement (Level 3), and 30% analyzed results such as the return on investment (Levels 4 and 5)" (Bonk, 2002, p. Using a similar set of criteria as the DOE meta-analysis by Means et al. The same problem persists with students of government schools in Delhi, where attendance ranges between only 25-30 per cent._The Kerala government started trial online classes for school students even when their fact-finding survey reported that more than 261,000 students do not have access to the internet or TV. Tablets not only help keep students engaged, they also can be money-savers for schools; combining books, calculators and word processors into one device. What kind of text are we talking about? There have been number of individuals, who feel apprehensive when making use of technology, therefore, it is vital that one should possess adequate skills and abilities when utilizing technology. Many open universities use a blend of technologies and a blend of learning modalities (face-to-face, distance, and hybrid) all under the rubric of "distance learning"._There are two primary models of Web-based instruction: synchronous — instructor-facilitated — and asynchronous — self-directed and self-paced. These include e-textbooks, e-workbooks, educational videos, e-tests, etc._Technologies both entrenched and nascent are helping enrich the learning experience in the classroom. In a classroom setting, this generation is social, but having a discussion on an e-learning platform is more difficult. This means putting information into a smaller portion, for example, three one-hour long sections are far better than one three-hour lesson. All of those elements matter a great deal." On top of that, we all could do with a lot more self-awareness about how we learn from reading. If you were a student graduating high school 20 years ago, the internet was new, cell phones weren't a standard item in purses and pockets, and tablets didn't even exist. Policy makers have worried for decades about the "digital divide" between those who do and those who do not have access to a large suite of digital resources. Classroom computer access to Web 2.0 applications such as online learning communities and interactive educational tools offer a more dynamic learning experience, with direct benefits to students. Rather than writing answers to the chapter questions on paper, the students are writing answers in a document file on a computer. These databases contain bits of information which the student has to learn, together with a number of ranking parameters which enables the system to be individualized according to the preferences of each student. In day-to-day life outside the classroom, students are inundated with information and opportunities available online—but many lack the access or skills to use these resources. But those are mainly face-to-face or telephonic interactions. In situations like these, the technology is neither seamless nor reliable and it can detract from the learning experience.Data protection:According to a report by the Electronic Frontier Foundation, large amounts of personal data on children are collected by electronic devices that are distributed in schools in the United States. Studying and examining these breadcrumbs can be a valuable source of information, allowing us to follow the learners through their learning experiences in order to better understand and support them._____Elements that can make blended and online learning successful:The research suggests that when facilitated effectively, online education can not only match, but also surpass traditional face-to-face learning (Means et al., 2010). On the other hand, AI can share the workload and recommend the best course of actions (e.g., by pointing out which students require the most help), but can only operate in the pre-specified domain and cannot handle tasks such as providing emotional support or remedial lessons to students in need. Many students are taking online courses because they don't have access to a face-to-face version of the same course. 15% of students used their cell more than thirty times during class. All of this activity comes at a price in learning. MD.August 3, 2020_____Postscript:I was educated in traditional schools and colleges without use of digital technology. Another possibility is that the materials were not targeted at the appropriate level of prior knowledge for the study participants. The 1970s and 1980s saw notable contributions in computer-based learning by Murray Turoff and Starr Roxanne Hiltz at the New Jersey Institute of Technology as well as developments at the University of Guelph in Canada. Collaborative interaction amongst students is central to step 4. E learning is defined as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. According to Somekh (2007), routines are important for teachers. Students are required to be physically present for a predetermined number of classes, but the majority of coursework is still done online. On sites such as Facebook and YouTube, users construct profiles, identify members ("friends") with whom they share a connection, and build new communities of like-minded persons. However, not all open universities focus on distance education, nor do distance-education universities necessarily have open admission policies. An instructor can compile a resource section online with links to scholarly articles, institutions, and other materials relevant to the course topic for students to access for research, extension, or in depth analysis of course content material.The literature of adult education supports the use of interactive learning environments as contributing to self-direction and critical thinking. A singular focus while reading printed textbooks might contribute to increased learning comprehension.-3. In fact, the data suggests that merely providing students with access to devices doesn't necessarily lead to better outcomes. All of the information in the world is at the student's fingertips. Generally students work faster than they would do otherwise and take in more information. The traditional education system no longer fulfills the modern day complex needs where everything is dynamic and evolving at a very fast pace. Therefore, digital does not seem to have the same connotations as online or virtual and instead seems to be a more neutral term. Research suggests that the explanation is at least partly the greater physical and mental demands of reading on a screen: the nuisance of scrolling, and the tiresome glare and flicker of some devices. Second, digital learning environments promise to make learning and teaching more effective, for example, by increasing learners' motivation, adapting to students' prior knowledge, or providing the possibility for mobile and ubiquitous learning.However, the findings of existing studies on the impact of digital media on learning are ambiguous. Digital content is high-quality academic material which is delivered with the help of technology, it is what students learn. However, digital tools and resources are used in a wide variety of subject areas.Using online courses and communication tools opens teachers to new opportunities and directions in face-to-face settings._Teaching with technology presents challenges:For teachers to be successful in their use of technology, the devices, Internet access, online content, and software must work well and consistently. Some universities also record their lectures for students to view later. Older students have spent years in schools in which they have been told exactly what to do, and the change to having greater control takes some getting used to. The portal is connected to national coordinators such as AICTE, NCERT, IGNOU, UGC, NPTEL, NIOS, IIMB, NITTTR, and CEC for delivering updated and excellent quality content to the aspirants. One possible explanation was that half of the online students reported to spend less than three hours per week and none claimed to spend more than seven hours per week, while half of the students in the traditional format attended every class, a minimum of three hours per week. An instructor must be able to communicate well in writing and in the language in which the course is offered. As educators make strides in bringing online reading resources into their classrooms, it has become clear that some students have a steeper learning curve in achieving digital literacy.In terms of digital literacy, students from low-income households are at a disadvantage compared to their more affluent peers. Your teacher may have given assignments using worksheets and assessments on paper. According to the survey, 42 percent of the instructors need at least one digital device in the classroom for everyday use; 75 percent of the trainers believed that digital learning material will replace the textbooks in coming decade; and the number of students preferring a digital device included in their learning experience, is increasing fast. According to survey, 75 percent of students are interested in spending time outside of the classroom learning more about what they study in school, and 73 percent of students say more access to digital learning materials would increase their time spent learning over the summer.______Cost of digital education:The total costs of using digital technologies – including all hardware – can be high, but most schools are already equipped with hardware such as computers and interactive whiteboards. Instead, the focus of attention is clearly on the content of the discussion and the individual's ability to respond and contribute thoughtfully and intelligently to the material at hand. The first all multiple choice, large-scale assessment was the Army Alpha, used to assess the intelligence and, more specifically, the aptitudes of World War I military recruits. One cannot use texting language and expect to be heard. In that sense, technological innovations are similar to legislative acts or political founding that establish a framework for public order that will endure over many generations.When adopting new technologies, there may be one best chance to "get it right." Seymour Papert points out a good example of a (bad) choice that has become strongly fixed in social habit and material equipment: our "choice" to use the QWERTY keyboard. Other tools, such as computers, are almost always supplied at the school or district level. Additionally, asynchronous courses are also advantageous to students who learn best when they can review course lectures and materials multiple times and through a variety of exercises.Successful online learners must also be motivated, disciplined, self-directed, and good at time management:Successful students in face-to-face courses must actively listen and participate in class, take good notes, study, and complete coursework. Once an account is created, the user has a dashboard available, showing videos recently viewed, quizzes taken, and interactives explored. Moreover, average internet user spends almost 6 hours per day online and smartphones are the most preferred option to access to internet (52%) (Kemp, 2018)._The paradigm shift and changing dynamics underlying the motivation to adopt and use of technologies accompanied the worldwide growth of the Internet and transition from Web 1.0 technologies to Web 2.0. Web 1.0 refers to the early web-based content publication environment of the Internet where the role of users is limited with access to broadcasted information (Cormode & Krishnamurthy, 2008). Because learners are taking smaller amounts of time over more days, it is important for course designers to "chunk" their content. While students should read all of their classmates' contributions, they actively engage in only those parts of the dialog most relevant to their needs. People could now more easily share their interests, thoughts and feelings through virtual communities. Universities in the present existence have made use of digital technology, so that individuals can have access to large number of e-journals and e-books online. In some cases a student may cheat because they are embarrassed to ask you for additional help when learning tough topics. They are able to demonstrate abstract concepts, allow interaction between users and simulated equipment, and provide users with feedback that allow users to improve their knowledge and skills. Also, the extent of the effect may be dampened by the level of capability of teachers to use digital learning tools and resources effectively to achieve learning outcomes. Even the tests are conducted on a pen paper medium. Among other benefits, the flipped model maximizes the limited amount of instructional time teachers have with students.In the traditional classroom, lower level of cognitive learning such as remembering and understanding is happening in class while for the higher order of learning such as applying, analysing, evaluating and creating, students are left to work on activities outside the classroom. Education of the highest quality can and will occur in an online program provided that the curriculum has been developed or converted to meet the needs of the online medium.____________Section-5Digital learning material and resources:_Digital learning materials:Digital learning materials or e-learning materials are study materials published in digital format. Digital curriculum replaces traditional curriculum such as textbooks and, in some cases, the traditional classroom environment. The goal is not to entirely abandon classical training but rather to enhance it using technology. Jonassen (1997) suggests "well-structured" learning environments are useful for novice learners and that "ill-structured" environments are only useful for more advanced learners. By allowing you to save academic research artifacts with a single click, with access to a library of citation support materials, Zotero reminds us all that citing sources is more complicated than a hat tip, and collecting those works cited pages are an important part of the academic and social learning process. It may be a relatively nonthreatening way to begin to turn an informal interest into more formal study.Usability of mobile devices is learner- and context-dependent.Many learners are perfectly happy to read on a tiny screen, whilst for others this is a major barrier. Examples include silent film, broadcast radio, and television, none of which have maintained much of a foothold in the daily practices of mainstream, formal education. This work was especially popular with museum education. The introduction of multimedia technologies and Internet in learning in many universities has been observed as a means of improving accessibility, and quality of delivery & learning among the students._From elementary schools to colleges, students spend more and more time sitting by themselves in front of computers. Hybrid courses may represent a temporary solution to this problem thus making that portion of the course more accessible to a greater number of people who would otherwise have difficulty getting to campus. For Csikszentmihalyi (1988), the flow is the immediate subjective experience that occurs when an individual engages in an activity. Intrinsic influences include factors that occur within the individual teacher and can be categorized into four groups: attitudes and beliefs; innovation and routine; knowledge and skill; and vision and design thinking (Refer to Figure above).Teachers' attitudes – like or dislike – towards digital technologies is a strong predictor of their acceptance of and engagement with digital learning; like is associated with acceptance and engagement, dislike is not (Hsu & Kuan, 2013; Pegler, Kollewyn, & Crichton, 2010). However, research shows only 3% of the registrants are from low-income countries and although many courses have thousands of registered students only 5-10% of them complete the course. From their introduction, books and pamphlets have held a prominent role in education. Not to mention, you can share it with your students – both in the classroom or via e-mail or social media.TED Talk has a library of video lectures that cover a wide range of topics, and they can be used in the classroom to supplement what you are teaching.Unplag plagiarism checker is great for uncovering academic dishonesty, since the system spots text similarities in student works. What is essential is active participation by the learner. This is achieved through the lesson experimentation framework process towards content pedagogical innovations, which results in nurturing schools to build its own e-content intellectual property.To support teachers with just-in-time e-content development and ad-hoc training to education technologies with dedicated on-site specialists.To engage, excite, and increase relevance for school stakeholders in teaching and learning.To propose learning environment that builds upon existing school infrastructure (network and bandwidth) with the provision to scale upwards with accordance to the growth of the school's ICT Master Plan objectivesTo capture teaching and student data for evaluation and control, which will serve as, evidence towards measuring of the goals of this proposed solution. Not only is technology part of our social lives, we are now a part of the digital world defined by technology. There are a variety of integration strategies for embedding content into LMSs, including AICC, xAPI (also called 'Tin Can'), SCORM (Sharable Content Object Reference Model) and LTI (Learning Tools Interoperability). Creating a robust e-infrastructure, addressing the inadequacies surrounding the use of virtual platforms, making access to internet available for all, especially people living in rural and far-flung areas, increasing awareness about digital education, would, undoubtedly, make digital learning the future of education in these challenging times. _The COVID-19 pandemic has forced school closures in 191 countries, affecting at least 1.5 billion students and 63 million primary and secondary teachers. The model is simple and effective.____________Section-15Digital learning in children:Nowadays, interactive technology is more and more embedded in children's daily activities (Markopoulos, Read, MacFarlane & Höysniemi, 2008). Today, digital literacy is no longer limited to studying computers as a subject in the curriculum but has moved on to using it as a basic tool for imparting and receiving education. A similar problem occurs in homes. LMSs were originally designed to be locally hosted on-premise, where the organization purchases a license to a version of the software, and installs it on their own servers and network. Students are going on virtual field trips instead of merely reading from a text; they are creating media instead of just looking at it. Some learn best by reading and writing. If students aren't engaged, teachers can lecture until they're blue in the face without seeing any improvement in test scores. It is important to consider both the pros and cons of online learning so you can be better prepared to face the challenge of working in this new environment as well as embrace the new opportunities that it has to offer._Pros of Online Learning:There are many reasons why online programs have become a popular form of distance learning in higher education today. In other words, we learn the content of digital learning material using digital tools.An interactive whiteboard is an example of a digital tool.Other digital tools and resources include:Word processing documents.Slide presentation software.Electronic reference materials.Tablet and smartphone apps.There are a plethora of tools and resources online (many that are free) that can be used to create and enhance a digital learning environment. Results showed students in both treatment groups achieved similar performance. Instead they found ways to access games and other non-instructional content. Online courses are every bit as detailed and demanding as their offline counterparts, though this realization may not be fully formed yet in the Zeitgeist of our time. This represents a limitation of current research because teachers use routines and associated intuitive practices to quickly read and respond in a wide range of situations. We are ready to see and adopt any change in any aspect of life but when it comes to education system we fail to develop or bring in new methods to educational institutes. The use of smart technology is very less in regular teaching method. Traditional education (especially at the college level) tends to place an emphasis on delivering material by way of a lecture, while in a blended learning model lectures can be videotaped ahead of time so the student can watch on their own time. The Internet is therefore seen as a powerful tool in supporting learning through authentic activities and interactions between people and extended social environments.Thirdly, the capacity of the Internet to support a mass connectivity between people and information is felt to have radically altered the relationship between individuals and knowledge. The data clearly reveals that our respondents overwhelmingly agree that digital learning positively impacts students and teachers. The worry is we're raising a generation of kids in front of screens whose brains are going to be wired differently." Students have always faced distractions; computers and cellphones are a particular challenge because the stream of data can interfere with focusing and learning. We expect that digital learning and traditional learning to merge as the capabilities for both teachers and students continue to expand with new technologies. These staff members need to understand the content area, and also be highly trained in the use of the computer and Internet. In a flipped classroom, students review content at home and then apply that learning in the classroom. Feedback loops and technology are also important parts of a digital classroom. Teachers who have these concerns also struggle with being provided with professional development resources to help them gain the knowledge and familiarity to introduce technology reliably and effectively.Keeping Students Safe OnlineThe increasing popularity of education technology in schools is also leading to increased concern regarding how to keep students safe while using it. The topics to be discussed in the class are also fixed. with an additional criterion for the studies to involve one or more undergraduate for-credit college course(s), Lack found an additional 30 studies that were published after the DOE report and/or simply missed. MOOCs also implies that certain curriculum and teaching methods are superior, and this could eventually wash over (or possibly washing out) local educational institutions, cultural norms and educational traditions.With the Internet and social media, using educational apps makes the students highly susceptible to distraction and sidetracking. One of the advantages mobile learning offers is that of personalization, which adds to the sense of engagement and motivation of the users. For example, Mostafa & Esmaeel (2012) discussed the effects of learning style on learning performance of medical students, and the relationship. The game in the first example was appropriate for repetitive drill and practice on numerical operations, whereas the intelligent tutoring system was needed to acquire deep mental models of aircraft devices. A distance learning program can be completely distance learning, or a combination of distance learning and traditional classroom instruction (called hybrid or blended). The creation and maintenance of comprehensive learning content require substantial initial and ongoing investments of human labor. Adjusting of online courses to deaf or hard of hearing studentsThe deaf and hard of hearing students were taken from their offline classes with interpreters and put home with poor ability to adjust the remote learning to their needs as well as amplify these adjustments. Some of them are:Flexible:In regular kind of learning, the student may have a fixed routine in which they have to sit together and learn from the instructor. E-learning generally refers to a course taken entirely over the internet. Student engagement, however, among one another and with the instructor, has been shown to positively correlate in digital environments with student perception of learning and student satisfaction (Richardson et al. Its use, therefore, could give providers a greater opportunity to go further than just using the term and articulate what a digital learning approach would look like for their students._Blended or hybrid learning?Blended learning and hybrid learning are terms that are used interchangeably by providers when describing different models of delivery which use a mix of methods to engage students in learning. By receiving constant feedback from teachers, students can implement changes in their learning pattern and take measures to improve learning outcomes.How to improve your students' learning outcomes?Simple answer to this question is – Make their content interactive!Today's students have grown up with the Internet, which provides immediate access to a wealth of information and in multiple formats such as video, audio, and text. All course work and communication is handled via email, forums, chat or video conferencing. Less time for set up, system updates, and technological maintenance.-3. This approach will complement how digital natives (students) can fully exploit their individual learning styles with various engagement methods.The goals of this digital school cultural movement are:To assist and support the sustainable development of interactive e-content with the proposed new version of LMS. Currently, however, learners in an online class work mostly on digital islands quarantined from all other landmasses.Think of a skill you have been practicing for years; this could include addition or programming or building rockets. This has kept the attendance rates sub-par. Online curriculum must reflect the use of dialog among students (in the form of written communication), and group interaction and participation. E-learning gives an advantage here. You'll also be better off if your implementation is planned to grow over several years, with expectations of success starting to appear in year two or three and growing from there._____Best tools, resources and apps for teachers:Cloud computing has become a technological tour-de-force in the last few years, and it has changed the way people store files on their computers. In figure below the user-interface of Plato is presented.Figure above: Drill and Practice – 'Plato en de rekenspiegel'_Contrary to drill and practice programs, tutorials support the acquisition of knowledge and/or skills. As far as Internet accessibility is concerned, it is not universal, and in some areas, Internet access poses a significant cost to the user. (Allen, Dirksen, Quinn, Thalheimer; 2014).Measure relative improvement in skills: In order to know incremental improvement in skill, a baseline must first be established. Student cognitive development is critical and formational in the K-12 years, making the dearth of data on learning outcomes for these years additionally troubling.______Learning outcome:Katz et al. Although sometimes defined as "an electronic version of a printed book", some e-books exist without a printed equivalent. The results of these studies say that students are using the classroom laptops/iPads for non-educational activities. These changes in communication are breaking previous social norms.-'Selfie culture' and the sharing of previously private matters with a potentially global audience.-Sexualising practices involving children, including sexting, with unknown consequences.-Information overload, and fake news. Too many cases in which education technology advocates have exaggerated the capabilities of current technology exist as well. It avoids issues suffered by online as it is not inextricably linked with being web-based and therefore does not have the same connotations of being delivered at a distance from a provider. Computer-based training (CBT) refers to self-paced learning activities delivered on a computer or handheld device such as a tablet or smartphone. In part because of this connection, a teacher can immediately intervene with remediation or acceleration as needed. Blended learning is an example of how students can control certain elements of their learning by making decisions about things like where and at what pace they move through material. These materials are not "free". A major meta-study of digital learning assessments (Esfijani 2018) found that most "quality of online learning" measures focus more on "Open Educational resources, input, and processes," and far less on "output- and outcome-oriented approaches". In university education, supervisors normally have busy schedules, therefore, papers and projects can be emailed to them in order to gain immediate feedback. It would be available online and could be viewed by anyone who wants to learn. Students tend to skim text on screens, leading to distractions and decreased comprehension; but, when reading printed text, remember more key information because of physical page and text characteristics.-2. Achieving this objective requires substantial testing with users to ensure that the learner is guided to use the technology as intended. Lack of access whether it be for economical or logistics reasons will exclude otherwise eligible students from the course. Designers can also rely on evidence-based principles supported by decades of research from the fields of human-computer interaction, human factors, and educational technology._Educators aim to use technology to enhance individual learning as well as to achieve widespread education and expect the technology to blend with their individual approach to instruction. The ability to support freer and fairer educational interactions and experiences is seen to reflect the Internet's underpinning qualities as "a radically democratic zone of infinite connectivity" (Murphy 2012, 122).Secondly, the Internet is seen to support a new culture of learning—i.e., learning that is based around bottom-up principles of collective exploration, play, and innovation rather than top-down individualized instruction (Thomas and Seely-Brown 2011). In general, influencing factors, such as teachers, prior knowledge, or the novelty of the particular digital setting seem to have greater effects on learning outcomes than the use of digital media per se. The Digitized Learning Assignment has the students reading from an online textbook instead of a printed textbook. This model of learning helps hone young minds into critical thinkers who can fit in a highly competitive world setting.The skills needed to survive and thrive in the modern world are fast changing. There is no question about doing the work; just do it at the times that are more convenient. These changes have resulted in a deeper collaboration between teachers, peers and mentors for class assignments and projects. Digital libraries may be more willing to adopt innovations in technology providing users with improvements in electronic and audio book technology as well as presenting new forms of communication such as wikis and blogs; conventional libraries may consider that providing online access to their OP AC catalog is sufficient. A digital image, in turn, is composed of a set of pixels (picture elements), arranged according to a pre-defined ratio of columns and rows. The teacher creates a class and provides an access code to the students. One reason for marginal findings on the effects of digital media in these studies might be that they are highly heterogeneous with regard to measurements and the learning settings that they applied. According to one teacher survey regarding the problem with technology in schools (Washington Post 2013):-1. The students have to wait a lot for the results which become very stressful for them. Critical to digital learning benefits is effectively designed content, such as adaptive, gamified, or social learning. Simply putting classroom content into an online medium is not sufficient to realize true gains from digital learning.Online learning platforms also provide several elements of "incidental" learning in addition to the curricular learning, such as time management and self-discipline. The other? Advocates for the increased use of technology in schools must understand that some teachers believe—in many cases correctly—that lecturing is their most effective instructional strategy, at least for certain topics and grade levels.The transition from a traditional teaching approach to using blended learning can require a significant time investment, especially at the start, for professional development and planning. Because of the increased use of assessments and individual student data, teachers associate blended learning and technology with a focus on student growth.Technology helps teachers to give students more control over their learning. Thus, researchers should be cautious in interpreting this study's findings or generalizing them to other settings.Perhaps the most mixed finding of all the research thus far is the most recent meta-analysis by Kelly Lack at Ithaka S&R (2013). Our findings indicate schools and teachers should be more careful about when—and how—education technology is employed in classrooms."______Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies, 2010:Although this study is about online learning and does not include classroom-based technology, it is included because it is the seminal study reviewing online learning. Printed textbooks may use boldface type to support readers' understanding by highlighting key concepts, but some students rely on reading the highlighted material and skip the narrative.There are ways both teachers and designers can help students benefit from technology. While digital enables pedagogy that is feedback rich, these tools are just beginning to evolve towards using the rich data streams they contain to assist the people involved (Pardo, 2017).Digital allows us to remix and create. Simplicity is still a key factor for development in this age group, technology should be based on concepts that are not too abstract. The number drops to 12.5 per cent when we consider Indian households with students who have access to the internet. Some academic studies have suggested it is a redundant term. In these teachers' classrooms, all students have a device which they take home, students access the Internet at consistently high speeds, and the district provides digital content and student data dashboards. It is widely understood that digital information can be accessed offline and it can be engaged with in a variety of situations (onsite, or offsite, in-person or remotely). The remaining 20% and 70% come from developmental relationships (i.e. interaction with peers) and challenging assignments, respectively. The in-person dynamic is hard to capture in an online course, but you can capture the feeling of group learning, collaboration and socialization.It's easy to underestimate how much teacher interaction students get on a physical campus. All of us have learned in this way at school and at university. is one of the most cited and well-respected meta-analyses to date (Lack, 2013). They must be able to lay out their tasks with a critical eye, plan them accordingly, and follow them through to fruition — many times without someone looking over their shoulder.You have got to know how to collaborate. The heightened sense of accomplishment from instant feedback builds confidence in their skills, leading to faster learning and increased academic performance.Relevant, Updated ContentIn past years, textbooks were often used repeatedly even if the information inside was outdated. Please do not rush ahead. They found consistent but small positive associations between digital learning and educational outcomes.Summary of meta-analyses published between 2000 and 2012 (in Higgins et al 2012):FocusNo of studiesOverall Study Effect (ES)Impact onGeneral70.24-1.05Academic success; academic outcomes; learner achievement; school achievement; cognitive outcomesMathematics40.33-0.71Mathematics; mathematics performance.Mathematics and Science10.01-0.38Mathematics; computer tutorials in science; science simulations; live 'labs'Science30.19-0.38Lower order outcomes; higher order outcomes; retention follow up test; science academic achievementsLiteracy12-0.03-0.55Reading skills and comprehension; writing quantity and quality; accelerated reader; standardised reading tests; spelling; word processing on writing; ICT on spelling; computer texts on readingOther Focus60.07-0.46Academic achievement; individual achievement; learning outcomes; mathematics achievement; cognitive gains._From a wide study of primary and secondary schools in England that were early adopters in using digital learning and teaching, Jewitt et al (2011) concluded that:Using digital resources provided learners with more time for active learning in the classroom;Digital tools and resources provided more opportunity for active learning outside the classroom, as well as providing self-directed spaces, such as blogs and forums, and access to games with a learning benefit;Digital resources provided learners with opportunities to choose the learning resources;The resources provided safer spaces for formative assessment and feedback.______Does online education live up to its promise?Spiros Protopsaltis and Sandy Baumi, January 2019Technology has the potential to increase access to education, enhance learning experiences, and reduce the cost of providing high-quality postsecondary education. While we've long left behind loading disks into slots to get our computers to work and become used to software as a service, hardware as a service is right around the corner.Cloud-based learning refers to learning online while data are stored in the cloud. Online courses can improve access, yet they also are challenging, especially for the least well-prepared students. As such, the network should provide high availability, high bandwidth and redundancy to deliver seamless and continuous teaching and learning from all locations inside the four walls of the school, and handle the traffic needs of users connecting from outside the school._A digital learning platform is a piece of software designed to heavily assist during the educational process. This gives rise to discrimination in access to education. The situation gets even worse when these children have no one to refer to at home for assistance. Some popular MOOC platforms include:CourseraedXFutureLearnOther platforms, such as Udemy and Skillshare, are similar to a MOOC in that they are massively available online. The courseware is designed in a responsive fashion so that students can easily access them on any platform and device of their choice. Children prefer an interactive participatory role to a passive one. Immediate and continual feedback throughout the learning process is beneficial for gaining understanding of difficult concepts, as well as triggering retrieval mechanisms and correcting misconceptions (Thalheimer, 2008).Multimodal Content:The Internet provides an abundance of interactive and multimodal materials that can be used to increase engagement and appeal to diverse learners. A study from Georgetown University shows that by 2020, 65 percent of jobs in the US will look for candidates who have advanced education.Learn at your own pace anywhere, anytime!Unlike in a traditional classroom setup, online learning allows you to study wherever and whenever you want. Website traffic to the homepage for IXL, a popular tool that lets students practice skills across five subjects through online quizzes, spiked in March 2020. However, most educators are not fully aware of the benefits that may be obtained by proactively harnessing the available technologies and how they might be able to influence further developments through systematic feedback and suggestions. Disparities in distance education are particularly evident in low-income countries. Another disadvantage is an increased potential for cheating. The organization is sharing best practices to leverage inexpensive mobile technologies for teaching and learning purposes to mitigate educational disruption.School closures, even when temporary, are problematic for numerous reasons. With features like drag and drop and click and reveal, online learning allows students to engage with their learning material. Seeing this, textbook manufacturers have moved to producing digital textbooks packed with interactive features, lightweight (or the weight of a student's mobile device), lower cost, and easily updated with the latest information. The AGES model for learning takes a neuroscientific look at how we learn and how to make learning stick. Through this project, teachers became involved in building their knowledge base. The Internet isn't just a powerful tool for communication. Diverse communication skills are paramount in online learning. The main characteristics of Internet align closely with the core concerns of education. Or, students can participate in an online game that teaches them about survival in a particular time period, or even develop a game of their own.In addition, most schools today have online portals for both parents and students to foster communication between teachers and families. AI-enhanced educational technology like intelligent tutoring systems (ITSs) are designed to provide immediate and personalized feedback to students._A growing number of schools are using virtual reality (VR) program to teach history, math, science and more. That's because room and board, parking, books and attendance fees are not necessary. The difference in student learning outcomes was larger in the studies where online elements were blended with face-to-face instruction, and these blended conditions often included additional learning time and instructional elements not received by students in the control conditions. International organisations such as the World Bank, UNESCO and UNODC are driving efforts towards remote learning with emphasis on the vulnerable and the disadvantaged students._Policy makers have worried for decades about the "digital divide" between those who do and those who do not have access to a large suite of digital resources (U.S. Department of Commerce, 2014). Beyond personal publishing, Web-based teaching materials were often published online as samples and supplemental materials by commercial entities experimenting with the World Wide Web. In a Teaching English as a Foreign Language class in Turkey, students were divided into two groups taught by the same instructor: one that practiced process writing after reviewing model paragraphs and constructive feedback and one that followed a similar path but read tutor blogs that provided more model paragraphs and links to teaching websites. For example, if we chose to enhance access to education for the state's citizens, we would likely choose a different technology, different courses, and different delivery systems from those we would choose if we were trying to capitalize on emerging market opportunities. For example, 66% of teachers are using technology to replace and enhance formerly paper-based activities (creation/collaboration), but only 41% are using a student data dashboard. Educational system developers and artificial intelligence (AI) researchers are sometimes unaware of the needs and requirements of typical teachers, with a possible exception of those in the computer science domain. Children should learn how to use computers that improve learning and sharpen minds. One is to provide adequate instructions for interacting with the technology. This suggests that in authentic learning settings, interest may mitigate the effects of the coherence principle. Students can post doubts and queries on the online platform, starting a discussion thread with teachers and other students. All these technological products have in common that they are specifically designed to facilitate interaction, encourage social activities and enhance creativity (Dix, Finlay, Abowd & Beale, 2004). The students do not have to go to the schools so there is no need for transportation. But a webcast is different from a webinar or online seminar; a webinar is 100% online, whereas a webcast is a broadcast of an existing (physical) event.PDFs make a great learning source for the students who like to read detailed reports with facts and figures. Difficulties involved in measuring differences in learning within the constraints of a real learning environment are also addressed.This study failed to find evidence for the coherence principle in an authentic learning setting involving online multimedia. Static Interactions with Voice Tech in Digital Learning:There are two very different ways in which you can approach how you will integrate AI and voice tech into your online learning modules.Static Interactions: These are interactions that are one-way interactions. In this situation, an LMS will manage e-learning delivery and assessment, while a training management system will manage ILT and back-office budget planning, logistics and reporting.________Some Inspiring eLearning Websites:Sal Khan and his team have earned their place by creating self-paced, free, source of online education that has become an industry standard. Simulations offer opportunities for appropriate practice within contextualized learning environments that are not bound by what is safe, reasonable, or sometimes even possible in real life. Such personalization is turning education into a "choose-your-own-adventure" method of learning, capitalizing on student interest and engagement.Playing and learning collide when classrooms utilize gaming as an instructional tool. E-learning is the use of network technologies to create, foster, deliver and facilitate learning, anytime and anywhere for empowering the individual learner so that the teacher is no longer the gatekeeper of knowledge, and the role of teachers is likely viewed as facilitators of knowledge process. Instead, the focus of attention is clearly on the content of the discussion and the individual's ability to respond and contribute thoughtfully and intelligently to the material at hand.It is easy to include distinguished guest experts or students from other institutions in an online class. While there is value in measuring these program outcomes, understanding the impact and improvement areas of digital learning remains important.____________Online Learning requires Digital Literacy:As technology becomes increasingly essential in our daily lives, students need to develop new skills in order to succeed. But unpacking these ideas for novice learners, laying out every concealed gear and spring, is a key component of teaching. Increased access to technology can leave students vulnerable to either intentionally or otherwise being exposed to graphic content (including violent media and pornography), online predators, scammers and hackers, and cyberbullying.Sometimes, the cost of bringing new technology into your classroom is not one that classroom budgets are able to sustain. While different from a face-to-face course which also involves more in-person dialogue and conversations, an advantage of an online course is that you can generally communicate more ideas as well as clear, comprehensive messaging given that students may view, reread and review again and again. And without context, new information doesn't really stick. Keeping the sensitive data from being stolen is a number one priority for digital tools that help deliver e-learning.Problem 12. The artificial intelligence assisted learning (AIAL) system can personalize learning. While there is evidence that technology can improve learning outcomes, technology may not always be used in a way that prompts richer forms of learning._Even when overall outcomes are similar for classroom and online courses, students with weak academic preparation and those from low-income and under-represented backgrounds consistently underperform in fully-online environments._Technology has the potential to increase access to education, enhance learning experiences, and reduce the cost of providing high-quality education. A learning management system (LMS) is software used for delivering, tracking and managing training and education. Taking learners' goals into account can help us understand the reasons behind their engagement in DGBL. Also, digital credentials prove something about their owner. Facebook and LinkedIn users can create groups to share information and ideas, and members of the groups can communicate freely about the shared material. Dowling, Godfrey & Gyles, (2003, as cited in Vignare et al., 2005) investigated the association between students' outcome and hybrid delivery. Thus, to facilitate inclusive learning opportunities during this period, the UNESCO has launched the Global Education Coalition. An online instructor must be able to compensate for lack of physical presence by creating a supportive environment in the Virtual Classroom where all students feel comfortable participating and especially where students know that their instructor is accessible. Because doing so would be unfair to the other students in the class. Digital libraries may reduce or, in some instances, do away with these fees. Most importantly, teachers can post multimedia to extend learning and introduce or review concepts._The Flipped Classroom:One popular approach to digital learning is the flipped classroom. Using e-learning platforms can be more time-consuming than traditional methods and can also come with new costs as e-learning platforms and service providers may charge user fees to educators.Another critical issue is access to network infrastructure. It puts more emphasis on providing "positive feedback" to students. The digital content may be stored locally, or accessed remotely via computer networks. Whereas games and toys particularly focus on entertainment, educational products mostly focus on improving children's knowledge and competences (Dix et al. First, teachers need to understand the ways in which devices, software, digital content, data platforms, etc. In addition, they reported that blended instruction combining online and face-to-face elements had a larger advantage than purely online instruction (Means, Toyama, Murphy, Bakia & Jones, 2010). So, educators must incorporate new interactive methods based on the latest technologies into their classrooms to become a smart school with next-generation technologies in classrooms. About 90 percent of students will multi-task while reading on-screen, but just one percent will multi-task while reading hard copy text. With careful planning and design, we can leverage this neuroscience research to maximize the impact of e-learning.Designing E-Learning Systems that engage these factors:When we give something our attention, we activate our hippocampus, which is the region of the brain where learning takes place. There are concerns that too much screen time can damage eyesight. Learners want free and reliable wireless access to the Internet; this is often a major factor in continued use of a mobile device or its rejection. The third level explores the use of these instructional strategies in the context of a specific group of students, for example middle school science students, or students taking algebra.Apply the growth mindset strategy to teachers. Take quick notes. Some examples of classroom technologies are Mentimeter and Kahoot.____________Section-9Digital classroom:Traditional classrooms refer to the standard classroom setup where teachers teach students with their physical presence in physical classroom. Early forms of online learning initially centered on translating a complete classroom course syllabus to a distance education environment, including similar content and assignments, and then grew to allow for teacher-student interactions, also similar to a traditional classroom._The current digital learning landscape:The key benefits of CAI and online learning were largely complementary, and in recent years online learning and CAI have converged. Pask's theory that learning occurs through conversations about a subject which in turn helps to make knowledge explicit has an obvious application to learning within a virtual learning environment (VLE).Salmon developed a five-stage model of e-learning and e-moderating that for some time has had a major influence where online courses and online discussion forums have been used. If they do not possess these technology tools, they will not succeed in an online program; a student or faculty member who cannot function on the system will drag the entire program down.Limitations of Technology:User friendly and reliable technology is critical to a successful online program. Kidblog is a blogging platform and much, much more. Presenting information in a multimedia program is especially appropriate in an ill-structured and complex knowledge domains in which opinions differ. The same technology can also be used in a classroom setting, as it can make it easier for teachers and students to share files and electronic documents. The teacher and/or the student could create a product using Web 2.0 tools and embed it in posts. Just as a paper-based credential could be a passport, a driver's license, a membership certificate or some kind of ticket to obtain some service, such as a cinema ticket or a public transport ticket, a digital credential is a proof of qualification, competence, or clearance that is attached to a person. Lessons can be completed around your schedule without leaving home or having to relocate depending on the rain, snow, or sunshine.Even the costs are shorter as most online programs cost less than brick and mortar. Online learning has become a great medium to acquire in-demand industry certifications, such as the Financial Modeling & Valuation Analyst (FMVA)™ designation, that will help you meet the needs of an evolving job market. Others claim their studies found effects that independent evaluators say didn't exist. In the second case, a thorough understanding of the provider's terms, conditions, and policies is paramount to ensure an unhindered business operation.Increased emphasis on digital portfolios.Digital portfolios are online data collections that users can store, edit, and download, and these collections can include various formats as text, multimedia, and links. Make sure that those setting these deadlines (directors or senior management) are aware of every step involved in the e-learning process so they know just how much work goes into delivering learning outcomes that provide value to the entire organization and align to business objectives.Finding the Perfect e-learning Authoring Tool or Learning PlatformIf you've had to choose a new e-learning authoring tool or Learning Management System in the past, then you already know how challenging the selection process can be. The more the content applies to modern life, the easier the modern learner absorbs the information. What sets connectivism apart from theories such as constructivism is the view that "learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing". Some teachers have developed strategies in their classrooms to address digital citizenship, or use strategies developed by their districts, but others are still greatly concerned by this issue. The choice of technology should be driven by the needs of the learners and the context in which they are working, not by its novelty._Figure above shows Web-based Teaching and e-Learning: Strategies, Technologies, and Pedagogical values:_Several approaches can be used to develop and deliver web based learning. If you don't believe that, consider the outcomes in schools that shift to digital without enough stakeholder engagement.Educator Heather Heibsch launched a highly successful hybrid public school and now is the executive director of a non-profit organization that is improving education in rural regions worldwide. This can be a particularly useful distinction in the case of digital games, as their entertaining and educational dimensions can prompt learners to focus either on performance goals (i.e., achieving the highest score) or on mastery goals (i.e., mastering knowledge).A recent study reported a positive relationship between the level of intrinsic motivation and learning scores in a digital learning game (Liu, Horton, Olmanson, & Toprac, 2011). Summative evaluation consists of tests designed for criterion-related referenced items and providing opportunities for feedback from the users. Revisions are made as necessary.____Action logs:One of the main opportunities provided by digital learning is the capability not only to examine the final products of learning activities (e.g., essays, final answers to problems and test scores), but also to collect detailed logs of how learners participate in learning activities. Open Yale works because it gives almost any curious person the chance to take courses led by Yale instructors.Academic Earth probably brings the most unique concept of education that there is. Knewton calls their system an adaptive learning infrastructure and have an impressive collection of collaborating organizations. The value placed on different kinds of pedagogies by members of the school community, including teachers and school leaders, can positively or negatively impact on how digital technologies are used. For many students, a classroom has been a kind of sanctuary, which is now taken away. User experience also depends on lighting, ambient noise, environment of use. The concept of ODL education came from idea where the learners and the teachers cannot be in a class room and they should be separated by some geographical distance or maybe they cannot come close to each other to make the entire education system flexible.____Virtual Reality:Virtual Reality Learning Environment (VRLE) allows the learner to experience a first hand learning experience where the learner (user) is able to interact inside the learning environment. "But when students report using these devices every day, and for several hours during the school day, performance lowers dramatically." The Reboot Foundation is a non-profit devoted to "cultivating a capacity for critical thinking." Its new report suggests that, while computers can sometimes help children grasp certain concepts, their overuse is highly worrisome.Bouygues analyzed data from two sources: the 2017 National Assessment of Educational Progress, which provided math and reading scores for American fourth- and eighth-graders, and the Program for International Student Assessment, which provided data from 30 nations. It has rendered an efficient contribution in enabling students to improve their grades. It's a general study via survey that included 16,906 teachers and administrators—nearly 97% of which were from the United States. Some options that are age-appropriate are video- or audio- recording of their creations, introducing them to the use of the internet through browsing age-appropriate websites, providing assistive technology to allow differently-abled children to participate with the rest of their peers, educational apps, electronic books, and educational videos. But in e-learning, notes are simply sent to the students. Smartphones, the most widely used computing devices in 2014, were owned by 68 percent of adults. Digital learning is more than just providing students with a laptop. Last but not least, digital equity allows lifelong learners to continue to pursue an education while growing up and meeting work or

family commitments.Promoting the digital transformation process in schools means allowing students to access the benefits of customization, building big-data fueled curriculums to shape their future. It is a total and comprehensive solution that integrates all the ICT components in schools.Typically, the Digital School Solution (DSS) 2.0 consists the following:Learning Management SystemSchool Management SystemInteractive Whiteboards for Lesson InstructionDigital Materials and Interactive ContentComprehensive Support & MaintenanceProfessional Development for Teachers and IT StaffProfessional Services (Project Management, System Integration, Consultancy)_Digital School Solution (DSS) 3.0Digital School Solution 3.0 embraces the value of school pedagogies in the curriculum to universally select the right digital tools or features for teachers to independently create content that have been either translated or transformed from core curriculum. Students are also interested on the use of different devices in the learning process. The growth of online education in postsecondary and professional development contributed to the legitimacy and growth of online learning in K–12. The routine of e-learning is very flexible. This makes learning a more engaging and interactive process, rather than students being passive recipient of classroom lectures.Easy and instant access to information has made rote learning a thing of the past. We need teachers to make students think. Link new information to knowledge we already have, that activates our hippocampus.-3. They connect to each other at anytime and anywhere. The possibilities offered by digital learning, however, are endless. Every learner works at a different pace. It has most often been used to describe an approach where the delivery of a program happens at a provider with a staff member delivering learning and teaching directly to students. Technology is the most visible part of this type of classroom and encompass hardware, software, operating systems and social media channels._Why digital classroom:Like snowflakes, no student is the same. They are told exactly what to create for their end product – a slide show that lists facts of information. There are studies that systematically examine the ubiquitous self-selection bias of online learning: the endogeneity of learning environment choice. Hameed, Badii, and Cullen (2008) in their study considered the efficiency of e-learning when mixed with traditional learning; they concluded that blended learning approach provides the most flexible method to e-learning.Blended instruction is reportedly more effective than purely face-to-face or purely online classes. Blended learning methods can also result in high levels of student achievement more effective than face-to-face learning. This takes a lot of time and hard work. Research, such as the study completed by S. Slightly over 86 percent of respondents said they agreed that teachers in their district need more training in education technology._____While student access to technology at home and lack of time during the school day are cited as the top obstacles to integrating technology into teaching and learning, there are many other concerns as well. The main benefit of e-learning is that it’s completely time and place agnostic. It provides a comparison to the usage levels of the other elements of technology.Between 64% and 66% of respondents report that they are using each of four types of resources and strategies: student creation of documents, student collaboration, free online resources, and online resources purchased by the school or district. They mostly relate with realistic characters and therefore prefer realistic settings. The less of face-to-face teaching you do, the better — you must have some of it, but it doesn’t do much. These two experiments demonstrate that a serious game environment can promote learning and motivation, providing it includes features that prompt learners to actively process the educational content.__________Section-11Artificial intelligence in digital learning:In their book The Future of the Professions, Richard and Daniel Susskind argue that we tend to conceive of occupations as embodied in a person – a butcher or baker, doctor or teacher. Social networking on the Internet promotes the idea of community building. These papers are then checked by the teachers. The contextual content of simulations allows the learner to “learn by doing” (Kluge, 2007).With the advent of the computer age, digital simulation provides effective virtual learning experiences for learners in many fields, such as medicine, police training, engineering, physics, the military and aviation. With more than 80000 e-Books solely created to train and enhance the learning of Class 12th students, the aim of CBSE, NCERT and States or Union Territories is to ensure that the students do not miss out on learning in case they miss out on physical classroom learning. Twitter offers a primary example of a micro-learning experience. In the hands of a great teacher they can push students to higher achievement, but in the hands of ineffective teachers, it can lead to reduced student achievement. In an increasingly digitalized world, education needs to be digital as well. Online learning may also be seen as a less desirable option for those students who have limited access to stable internet access or no access to appropriate devices on which to interact with their learning._The term virtual is less widely used in higher education but is again understood beyond in the sector. A wide variety of scenarios are available for students to experiment in, such as emergency events, so that they are able to execute the appropriate procedures when these events occur in the real world. Prensky (2001) notes that learning by doing is central to game and simulation based learning, because it turns out that “doing” is something that computer simulations are especially good at; they allow us to interact with them. published their study, another group published an analysis on the effectiveness of distance education. As an example, children around the age of 4 oftentimes like to play games with a fantasy setting and stereotype characters, whereas children around the age of 12 prefer more contemporary concepts and characters that are similar to themselves. But if you think of the possibilities, you’ll quickly see why. George Brown College’s School of Continuing Education uses simulation software in their online technical training certificate programs to provide hands-on-training for automation, robotics, electronics, electromechanics, and PLC students.Many more examples of training with the use of simulators can be found across several different fields, with new applications emerging every year._Future of Simulation Based Learning:With new improvements in technology, new opportunities to apply simulation-based education and training will emerge across several industries. The benefits of this reshaping of education systems around the world are manifold. Today researchers are concentrating on topics like cognitive load, information processing, and media psychology. Semantic web is suitable platform for implementation of e-learning environment because it provides ontology-based annotation of learning materials, ontology development and proactive delivery of the learning materials through e-learning systems._______Whiteboards:There are three types of whiteboards. Apps such as Unimersiv can transport students to ancient Greece, while Cospaces allows students to share their virtual creations with the world. Although these results suggest that blended learning environments can provide a learning advantage when compared to purely face-to-face instruction, the researchers emphasized that the findings do not demonstrate that online learning is superior as a medium…It was the combination of additional learning time and materials as well as additional opportunities for collaboration that produced the observed learning advantages._Many researchers believe that technology is a tool to remove geographical barriers and to facilitate learning anytime and anywhere without presence of lecturer. In addition, homeschooled students gain access to centralized instruction._Distance education or distance learning is the education of students who may not always be physically present at a school. In order to have its full effect, digital learning in schools must be accompanied by dynamic and interactive curated content. Detrimental effects of the increased cognitive load engendered by the extra material may be balanced by heightened interest and attention._With careful planning and design, we can leverage neuroscience research to maximize the impact of e-learning in the following ways:-1. They can also offer targeted skill development—students can choose which skills to improve on and receive specific training resources, and educators can also control the content. Yet students may rarely choose to interrupt their reading to do this (Woody et al., 2010). Furthermore, gamification elements will be implemented in order to get students to do more work whilst enjoying themselves.__________Section-12Digital simulations in learning:Computer simulations have greatly evolved with progress in computer science over the past few decades. However, if you can make your training interactive and fun, the other applications available on mobiles won’t be a distraction for your learners.Lack of Internet connectionUsing mobile devices for e-learning could be an issue if your participants don’t have Internet connection or electricity readily available. Online learning demands springing into action, accepting course material in a variety of multimedia formats, and taking part in online discussions which can continue indefinitely.Problem 4. CredibilityOften, the worth of online learning is not fully trusted, nor given the respect it deserves. By focusing on this type of assignment, the digital learning is more likely to reach the Modification or the Redefinition levels of instruction._______Learning is a process of acquiring knowledge, skill, and performance. In an online course, it’s even easier to “skip class” or put off an assignment.Missing Social InteractionCollege is an inherently social time — for many of us it’s where we meet lifelong friends, even our future spouse. Social networking sites are virtual communities for people interested in a particular subject to communicate by voice, chat, instant message, video conference, or blogs. Digital technology is considered as the sole catalyst to bring about changes and transformations within the teaching-learning processes. It’s a nuanced and strategic challenge that grapples with countless tangible and abstract variables—devices, software, classroom practices, professional development, and collaboration among the many stakeholders just to name a few.____________History of digital learning:Helping people and children learn in ways that are easier, faster, more accurate, or less expensive can be traced back to the emergence of very early tools, such as paintings on cave walls. A typical analogue device is a clock in which the hands move continuously around the face. At the school level, the situation is even worse. Digital technology has been utilized not only in higher education, but at all levels of education, from nursery to the university level. Although digital learning could not completely replace traditional teaching, it could achieve the best teaching effect and have learners be glad to learn by reinforcing traditional teaching with digital learning and comprehensively practicing both methods in teaching activity. Additionally, they believe that e-learning has a positive impact on academic achievements of students in terms of reduces costs, saving time and increases accessibility of education as well as enhances academic performance.On the other hand, and despite these benefits, numerous studies pointed that e-learning has a negative impact on students’ achievements; these researchers argue that students may feel isolated, parents may have concerns about children’s social development, and students with language difficulties may experience a disadvantage in a text-heavy online environment. Educational institutes treading the clever study room path will need to appoint a salaried technologist who will again drain the college’s assets. Learning resources are virtually available and can be accessed by multiple digital devices. These include Starfall, ABC mouse, PBS Kids Video, Teachme, and Montessori crosswords. Schools can ask permission or it could be indicated on a site or provided through Creative Commons licenses under the fair dealing, flexible dealing, educational and other statutory exceptions, copyright exceptions or through paid license or agreement.What is protected by copyright?Literary worksMusical works, including any accompanying wordsDramatic works, including any accompanying musicPantomimes and choreographic worksPictorial, graphic and sculptural worksMotion pictures and other audiovisual worksSound recordingsArchitectural worksComputer softwareWhat is not under copyright?Works that have not been fixed in a tangible form of expression (not written or recorded)FactsIdeas, principles and conceptsWorks for which copyright has expiredDuration of copyright:Copyright protection starts from the time the work is created in a fixed formCopyright protection lasts authors’ lifetime and 70 years after death______________Benefits of digital education:Engagement: improved student motivation from engaging content and game-based strategiesTime: extending the learning day and year; allowing students to learn when they learn bestLocation: anywhere anytime learning creates a new world of opportunityPacing: allowing students to progress at their own rateIndividualization: customizing learning by level and modalityContent: rich, deep, and up to dateSharing: the difference between ‘turn it in’ and ‘publish it’; the ability to teachers to share what worksData: instant and multiple forms of feedback; smart profiles that will drive customized learningOwnership: students choosing what to learn, how to demonstrate their learningParent involvement: transparency and connections the classroom_Figure below summarizes digital learning benefits:_Concerns of digital education:Infrastructure: particularly affordable broadband at homeMore of the same: the risk of layering technology on top of how we’ve always done school with little benefitOld paradigms: teachers, administrators, and parents trapped in an old modelEquity: among several equity concerns, the ability to vary time could results in fast groups and slow groups based on historical stereotypesManagement and scheduling: customized learning will require much better management and scheduling toolsPreparation & development: learning new tools will be the easy part, learning new roles will be more challenging particularly as school models proliferateObsolesce: constantly changing software and hardware versions make it tough for schools to stay current (but cloud computing will help)Interoperability: there lots of engaging content and cool apps but nothing works togetherHigher Ed: dated entrance requirements and instructional practices influence K-12 and teacher preparationSecurity and cheating: technology will solve some problems but introduce other challenges_______________Section-7:Comparison between traditional teaching and digital learning:McKiernan (2011) pointed out various differences in teaching material contents, learning channels, and practice methods between traditional teaching and digital learning. When developing products for children in this age group, the design should therefore be more mature and serious than for younger age groups.The last stage of development is the early and late adolescence (ages 13 years and up).In this stage children become independent of their peers and parents and they develop their abstract thinking and logical skills (Markopoulos & Bekker, 2003). When attempting to integrate digital technologies in practice, there is a gap between teachers’ espoused and enacted beliefs (Prestridge, 2012).Routines also play an important role in teacher practice; unfortunately, the integration of digital technologies disrupts routines (Somekh, 2007). They are not only listening but also viewing it on the screen which makes their learning all the more effective. These point to the emergence of social and community interaction, mobile Internet access, use of multiple media, location-based activity and user created content.New activities emerging during the period 2005-10:social/community interaction• the use of use social apps on the phone (e.g. Facebook)• being part of microblogging communities, e.g. Twittermobile Internet access• browsing websites• reading newsmultimedia uses• watching movies and TV shows• listening to audio books, podcasts, and vodcastslocation-based activity• using GPS to find places• using location-based servicesuser-created content• filming an event to create a resource• creating podcasts It can be argued that the pervasiveness of mobile technologies is generating a distinct culture where learners repeatedly use mobility and awareness of their immediate context as starting points for keeping social contact alive, accessing fresh content, getting local information and becoming visible as creators and producers of content. Participants can raise hands, answer polls or take tests. The realization of a shift in technology creates the hope that those who move into the new technology will also leave behind bad habits as they adopt this new paradigm of teaching. Never in the history of the planet has information been more readily available. The best corporate LMSs are scalable, customizable, goal-oriented and user-friendly. eLearning providers will have to choose between hosting and managing their own virtual platform and using an external provider. Just because it may be technologically possible to simulate a physical learning experience, this does not necessarily mean that it is the best way to teach it.______Rationales of Distance Education:Although most institutions have become involved in some form of distance learning, their rationales for doing so are not always clear. Teachers and students now have a digital toolbox – ranging from engaging devices to teach the students to online courses and digital textbooks. Although these are positive developments, the infrastructure requirements for the current generation of digital learning applications have risen substantially, and available evidence suggests that schools are not yet positioned to close the digital opportunity gap. “Rather than playing to the lowest common denominator – as they would in a traditional classroom – teachers can now streamline their instruction to help all students reach their full potential.” Proponents of blended learning argue that incorporating the “asynchronous Internet communication technology” into higher education courses serves to “facilitate a simultaneous independent and collaborative learning experience”. (Strother, 2002).Provide certifications or badges: Organizations can provide badges for learners that are recognized in the employment marketplace.Caveat:Some organizations choose to validate learning for the program as a whole in lieu of measuring the digital learning effectiveness alone. Any attempt to incorporate blended learning strategies into an organization’s pedagogical strategy needs to account for this. The teacher can monitor and intervene with students as needed, using class time to work and connect with students individually. Khan pointed that E-learning has been described in various ways as learning that is using a number of different technologies and methods for delivery e.g. Computer based training (CBT), Internet-based training (IBT), Web-based instruction (WBI), Advanced distributed learning (ADL), Distributed learning (DL) Distance learning or Mobile learning, etc._Based on the data collected regarding the impact of E-learning on academic achievement, there were conflicting findings in the literature which range from positive, negative or even no significant difference in students’ performance between online and live classes respectively. Technology enables a student to learn at his own pace.User-friendly: The best thing about digital education is that it is user-friendly. As a learning designer, you must know all about the two formats so that you can create effective instructional content for each.Table below list down main differences between both terms:____________Section-8Computers in classrooms:Computers in the classroom include any digital technology used to enhance, supplement, or replace a traditional educational curriculum with computer science education. The studies of more recent online instruction found that, on average, online learning, at the post-secondary level, is not just as good as but more effective than conventional face-to-face instruction. The teacher can provide the best multimedia resources to complement the core content and extend or reinforce the learning. Users can log into the MOOC’s website and sign up for a given course. Coursera is a spinoff out of Stanford University. With no in-person interactions with the instructor or with fellow students, it can be easy to forget assignments and deadline unless the student keeps organized. Moreover, researchers also found, using weighted multiple regression, that the methodology of the studies accounts for most of the variations in learning outcomes followed by pedagogy and media (Bernard et al., 2004). Which brings us back to the Lego analogy; as institutions, as instructors, as students, the NGDLE will challenge us to take on the role of individual architects. One of the most common frustrations teachers face with digital curriculum is the fact that students cheat on classwork, homework, and assessments._Increased access to technology can leave students vulnerable to graphic content (including violent media and pornography), online predators, scammers and hackers, and cyberbullying. “In narrative prose fiction, the author strictly determines the reading path,” he and co-author August Hans Den Boef write in The Unbound Book, a collection of essays about the future of reading. In order to provide services that meet the needs of today’s digital natives, school systems should work with service providers that can support a full line of dedicated, broadband and Wi-Fi connectivity services, ensuring an always-on, always-connected environment that works for everyone. IsolationThis rather psychological factor is still highly affecting students’ motivation and learning progress. With the help of virtual reality (VR) and augmented reality (AR), a class IV student can be transported to the freezing conditions of the north Atlantic, or experience the delights of an African safari._Where has tech infiltrated the most?HomeworkMany students no longer have to write out that science project in a copybook – just type away and hit the send buttonMonitoringIf a teacher caught you indulging in a bit of mischief, you knew what was coming – a scolding, or a clip around the ear. Computer LiteracyAlthough students are generally tech savvy, and thus able to manage computers well, lack of computer literacy is a major issue among students today. The topics of these courses vary from web development to digital marketing. Furthermore, eLearning providers themselves may become overwhelmed by the abundance of options and will need to be open to change. Its gamified model incorporates competition through levels and points, spacing with daily reminders, and even a social generation aspect with online discussion forums. Learning in digital learning environments is characterized by the provision of learning materials that are independent of time and location, and by broad access to learning materials. Brick and mortar is the traditional way to attend college, with students coming to campus and attending class in physical classrooms. Both describe a method of delivery which involve activities that happen away from the physical site of a provider with students using digital means to engage with a program, rather than having any requirement to visit the provider. Without a set class schedule, as students would have in a traditional course, the temptation to procrastinate may be stronger. It is up to them what they want to study and for how much time they have to study.You can learn whatever you want:No matter your age or educational background, online learning allows you to take courses on any topic you are interested in. Effectiveness also varies depending on the type of task being learned.There are key components of simulation training tools that make them effective, such as the addition of multimedia and the availability of immediate feedback. Virtual access is achieved through Internet / Intranets. They find that there are negative effects for certain groups of students and null findings for others. Due to the length, no scrolling was required, but there still was a difference in how much they absorbed. You can encourage spacing by providing microlearning that follows up on training sessions or by creating apps and programs to use each week to integrate training into the everyday workplace.Gamification:Most organizations already understand the importance of games when it comes to attention; a well-designed game can turn a boring subject (e.g., company policy) into an exciting challenge. Students can experience Augmented Reality on their mobile phones, where they are introduced to additional information such as fun facts, historical data, 3D models. If not, then the processes can be repeated until the student has achieved their desired learning goals. Moreover, provision of devices and broadband Internet access is not sufficient: programs of professional support for teachers and leaders in schools who serve low-income students are also necessary (U.S. Department of Education and Office of Educational Technology, 2016). Digital Learning Day is celebrated annually on the last Thursday of every February. School cameras serve their purpose of safety for children but don’t intrude into their privacy. These developments have special meaning for language learning._Advantages of mobile learning:Flexibility is not limited to any one place or time anymore! Flexibility in mLearning also involves learning using videos, podcasts and other popular multimedia assets on smartphones.Better completion rates and higher retentionThe content presented in the mobile platform is chunk-sized and concise. Digital helps learners transcend the barriers of time and distance/location; it also expands the size of the classroom infinitely. Even so, rarely is the technology the interesting part. There are several keys to making the most educational use out of introducing technology at the preschool level: technology must be used appropriately, should allow access to learning opportunities, should include the interaction of parents and other adults with the preschool children, and should be developmentally appropriate. Traditional teaching, with “lecture” in classrooms, was the most traditional and representative teaching method. Another approach is to go directly to professors to engage massively online courses. They should be able to use basic word and numerical processing software. The finding was supported by numerous studies and held true for students in college, high school and grade school. Lectures in study centers, printed teaching material as well as educational radio and TV presentations provide ample proof of this. No matter how many times we tried to shift things around and allocate resources, we just couldn’t seem to make the timeline work in our favor. Rather, it provides an additional tool to help teachers increase classroom productivity and reach as many of their students as possible.Improved Engagement and Self-MotivationWhen it comes to educational success, self-motivation matters. Learner Focused:No instructor means that the focus of the course becomes the learner, which can be a huge advantage if the course is designed correctly. So far, the results have been promising. 2004).According to Goodwin (2012), the development of interactive technology introduced a new generation of educational tools, that have been praised as revolutionary devices that hold great potential for transforming the traditional learning environments. There are some benefits to this instruction. 433), intrinsic influences are “the true gatekeepers”. Ideally, students make their own individual contributions to the course while at the same time take away a unique mix of information directly relevant to their needs.In the online environment, learners have a certain measure of anonymity. While this type of interaction might be different in an online environment, that doesn’t mean it isn’t possible. At the extremes, some teachers are largely on their own in their classrooms, using digital tools and resources despite having a limited number of existing computers, slow or intermittent Internet access, and no funds available for purchasing online content. The program calculates a model of the learner, and based on his/her past performance, subsequent tasks are given. Benefits of having a cloud-based learning system are:-1. They are an important element of an infrastructure for learning and range from podcasts to digital libraries to textbooks and games. For instance, both the Internet and education are concerned with information exchange, communication, and the creation of knowledge. This situation is similar to what corporate had to deal with when device manufacturers stopped supporting their flash-based eLearning content, and HTML5 came to the foray.As an online student, you can access class wherever you have a connected device, but a strong internet connection is required. But in the case of e-learning, there is a generous use of digital resources included presentations, multimedia that includes images and videos etc. The article also notes, “readers spend a little more than one minute on Web pages, and only 16 percent of people read word-by-word” – a problem as readers try to consume longer pieces of text on-screen. For instructors, the teaching material contents could be effectively organized and accumulated through a digital learning platform and rapidly delivered to learners for effectively implementing knowledge management (Jude et al., 2014).Enhancement of learning interests: Instruction could be more vivid and lively through information technology and the presentation of various media to enhance learners’ interests, make learning more efficient, and promote learners’ learning persistence (Kaklamanou et al., 2012).Simultaneous new technology learning: Digital learning stressed on learners learning distinct knowledge and new technologies of computers and network with digital tools to promote the ability of using information technology (Shin et al., 2011).In summary, digital learning is attractive because the contents would not change with media or standards so that learners could easily operate to learn and break through the restriction on time and space for thorough learning and successful learning. Use the privacy matrix as a start.parents must be informed of what online tools are being used. Some of these schools are available at the high school level and offer college prep courses to students.Virtual education in K-12 schooling often refers to virtual schools, and in higher education to virtual universities. With “Assignments,” you can view who completed the task.The teacher can create any format of quiz and send it to the class. The researcher found that most of the studies had mixed results. Students with special needs constitute a wide range of individuals, from those with physical handicaps to cognitive or developmental impairments. With a computer and Internet access, the entirety of the educational world can be yours as long as you have Internet access, no matter where you live. For instructors, writing lesson plans is replaced with preparing instructor presence plans and facilitating learning for students as they each work their way through the course. If you are reading something lengthy – more than 500 words or more than a page of the book or screen, your comprehension will likely take a hit if you’re using a digital device due to greater physical and mental demands of reading on a screen, the nuisance of scrolling, and the tiresome glare and flicker of some devices.-4. For example, podcasts may facilitate activities based on memorization and retention, whereas wikis emphasize learning that requires social negotiation. The games may either be designed to promote learning or the development of cognitive skills, or else take the form of simulations allowing learners to practice their skills in a virtual environment. The University of Hyderabad planned to start online classes but later dropped the idea when a survey conducted by the university revealed that 45% of students can access internet only infrequently and 18% cannot access the internet at all.The key findings of the Household Social Consumption on Education in India, 2017-18 National Sample Survey (NSS) shows the digital divide not just between rural-urban, private-public educational institutions but also by caste. Mail correspondence, which is the oldest form of distance education, is an asynchronous delivery technology, as are message board forums, e-mail, video and audio recordings, print materials, voicemail, and fax.The two methods can be combined. While information is easy to obtain, knowledge and wisdom are not. (2011) pointed out the difference between digital learning and traditional teaching in learning environment and persons. University-level programs, like edX founded by Massachusetts Institute of Technology and Harvard University, offer wide range of disciplines at no charge, while others permit students to audit a course at no charge but require a small fee for accreditation. If you won’t ask the questions, take control, and make sure your voice is heard in a positive way…then who will?_____Digital learning has created greater imbalances among students in poor developing nations:There is inequality in terms of [technology and online] access for students of both primary and secondary ages.Hungry kids are not good learners.Social challenges that extend to the home have been heightenedChildren with mental health issues or children who have parents with mental health issues are at a greater disadvantageStudents with different learning needs who are not in specialized learning tracks are at risk of falling through the cracksStudents are missing important opportunities to work collaboratively with their peers and require additional individualized feedback and direction from their teachers.Evidence shows that children’s learning may be significantly impacted if they are hungry, feel insecure or unsafe. It will look great on your résumé.More choice of course topics:Let’s face it, when thinking about what to study, besides for interest and career opportunities, where to study is also a deciding factor. Web based courses may also provide static pages such as printed course materials. One of the values of using the web to access course materials is that web pages may contain hyperlinks to other parts of the web, thus enabling access to a vast amount of web based information.The focus of web-based courses must always be on the learner—technology is not the issue, nor necessarily the answer. These models, for the most part, are not mutually exclusive.There are many components that can comprise a blended learning model, including “instructor-delivered content, e-learning, webinars, conference calls, live or online sessions with instructors, and other media and events, for example, Facebook, e-mail, chat rooms, blogs, podcasting, Twitter, YouTube, Skype and web boards”._Harrington (2010) coined the combination of traditional classes with online ones as ‘hybrid classroom’ and stressed that educators are increasingly engage in hybrid classes as they have become aware of the benefits. A science class is incomplete without practical. It stands to reason, then, that technology should be a crucial part of their educational experience. According to him, technology can enable different teaching methodologies, and also allow teaching a large number of people across the country. Repeated exposure to information in specifically timed intervals provides the most powerful way to fix memory into the brain. Different Artificial Intelligence (AI) based tools & techniques (such as, rough sets, fuzzy sets, neural networks, machine learning etc.) can be integrated with the e-learning applications to support intelligence.In support of e-learning on the web, a new version of World Wide Web called Web 3.0 has been proposed as a possible future consisting of the integration of high-powered graphics (Scalable Vector Graphics or SVG) and semantic data. Being in the classroom, students got used to instant eye-to-eye communication with each other allowing reacting together, sharing the experience, joking, & making a non-verbal contact, strengthening the social skills. However, finding the right balance of allowing vs. When compared to analogue, it also has positive connotations for some as it suggests that things have developed compared to more traditional ways of doing things. This is one of the biggest mobile learning advantages, as learning as a process quite often suffers from lack of collaboration among eLearners.Extant research and statistics reveal a higher engagement rate when courses are delivered using the mobile format. Students are asked to read online content or watch video-based learning content at home and the same is discussed in the classroom. A good network service provider will address current demands and anticipate future needs to guarantee the school can continue to provide its population of students and instructors with a stellar online experience. In the flipped classroom model, students can finish lower order of cognitive work before the class and when they come to the class they can engage in higher cognitive levels of learning through interactions.As with any new instructional approach, there are some inherent challenges involved with flipping a class. It is critical to take into account the relatively higher initial investment required to launch a digital learning program when estimating payback time. Digital Learning (Digital Education):______Section-1Prologue:“Lectures are only terrible if you are a terrible lecturer!”.Lectures that are dynamic, evoke emotion, and engage the audience are worthwhile learning experiences. And all parties have the ability to communicate with each other, through email, chat or text messages._Dynamic vs. Gee (2009) has argued that the digital divide is growing, not shrinking, because those with greater literacy skills and more access to supports for learning continue to accrue larger and larger benefits in areas of learning not available to people of more limited means. Online education, however, has historically been terrible at providing feedback on questions like “How will you break this problem down?” and prompts like “Do you agree with this argument?” The tension, of course, is that the greatest strength of online education—that one or few educators can reach tens of thousands of students in a single class—is also its greatest weakness. Several educational institutes have switched to online platforms to conduct classes, and digital learning is being touted as the future of education. VLEs act as any other learning environment in that they distribute information to learners. Internet offers individuals enhanced access to sources of knowledge and expertise that exist outside of their immediate environment. Singh says there may be some merits to face-to-face teaching, but maintains it is not necessary, given the number of online tools and innovative methods of teaching available to enable learning. Digital learning requires effective teachers in order to be successful. A study from California State University in San Bernadino found that two different sets of students—one group who studied online and the other who went to class—who received the same instruction from the same professor fared equally well in terms of performance. Physical simulations may have a time component, which implies that users run a simulation, for example, about photosynthesis, as the system unfolds. The spread of online learning in the digital era demonstrated the advantage digital has for providing access. Some programs require students to attend some campus classes or orientations, but many are delivered completely online. Both personalized and individualized learning are considered to be the most effective types of differentiated learning._Fixed Learning:Fixed e-learning is a fancy name for something you are likely already familiar with. LMS allow educators to run a learning system partially or fully online, asynchronously or synchronously. Students who score poorly on the quiz would receive access to additional materials online, then take another quiz.State testing, too, has gone online: During the 2015-16 school year, only 15 percent of assessments administered to students in grades 3-8 were of the pencil and paper variety, according to a report by EdTech Strategies. Because of this shift, digital curricula and digital tools have emerged although they are not staples in every classroom._By comprehensively analyzing the viewpoints of several researchers, digital learning could be divided into four parts (Keane, 2012).Digital teaching materials: It emphasizes that learners could learn by extracting some digital teaching material contents. Virtual reality has the capability of bringing the outside world into the classroom and vice versa. Otherwise teachers will constantly feel that they are being required to implement new ideas.Teachers have different personalities and instructional strategies, and they should feel comfortable adjusting blended learning concepts to their own strengths and situations. The ability to take a project from idea to finished product can help students learn faster and retain knowledge better.Mobile Devices as Learning Devices: Recognizing that more people use their smartphones and other mobile devices for internet searches more than they use their PCs, a number of mobile app development companies are building learning apps for the education space—a quick count in the Apple App Store alone tallied more than 1,700 apps. Likewise, through their study on the transformational potential of blended learning, Garrison and Kanuka (2004) found that blended learning environments seize the values of traditional classes, which improve the effectiveness of meaningful learning experiences. At the most basic is the use of computers, tablets, and audio and video resources in classrooms. They can even search the Internet for other people’s’ works and submit them as their own. Learning using technology is not the same as learning through technology. However, even the most sophisticated technology is not 100% reliable. (2012, p. No studies have ever demonstrated a technology showing sustained and scale-able success without a mix of these and other elements. With the use of such resources, the students get to learn more. Hence, the cost of eBooks is always cheaper than the combined cost of traditional textbooks for the academic year. The researchers noted that there were few rigorous K-12 studies and so their findings are not necessarily generalizable to K-12 settings.It must be emphasized that this seminal work by Means et al. The teacher can edit the information, add questions, and add resources. A European reference framework that adopts a systemic approach can add value by promoting transparency, comparability and peer-learning._____________Distance education (distance learning):Various terms have been used to describe the phenomenon of distance learning. Other features such as adaptive release, instructor reports, and a calendar allow teachers to closely monitor student progress toward curricular goals.Google Hangouts:Google has also transformed distance learning through the use of hangouts, which allow students to video chat with instructors or peers. He also imagines digital books that could enable a variety of paths through a body of work. Not all information is linear or even layered, he says: “There’s a lot of information that’s spherical. Finally, instruction reaches the level of Redefinition when something is created that could not exist without the use of technology tools, resources, and access. Many terms had been used to describe learning that delivered online or via the internet, ranging from distance education, computerized electronic learning, online learning, internet learning, and many others. Learners can skim material they feel they already know and reread information that is more difficult._Many students are taking online courses because they don’t have access to a face-to-face version of the same course. In nursery schools, young students feel interested and develop curiosity when they observe technology. Disrupting schooling also leads to other harder to measure losses, including inconveniences to families and decreased economic productivity as parents struggle to balance work obligations with childcare. After decades of reviewing K-12 online and blended learning, researchers have found no examples of successful and scalable digital learning programs that did not use teachers. Typically, education is one of the last industries to make extensive change, holding on to antiquated methods and practices. 69 per cent of the disabled population lives in rural areas. The plan called for the preparation of teachers to take advantage of this improved technology infrastructure. Subsequent meta-analyses, such as Bernard et al. At the graduation level, less than 6% of rural and 25% urban households have access to a computer. Of course, there are many ways of learning by doing; drill and practice is one form of doing; exploring, discovery, and problem solving are other forms. They should select the technology that fits their learning goals before offering it to their learners.-3. Thus student who used to learn facts and skills by absorbing the content presented by teachers and media resources should move towards creating personal knowledge by acting on content provided by teachers, media resources, and personal experiences. Digital Transformation in schools is not about innovation or technology, it’s more a matter of culture. As the name suggests, ‘Shagun’ is coined from two different words i.e. ‘Shala’, meaning Schools and ‘Gunvatta’ meaning Quality. Again, countries in sub-Saharan Africa face the greatest challenges._Across 191 countries, some 1.5 billion students have seen schools close as part of their governments’ response to the coronavirus (COVID-19). Twitter can be used to connect learning communities over a specific topic or event by utilizing a hashtag. They are typically available as a series, new installments of which can be received by subscribers automatically.A webinar is an engaging online event where a speaker, or small group of speakers, deliver a presentation to a large audience who participate by submitting questions, responding to polls and using other available interactive tools. At the other end is an organizational intranet, which replicates printed course materials online to support what is essentially a traditional face to face course. Students, be it postgraduates, undergraduates, schoolchildren, have been confronted with unpleasant challenges as universities, colleges, and schools, continue to remain closed. Obviously, digital learning provides many advantages, convenience and reach being the primary ones. They can become familiar with the equipment and environment, and practice necessary skills without risking accidents to themselves, the equipment, and the environment. However, the curriculum design and the production of teaching materials for digital learning were digital contents that learners could freely select different courses and teaching materials, according to the level and preference, to achieve the tailored learning outcome (Sun et al., 2012).Complete records of learners’ learning history: A good digital learning platform should be able to completely record learners’ learning history so that instructors could understand learners’ learning conditions and learners could clearly realize the level or learning outcome for adjustment and improvement.Interactive learning: Digital learning was self-learning that the production of teaching materials should cover more media pictures, sound, or images than traditional ones to generate more attractive and lively teaching materials. They have mostly identity and sexuality needs. Still, you get the same benefits and level of knowledge as you would from traditional classrooms. Print textbooks have immutable information, small margins, and lack engaging characteristics. At Lancers International School in Gurgaon, students can go on field trips without stepping out of their classroom. (2006, as cited in Bdawi, 2009) there are three rationales for supporting blended learning: fulfilling the learner’s needs and motivating critical thinking skills; the flexibility of blended learning since the learning occurs online and face-to-face and its cost effectiveness.Dziuban, Hartman & Moskal (2004) in a three-year study between the face- to-face, fully online, and blended teaching methods found that blended teaching always give better success rates than the other two methods. When taking into account all the important factors, individuals are able to put into practice the function of planning in an adequate manner. Distance learning traditionally has focused on non-traditional students, such as full-time workers, military personnel, and non-residents or individuals in remote regions who are unable to attend classroom lectures. Traditional curriculum would focus on fragmented knowledge and disciplinary separation. Learning continuity would then be ensured for some but denied to others. Initial efforts are focusing on ensuring that all students have access to the Internet, the first dimension of the digital gap. This would allow all students to access online learning materials and digital platforms with educational content. Loading... The delivery of content can be done by Internet access and hardware (like laptop, tablet, iPad, smartphone, desktop). Subject curriculum and assessment, particularly with high-stakes external assessment, represents a barrier to digital learning (Fu, 2013; Orlando, 2013). Staffing is a function, which ensures that right individuals with proper skills, abilities, qualifications and experience are placed in right positions within the organization. However, simulation tools save money by increasing the rate of skill development which reduces training time with physical equipment. That’s hardly an exaggeration when you consider that for the past few years, highly prestigious schools, such as Harvard, MIT, and Stanford, have been offering full, non-credit courses of study online for free through something called MOOCs (which stands for massive open online course). The knowledge and skills are imparted entertainingly into the game. Unfortunately some studies were underdeveloped and had confounding variables, weak experimental designs, and other limitations that made it difficult to generalize broadly about digital learning tools. Between 2012 and 2013, almost half of the students who participated in the survey revealed that they attended counselling sessions for mental health concerns. However, the costs of providing bandwidth to sparsely populated areas are large, and debate continues about feasibility and how to pay for the necessary upgrades. A simple way to do this is to include a “continue” button allowing the learner to progress through the material at her own pace.People learn better from a multimedia lesson when they know the names and characteristics of the main concepts. Zameni and Kardan believe that with the widespread use of the internet, knowledge has become more effectively reachable by the mass students, educators and researchers. The flexibility offered by the bite-sized mobile learning content is immense, as it enables learners to complete courses and initiate the next course as well. When the experience is enjoyable, the students become more engaged. Teachers should ensure that knowledge and skills are not presented to students directly, but are constructed by them in response to information and learning tasks. Teachers and students have started to familiarise themselves with these virtual classrooms and now, classes can be held anytime in the comfort of their homes. Students should also be given tasks to demonstrate understanding and creativity.Language Barriers:Many learner’s first language is not English in developing nations. Watson’s virtual advisors fielded more than 30,000 questions in the first trimester, freeing up the actual advisors to handle more advanced issues. Synchronous learning is instructor-facilitated while asynchronous learning is self-directed and self-paced. Practitioners such as Harasim (1995) put heavy emphasis on the use of learning networks.With the advent of World Wide Web in the 1990s, teachers embarked on the method using emerging technologies to employ multi-object oriented sites, which are text-based online virtual reality systems, to create course websites along with simple sets of instructions for its students.By 1994, the first online high school had been founded. Take, for example, the privately owned company Magic Leap. (2004) found that overall there was no significant difference in achievement, attitude, and retention outcomes between distance education, which included online education, and the traditional face-to-face education. In addition, online tests and quizzes can be constructed with automatic grading capability that provides timely feedback (Kassop, 2003). Moreover, online platforms offer the promise, through artificial intelligence, of providing the optimal course pacing and content to fit each student’s needs and thereby improve educational quality and learning. In 2008, the Council of Europe passed a statement endorsing e-learning’s potential to drive equality and education improvements across the EU.In 2020 due to Coronavirus outbreak many schools are closed and more and more students are enrolling in online courses to enforce distant learning. Organizations such as UNESCO have listed educational technology solutions to help schools facilitate distance education._Unlike Computer-assisted instruction (CAI), which began with a focus on in-classroom and learning lab use, much of the online learning we see today in K–12 schools had its origins as a form of distance education. Each student has access to an Internet connected device, whether it be a laptop, tablet, Chromebook, or other device, and the majority (or all of) the curriculum is delivered via an online, engaging, interactive platform. Being able to see the target and backwards plan towards that target is vital.You need to communicate well in writing. Further large-scale use of technologies was employed in training soldiers during and after WWII using films and other mediated materials, such as overhead projectors. A 2015 survey of a nationally representative sample of adults ages 18 and older reported growth in ownership of smartphones and tablet computers, whereas ownership of other kinds of computing devices (such as laptop and desktop computers) was relatively constant or had fallen (Anderson, 2015b). And then the results are declared. Digital learning offers students the ability to connect with their peers not just nationally, but globally. Digital learning is meant to enhance the learning experience rather than replace traditional methods altogether. Quizzes, assignments, and exams are designed to grade and distribute students, not to help enhance retrieval and retention of content.Online learning can overcome all these issues. They say, “TV does what it wants to do. According to health experts, online classes are an added burden on kids’ already strained eyes. Teaching and learning become a smoother experience as it includes animations, gamification and audio-visual effects. While this type of learning is more often used in traditional classrooms than in online courses, it’s still a valid type of e-learning which can be highly effective if done correctly.Computer-supported collaborative learning (CSCL) uses instructional methods designed to encourage or require students to work together on learning tasks, allowing social learning. This applies to education as well. What they learned was that schools are underfunded and teachers are undertrained, facing environments where the technologies they use aren’t always reliable. It is said that only when we do something, actual learning takes place, as that is when we understand the concept. And they must be active in order to be able to learn. This program consists of excellent facilities to diagnose performance and give adequate feedback and guidance. Their popularity can chiefly be explained by the huge amount of leisure time that children and adolescents spend playing video games (Papastergiou, 2009a). The system will then check the profile of every individual child and give him (on his personal electronic device) a tailor made exercise which is neither too easy, nor too hard. These types of LMS allow educators to run a learning system partially or fully online, asynchronously or synchronously. When individuals are young, they need guidance and assistance, but as a person grows older, he is able to make use of it independently._Digital technology can be competent and valuable with the main purpose of making improvements within the learning areas (Higgins, Xiao, & Katsipataki, 2012). LMS allows the communication of learning objectives, and organize learning timelines. Some studies conclude that students achieve marginally better learning and feel slightly more supported with online and distance learning. al (2013) worked with middle-grade students and found that those who read print comprehended more than those who read an eBook on an iPad. It tracks data about attendance, time on task, and student progress. Either, simulations are about something or about how to do something (p.214). However, remote learning is treated with caution by other providers as it is seen to classify this method of delivery as removed from the rest of a providers’ program and from the provider itself._Face-to-face, in-person, on campus or onsite delivery?Face-to-face delivery of education and training program has been in common use for some time in the higher education sector. When schools close, educational performance suffers. Educational publishers and institutes also include gamification and interactive quizzes and assessments to make the course module more challenging for the students. This is particularly convenient for those who may need to reread a lecture or take more time to reflect on some material before moving on.The online format allows a dynamic interaction between the instructor and students and among the students themselves. The second level is applying general instructional strategies based on the use of these tools and resources. In parallel play, children play alongside other children without much interaction with each other. Digital learning is the process of using digital tools and technology to create a better learning experience for students. The Covid-19 has resulted in schools shut all across the world. Here again comes the aspect of the digital divide: poorest students do not have access to smartphones, and even if they do, net connectivity is poor, and content is often not available in vernacular languages. Providers have indicated the need for automatic notification of the latest research, a single searchable portal of information, and access to grey literature. The Maternal and Child Health (MCH) Library is funded by the U.S. Maternal and Child Health Bureau to screen the latest research and develop automatic notifications to providers through the MCH Alert. However, both terms have connotations leading to some providers clearly favouring one over the other as they seek to clearly articulate what they are offering their students.Distance learning is a term that was in use before the widespread proliferation of digital approaches to learning and was initially related to courses delivered by correspondence. As with face-to-face learning, this term has its root in the communication style that students adopted to engage with members of staff responsible for delivering the program by distance. Results showed that the learning instruction elicited deeper learning than the entertainment one, without impacting negatively on motivation. Its conclusions are:“on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction.”Blended learning (a combination of online and face-to-face instruction) showed the best results.However, “blended classes often included additional learning time and instructional elements not received by students in control conditions. In 2015, 49 percent of students stated that they had taken an online course in the last 12 months. Essentially, these programs built on existing knowledge and give learners the opportunity to consolidate and repeat knowledge and train and automate skills (cf. There remains limited evidence to show that technology and online learning are improving learning outcomes for most students. Even though it has yet to really sell anything, Magic Leap is already valued at four and a half billion dollars! This speaks to the projected endless possibilities of technology transforming classrooms.Figure below shows student using VR headset:A growing number of schools are using VR program to teach history, math, science and more. The pandemic has surely changed the future of education and a duty is cast upon us to explore the profuse potential of e-learning in the words of Buckminster Fuller when he said, “You never change things by fighting the existing reality. A study:There is a long-standing debate surrounding what should and should not be included in instruction. Overcoming the physical distance, the ICTs are influencing and considerably changing the learning environment, as presented by some authors (Davis et al., 2018; Herrada Valverde, Baños Navarro, & Navarro, 2018)._“Each person is a switchboard, between ties and networks”(Wellman et al., 2002)Wellman’s quotation above expresses a famous metaphor on how technological advances have reached a point where we (humans) are merged into a larger system with other media and tools. The students can learn when they want and wherever they want. Nowadays people use a variety of mobile devices, depending on where they are and what they are doing. Therefore, in terms of corporate online training, this research is appropriate. Numerous situations exist in which online training can be useful, cost-effective and even preferred. Using online learning for online university classes may be different than using it for corporate training, and although some of the same data can be used, it must be interpreted as it relates to both for profit and not-for-profit corporations while identifying the limitations and the scope of applicability of current research.A recognized form of corporate training evaluation is the Kirkpatrick Model:An adaptation of the Kirkpatrick Model can be used as a model with which one can evaluate and therefore potentially measure the effectiveness of an online training module.The Kirkpatrick Model consists of four steps that can be used to evaluate training programs: (1) reaction, or how well learners were satisfied with the program; (2) learning, or the principles, facts, and techniques that were learned; (3) behavior, or the changes in job behavior that resulted from the program; and (4) concrete results in terms of cost reduction and quality and quantity improvements” (Galloway, 2005, p. This is a remarkable example of how digital tools can help reduce inequalities in the world.______Facilitating factors for digital learning:_____________Pedagogies of digital learning:Digital Learning is a broad term used to describe the use of technology that is applied to the learning process. In this way, students control their own learning experience and tailor the class discussions to meet their own specific needs. Many training applications involve training for high-risk or dangerous situations that would be difficult to train for in the real world.In the field of aviation, pilots-in-training spend many hours practicing in flight simulators before flying in a real aircraft. Digital technology approaches often require additional training and support for teachers which can be essential in ensuring the technology is properly used and learning gains are made. At a basic level, these options include:-Online tools and resources in physical classrooms-Hybrid and blended programs that combine online and onsite learning-Fully online schoolsEach of these major categories has many varieties that may be appropriate for meeting different student needs.Figure above shows defining dimensions of digital learning.Lead with teachers—not technologyK-12 online and blended learning have been studies for 20 years. She concluded that these studies did not provide enough evidence for assessing whether online learning is significantly more or less effective than the traditional face-to-face format.In short, there is not a constant effect for the effectiveness of online learning relative to traditional learning. However, there was significant heterogeneity in student learning outcomes for different activities. However now we should focus on multidisciplinary themes as future generation will need the ability to move through several different jobs. Lack of any one or more will fail to provide education electronically.As the figure shows, apart from the electronic devices and internet connectivity, infrastructure is also a vital facet of online education, one that is often overlooked. As a result, we think of them as ‘too human’ to be taken over by machines. It can be unnerving for students who have only ever known traditional classroom settings. For many people in the past, academic program calendars have not matched work and family responsibilities, and program offerings may not have met learner needs.Alleviating capacity constraints.Many states are expecting more college students over the next decade than their facilities can accommodate. As of 2016, the most common digital learning materials used in weekly in PreK-12 classrooms in the United States were online educational videos, educational apps or software, as well as research websites.Students are turning to online courses as well. It encompasses several domains including learning theory, computer-based training, online learning, and m-learning, where mobile technologies are used._Related terms:Educational technology is an inclusive term for both the material tools and the theoretical foundations for supporting learning and teaching. But with digital education, even if he does not understand anything at one go, he can attend the recorded sessions to clear his doubts. “The concept intersects—and overlaps—with notions including adaptive learning, differentiated instruction, competency-based education, and analytics.” (EDUCAUSE, 2016). Combined with peer-to-peer collaboration and discussions on a digital facilitation platform such as Howspace, blended learning truly sets the participants up for success. This includes understanding online communication etiquette and knowing student rights and responsibilities in an online learning environment.Best Colleges surveyed 1,500 online students and found convenience and flexibility were the top reasons why students chose an online format. It stands for Attention, Generation, Emotion, and Spacing. Overall, there is strong evidence to suggest that online learning is at least as effective as the traditional format, but the evidence is, by no means, conclusive. Do my students have wireless network capabilities or Internet access at home and in school? Adaptive learning keeps the learner engaged throughout the entire course by presenting new material on a timely basis.Linear Learning:When referring to human-computer interaction, linear communication means that information passes from sender to receiver, without exception. Students can submit their work, read and respond to discussion questions, and take quizzes. Perhaps most importantly, be patient and create appropriate expectations among stakeholders. Moreover, Rovai and Jordan (2004) claimed that blended learning is a mixture of online learning and classroom that contain some of the facilities of online courses with the presence of face-to-face communication. eLearning often doesn’t allow that with trainers often having to answer numerous questions all of the time and only doing it within working hours – where a lot of learners may prefer to do their learning out of working hours. Driscoll (2002) defined blended learning as a combination of instructional methods. The challenge lies in trying to get them to adapt to digital ways of learning. And what kind of readers? Students can copy and paste each other’s work into their own assignments. Thus learning is ultimately considered one of the fundamental pillars of society changes. Sometimes administration cannot see beyond the bottom line and look at online programs only as ways to increase revenues and are thus not committed to seeing online programs as a means of providing quality education to people who would otherwise not be able to access it. If facilitators are not properly trained in online delivery and methodologies, the success of the online program will be compromised. When a student is engaged in regular learning, they have to go to the institute regularly. Immersive environments (notably SecondLife) have also been used to enhance participant presence in distance education courses. A few examples of these platforms are:MoodleBlackboard LearnCanvasSakaiSchoologyLearning management systems are also prevalent in the enterprise. Some open universities have grown to become mega-universities, a term coined to denote institutions with more than 100,000 students._Open and distance learning (ODL):Open learning is an umbrella term for any scheme of education or training that seeks systematically to remove barriers to learning, whether they are concerned with age, time, place or space. This leads to issues with attendance and participation in online sessions. There is a huge amount of transformation that takes place in the present world in every nanosecond. The latest ideas for adaptive learning allow pacing and support from tutors and peers to be included in designs that used to be solitary. With digital learning, dynamics of classroom learning are turned on their head. 60% felt it hindered writing and face-to-face communication; i.e., communication with full sentences and longer has lost out to short snippets in writing or media.-3. In a 2016 experiment they asked 90 undergraduates to read short informational texts (about 450 words) on a computer and in print. The NGDLE should provide mechanisms for seamless collaboration across a variety of tools and platforms, promoting cooperation both within the institution and beyond it.Accessibility and Universal DesignFor the NGDLE, accessibility won’t be an add-on or an afterthought but a central aim. These students are growing up in an interactive world and they view learning through the lens of interactivity. Here’s the thing; Ted-Ed is full of educational videos on a variety of general education topics that can be accessed for free. A singular focus while reading printed textbooks might contribute to increased learning comprehension._Millar and Schrier (2015) mentioned that the primary reason that students want a print textbook is that they,“simply prefer print to digital, and they also believed that printed textbooks were more convenient than electronic textbooks” (p. From the use of community radio to assistive technology, accessible digital technology, sign language interpretation, video conferencing facility, and so on and so forth,” he said.Two massive surveys have been conducted by a community-based organization Swabhiman, and Disability Legislation Unit for Eastern India in association Center of Advocacy and Research. However, technological proficiency is a must for following online courses, as it enables students to manage their assignments and courseware in an organized manner without struggling. Mobile learning is popular because it enables learners to engage in the learning process “on-demand”, wherever and whenever the learner desires.Personalized Learning:Personalized Learning is a custom-tailored learning process that is created to help an individual learner. Everyday new content of at least 4 hours duration is floated on the website which runs 5 times in a day. In the simplest terms, we can define Semantic Web as a relationship between things, described in a manner which makes people and machines able to understand. However, these supportive forums require more planning and preparation time than teachers often have.Professional development also must be geared towards specific subject areas and grade levels, which is a final step in an educational technology learning pyramid.Experienced teachers emphasize that successful professional development operates over three levels. Later through overhead projectors teachers were able to do the writing in advance and project them directly. The medium didn’t matter for general questions (like understanding the main idea of the text).-6. Motivating learners is one of the common challenges faced by the eLearning developers. There’s the instruction time itself, with real-time question-and-answer. The web can be a useful tool for bringing isolated learners together in “virtual” groups—for example, through a discussion forum. Self-directed

learning, which is the most personalized kind of learning, is more prevalent nowadays in informal learning settings (e.g. museums and exhibits) than in the formal educational system, but with technology, could become embedded in the student's "workday" to help them achieve higher levels of productivity. This includes increased distractibility for younger children, and addiction-like behaviours for older children.-Cyberbullying among children and adolescents is a growing concern in schools, increasing dropout rates and affecting academic performance. With the long history, it has been broadly applied and is still one of favorable teaching methods of instructors. Cases where podcasts did not result in higher scores were attributed to small, invalid sample sizes and technical difficulty accessing the podcasts.Six studies evaluated blogs in classes ranging from English language learning to science to physical education. Firstly, students and teachers need access to resources. Looking to 2020, digital portfolios accessible from multiple devices will make it easier for students to demonstrate real-world skills and knowledge, and will serve as a stronger link to their next steps professionally and educationally._____Move from system (LMS) to ecosystem (NGDLE):Throughout the early twenty-first century, the learning management system (LMS) played a key role in enhancing the learning experience for educators and students alike. This research mentions that the results are mostly from studies in settings such as medical training, higher education, corporate and military training, and therefore should not necessarily be applied to the K-12 population (US Department, 2009). ...Deliberately re-expose yourself to the information more elaborately, and in fixed, spaced intervals, if you want the retrieval to be the most vivid it can be. Furthermore, they have to deal with students having different abilities in the same class which makes it impossible to give each and every child the individual attention they deserve. However, LOGO programming skills did not consistently yield cognitive benefits. The use of information and communication technologies have been found to improve student attitudes towards learning. By incorporating information technology into class projects, communication between lecturers and part-time students has improved, and students were able to better evaluate their understanding of course material via the use of "computer-based qualitative and quantitative assessment modules".Another advantage of blended learning environment is its potential to offer many sources for learners. Along the way, children need to solve riddles and play games that allow them to practice for example basis math, language or logical skills.The third stage of development is the rule/role stage (ages 8-12 years).The interest of children in this phase gradually shifts from fantasy to reality (Markopoulos & Bekker, 2003). In "micro-learning," we can quickly read, view, or consume and it only take 10 minutes or less. The collaboration engages groups of people in not only sending and receiving feedback but working together for creating, building, and editing, These skills are a necessity for students' futures as they grow and enter the workplace. Concerns about these digital opportunity gaps have inspired the creation of clubs and community centers with rich technology resources and social supports to enable more of the U.S. population to use a larger range of technologies._Basic Internet access in U.S. schools has become more consistent over time for students from different backgrounds (Warschauer and Matuchniak, 2010). Show your students relevant videos and make your content interactive. SecurityThe covid-19 outbreak, as well as any other crisis, is a fertile ground for cyber criminals, unleashing the wave of cyber-attacks. An eLearning course can take anyway from 40 to 75% less class time than a traditional course. First Aid training involves practicing CPR on a programed dummy that is equipped with simulation tools. Atkinson, experimented with using computers to teach arithmetic and spelling via Teletypes to elementary school students in the Palo Alto Unified School District in California. It is sometimes argued that the Internet supports forms of knowledge creation and knowledge consumption that differ greatly from the epistemological presumptions of formal schooling and mass instruction. One way of activating joy and excitement is by introducing an element of competition; engage learners in the excitement of trying to win, and help combat negative emotions by enabling small wins along the way.Finally, by spacing learning, you can increase the long-term stickiness of your content. In spite of the many ill-designed drill and practice programs, this criticism seems to be too harsh. The incentive to develop ITS comes from educational studies showing that individual tutoring is much more effective than group teaching, in addition to the need for promoting learning on a larger scale. The Internet allows learning to take place on a many-to-many rather than one-to-many basis, thereby supporting socio-constructivist modes of learning and cognitive development that are profoundly social and cultural in nature. Educational researchers from diverse disciplines have been trying to identify the success factors of learning with digital media in higher education for about two decades. Provided that online learning is already a kind of challenge for the students, those deaf or hard of hearing facing a double problem multiplying the chances of falling behind.Problem 10. Being still the most dominant form of pursuing an education, brick and mortar colleges allow students to interact with one another and discuss with teachers face-to-face. A teacher can scribble away on this interactive whiteboard through a mouse, a keyboard, or – if it's a touchscreen – just by using his or her fingers_Classroom Technologies:Classrooms are becoming modernized with help from Virtual Reality, 3D printing, Cloud Computing and Social Networking. Teachers do their best to provide the best learning opportunities for every student, but in a large classroom it's impossible to cater to varying skill levels and learning styles. Separating student learning outcomes based on synchronous and asynchronous activities, activities that have to be done at the same time or at each person's convenience respectively, showed that the mean achievement effect sizes for synchronous work were better for the traditional format, but asynchronous work favored distance education. Students should be encouraged and empowered to use digital media for communication and collaboration as well as for learning and knowledge exchange in an appropriate way to become competent and proficient members of a knowledge society. They can share resources, discuss and learn. We as information-seeking humans consume this kind of material all day, and most of the news sites and social networks now offer such learning in a massive, curated stream. Various types of abacus have been used. Use the mobile app, your web browser, or the computer-based app.Zotero is a tool that quite simply makes research more functional and organized. These stages of development describe the skills, needs and knowledge of children and how technology for children in these age group should be designed.The dependency/exploratory stage is the first stage of development (ages birth-2 years).In this phase, children experience discovery, exploration and learning. In contrast to that linear delivery of content, often directly from the instructor's material, CSCL uses social software such as blogs, social media, wikis, podcasts, cloud-based document portals, and discussion groups and virtual worlds. Groups created on LinkedIn might be perceived to have an added level of credibility because users display their career credentials on their profiles. Some examples of a digital curriculum include:-Online courses-Electronic textbooks-Digital and online programsOnline courses range from K-12 to university and vocational levels. The last step is to transfer what is obtained into real life. That helps schools focus on providing the best learning environment, instead of tending to their networks._Problematic Features of Educational Technology:Educational technologies are replete with features that can facilitate learning in controlled settings but can also serve as a distraction to many students (Gurung and Daniel, 2005). Further, textual images can be OCRed so as to make its contents searchable._Digital learning and educational technology are not synonymous. Additionally, educational institutions use computer-managed learning systems for storing and retrieving information which aids in educational management. Blended learning gives more responsibility to the student, as it involves less direct instruction from the teacher and more discovery-based methods of learning. Given this, the use of the term face-to-face was used to denote if communication (and therefore delivery of some teaching and learning) was taking place in person or if it was taking place remotely. Do you remember opening a history textbook and realizing at the end of the first chapter that you zoned out on page 3? In order to advance this educational field, we have to engage with digital learning.In simple and easy terms, we can define digital learning as any type of learning that is facilitated by digital technology or by instructional practice that makes effective and best use of digital technology. Even at home, students favour computers over television. They reported some disadvantages regarding E-learning such as lack of interpersonal skill development, lack of memory and learning development and lack of student motivation. Moreover, most of them live off campus and find it difficult to keep in tune with the technical requirements of the chosen course.Problem 3. In addition, the virtual classroom provides a social learning environment that replicates the traditional "brick and mortar" classroom. Technology is just a tool, not the instruction and this technology is the main source to deliver content and facilitates how the content should be received by the students. This type of e-learning does have its place in education, although it's becoming less relevant with time. and Moodle. This instructional strategy can be implemented without using computers, but online quizzes allow for much quicker assessment and data collection. This will allow testing of problem solving skills of a student. Media psychology is an emerging specialty field that embraces electronic devices and the sensory behaviors occurring from the use of educational technology in learning.Lack of Essential Online Qualities:Successful on-ground instruction does not always translate to successful online instruction. Traditionally, a degree of passivity is expected during lectures, particularly when note-taking and listening, while discussion with tutors is allotted a limited time. When introduced in classrooms, digital technologies can disrupt existing routines (Ertmer, 1999) and negatively influence teacher confidence (Prestridge, 2012), reputation, and identity (Claxton, 2008).There is considerable focus in the literature on the intrinsic influence of teacher knowledge and skill as well as teacher vision and design thinking (Refer to Figure above). It is still appropriate to track measures such as Advanced Placement exam scores, college credits in dual-enrollment classes, and course completion rates, to ensure that these online courses are cost-effective and a productive use of students' time.Given that online, blended, and digital learning are being used by schools to meet student's needs, valuable research focuses on determining promising practices and related questions. In addition to the time background, it was rapidly developed because it broke through traditional teaching modes and presented various strengths. For evidence of this distinction, one need only notice that many schools allow their learners to use educational simulations at school, while games remain strictly 'verboten'._The trend toward increased interactivity and personal experience is expected to continue into the future and to become more embedded in work and everyday life. At the end of the exercise, the system automatically corrects the worked exercises and provides immediate feedback. In the UK, the Council for Educational Technology supported the use of educational technology, in particular administering the government's National Development Program in Computer Aided Learning (1973–77) and the Microelectronics Education Program (1980–86).By the mid-1980s, accessing course content became possible at many college libraries. Performance data is often entirely missing in digital learning environments: The National Education Policy Center found only 15 of 38 surveyed states maintained overall performance rating data for K-12 virtual schools (Molnar 2017). This type of learning is not ideal for developing communicational skills and teamwork abilities in students, as it largely focuses on students learning independently, without communication with other students. Studies published before 1998 do not find significant difference between distance education and traditional education while studies published in and after 1998 generally find significant differences in favor of distance education. To get a more complete picture, there needs to be an examination of the mixed and negative findings to arrive at a more nuanced conclusion._The Mixed and Negative Findings:Compared to the number of studies that found positive or no significant effects for student learning outcomes in the online format, the number of studies that found mixed or negative significant effects is much smaller, by a full order of magnitude. LOGO, a programming language, embodied an attempt to integrate Piagetan ideas with computers and technology. Initially there were broad, hopeful claims, including "perhaps the most controversial claim" that it would "improve general problem-solving skills" across disciplines. There have also been discussions around 3-D social networking systems and immersive 3-D internet environments that will take the best of virtual worlds (such as Second Life) and gaming environments and merge them with the Web. Miyoshi et al. However, without an instructor or other learners in the room to help recapture participants' attention, it is important that e-learning modules are simple, straightforward and recapture their attention every 20 minutes.Generating information, including linking new information to knowledge we already have, is another important factor that activates our hippocampus. This set of skills and understandings will "prepare the workforce or citizenry for a changing, interconnected world". Students who watched a concise multimedia treatment on stellar spectra performed similarly on the post-test to those who watched an extended version. 72 % felt that sending text messages hurts my ability to learn during lecture.-3. Parameters, such as age-appropriateness, coherence with sought-after values, and concurrent entertainment and educational aspects, have been suggested for choosing media.At the preschool level, technology can be introduced in several ways. Augmented reality enriches the students learning experience through multiple sensory modalities such as visual, auditory, haptic somatosensory and olfactory. As data collection becomes easier, we'll be able to build deeper learning dashboards that give some indication of the quality of the experiences that most students engage in. Children make use of interactive products, such as games, toys or educational applications, both during leisure time and in school environments. It's also true of all educational organisation types, including schools, colleges, universities and language training institutions.A digital learning platform is a piece of software designed to heavily assist during the educational process. The trick is to balance that reach with the same rich learning experience as if the instructor were right there. Each class is recorded and stored on a server, which allows for instant playback of any class over the course of the school year. Many LMSs are now offered as SaaS (software as a service), with hosting provided by the vendors._Internet-based learning management systems include Canvas, Blackboard Inc. Educators have noticed that when technology is integrated into the curriculum, students tend to demonstrate an eagerness to learn. With the steady rise in digital learning materials, and the various interactive elements being incorporated into these digital resources, the teaching faculty is hoping to create an engaging learning environment and improve student learning outcomes.Ways to Improve Student Learning Outcomes:Interactive Learning: It's important for the students to be able to visualize whatever information is given to them. Instead, on average fully online coursework has contributed to increasing gaps in educational success across socioeconomic groups while failing to improve affordability. Digital learning offers students constant feedback- where they excel, what they need to work on, and a sense of accomplishment when they succeed. They know that them being late or absent is something that can be held against them later on in exams. Through the analytics module, the Artificial Intelligence (AI) will also predict and flag students which will be facing issues in the following weeks so that the teacher can intervene on them directly. The former (physical simulations) focuses on an object or a phenomenon, the latter (procedural simulations), concentrates on a sequence of actions to reach a goal. For the faculty as well as the participants, such things as being left out of meetings and other events that require on-site interaction could present a limiting factor in an online program.The Administration and Faculty:Some environments are disruptive to the successful implementation of an online program. The 2016 Broadband Progress Report indicated that 41 percent of U.S. schools did not have Internet access at transmission speeds (bandwidth) capable of supporting digital learning applications (Federal Communications Commission, 2016)._The gap is particularly acute for those living in sparsely populated areas and on tribal lands. When conducting research in digital environments, taking a whole system approach is essential to understanding the many interacting elements and varying contexts.The use of technology in education does not automatically result in a change in educational outcomes. With emotional health heavily dependent on both concepts, these emergent technologies may have some negative impact._____How does digital education benefit the child?Interactive: With digital education, classroom teachings have become more fun and interactive. Which would you choose? However, even if a virtual professor is competent enough to create a comfortable virtual environment in which the class can operate, still the lack of physical presence at an institution can be a limitation for an online program. For example, one school might be sending printed materials only or suggesting that students watch videos aimed at the general public, while another school is able to continue classes virtually or initiate creative ways of using digital apps for collaborative learning and individualized student support. So it increases the understanding and retention ability of the students.Cost Effective:A paperback book is costlier because it involves a lot of process in its making. As online notes can be shared with peers, students would also have access to any extra information provided by the teacher in class. (2005) analyzed prior literature, which included the Russell's 1999 study among other meta-analyses, and found that the overall mean effect size was close to zero, but there was a modest size standard deviation. Digital contents are less expensive and they can be shared among students and teachers in a click. On the other hand, Digital Classroom refer to online classes with virtual set up possible through virtual classroom software. Even if the entire education system is not digitalised, yet students can leverage the power of digital content depending upon their capabilities. Artificial intelligence can truly help in strengthening digital learning and it can lend a helping hand to teachers in bringing correctness in their teaching methodology as recording or scripting lessons takes gargantuan efforts and time. According to NCTE, active, successful participants in this 21st century global society must be able to:-develop proficiency and fluency with the tools of technology;-build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought;-design and share information for global communities to meet a variety of purposes;-manage, analyze and synthesize multiple streams of simultaneous information;-create, critique, analyze and evaluate multimedia texts;-attend to the ethical responsibilities required by these complex environments_____Improve Student Learning Outcomes:In this age of digital content consumption, students are likely to get easily distracted if they do not find their curriculum interesting enough. Internet is arguably the most potent force for learning and innovation since the printing press. For now, traditional educational methods still have a place within modern education. After delivery, the effectiveness of the training materials is evaluated.Evaluation:This phase consists of (1) formative and (2) summative evaluation. Although successful blended teachers and schools report that their students have learned to take control, the teachers say that many of their students have not yet made this transition.Although many teachers relish their new role in working with smaller numbers of students, and allowing students greater voice and choice, some feel that this change has reduced their role. For those tasks that require more visualization, a bigger screen may work better._____Impact of digital learning:Schoology conducted a landmark K-12 study called The State of Digital Learning. Teachers should be involved in every phase, from planning through implementation and assessment. Teaching in behaviorism has been linked to training, emphasizing the animal learning experiments. That means internet technology has been considered as an important medium for many aspects of our lives including academic learning. This allows the learner to focus on the critical material that is presented.Spatial Contiguity Principle.People learn better when corresponding words and pictures are presented near to, rather than far from, each other on the page or screen.Temporal Contiguity Principle.People learn better when corresponding words and pictures are presented simultaneously rather than successively. The current situation has also laid bare the language divide prevalent across India with vernacular medium schools largely (though with exceptions) catering to the poor whilst English medium schools cater to other sections of the society. Top education bodies of the nation such as NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS provide content to INFLIBNET Centre which runs these channels. "But in a digital environment we can easily enable a plurality of reading paths in educational and scholarly texts." In addition to the hyperlinks, video and audio that currently enhance many digital texts, Kircz would like to see innovations such as multiple types of hyperlinks, perhaps in a rainbow of colors that denote specific purposes (annotation, elaboration, contrary views, media, etc.). These subjects are probably best taught in a face-to-face traditional learning environment._Educational technology is thought to improve hand-eye coordination, language skills, visual attention and motivation to complete educational tasks, and allows preschool children to experience things they otherwise wouldn't._Digital learning can lead to 25%-60% improved content retention relative to traditional classroom learning provided it delivers adaptive, gamified, or social learning. All these processes add to the cost of each printed book. This increases productivity and learning efficiency. Everyone is having a baffling time but performing better than usual in this time of a pandemic would surely help us to steer our ships to their cherished goals. The participatory, shared nature of many social Internet applications and activities is aligned closely with the fundamental qualities of how humans learn, not least the practices of creating, sharing, collaborating, and critiquing. Formative assessment sifts out the incorrect answers, and these questions are then explained by the teacher. These literacies are dynamic due to the ability to be linked to one another. The secret to overcoming unrealistic deadlines is full transparency and honesty. A strong body of evidence, as well as industry best practices, have consistently emphasized the critical role of frequent and meaningful interaction between students and instructors for increasing the quality of the online educational experience and improving student outcomes and satisfaction. However, in their current design, online courses are difficult, especially for the students who are least prepared. 76% felt students were conditioned to find quick answers.In short, technology is changing the way our students learn, and not always for the better.In another survey, university students were asked how often they use their cell phones while in class for non-class related uses (Baron 2015). The overlap between content and pedagogy is the critical region of teacher activity where knowledge is transformed in ways that support learning (Shulman, 1986). In addition to computers in the classroom, a growing number of mobile devices such as tablets and even student-owned smartphones are being put to work as tools for both learning and student engagement. Another use for AI includes chatbots. Many such factors which increase the cost are chopped off in e-learning. They also showed interest in other academic performance analytics. And, less than 17% rural and 44% urban households have access to internet. Many psychologists used these results to develop theories of human learning, but modern educators generally see behaviorism as one aspect of a holistic synthesis. An example of such program is the Dutch program 'Plato en de rekenspiegel' [Plato and the arithmetic mirror] that provides learners with ample opportunities to practice their numeric skills. In addition, you can use any video from YouTube and create your own flipped lesson.NeoK12:NeoK12 contains educational videos, games, puzzles, and quizzes. Some educators have made great strides in applying these concepts to their on ground teaching. This limits machine downtime, reducing impact on workplace productivity. Certain MOOCs may charge a student looking to earn a specific certificate for the completion of their coursework. Augmented reality sits in between Virtual Reality and real Classroom training in terms of cost and scale benefits._____Distance education delivery:Internet technology has enabled many forms of distance learning through open educational resources and facilities such as e-learning and MOOCs. Although the expansion of the Internet blurs the boundaries, distance education technologies are divided into two modes of delivery: synchronous learning and asynchronous learning.In synchronous learning, all participants are "present" at the same time. When a digital learning platform was able to organize relevant resources for the use or connection of learners, network resources would be effectively applied through digital learning, and instructors or learners could acquire richer information beyond teaching materials in the curriculum to enhance the learning effect (Im et al., 2011).Digital learning contents and tailored learning schedule: Learners were equally treated in traditional teaching for same teaching schedule and contents, regardless of learners' level. As educators transform their courses to take full advantage of the online format, they must reflect on their course objectives and teaching styles. Teachers also are struggling with the rapid transition to online learning, even those in countries with reliable infrastructure and household connectivity. These tools need to be reliable, easy to use, and up to date, for them to have a meaningful impact on the learning experience. Most open universities use distance education technologies as delivery methods, though some require attendance at local study centers or at regional "summer schools". Digital textbooks eliminate the cost of replacing print textbooks every few years, since new content can be uploaded anytime. Lessons can become more interesting with virtual experiences, videos and other exciting content you can't always get out of a text book!_____At Podar International School, in Santacruz, Mumbai, iPads were introduced seven years ago. al 2018 pg. Knowledge isn't held captive behind university walls; it can spread throughout the world. It stresses on personal autonomous learning and requires the participation of learners with autonomous learning to precede learning activity._Below is a glimpse into the hardware being used by the faculty and administrators who took one survey._By digital tools we mean hardware (computer and mobile devices) and software including platforms for teaching and learning which work with digital learning materials like text, images, audio, and video. Thus the teachers are now equipped with tools to teach effectively.Table below summarises these options.MethodTeacherStudentVerbal explanationsDictateListen and copyWriting during classBlackboard / whiteboard & Chalk / PenCopy notesPre-written transparenciesOverheadProjectorCopy notesPre-prepared slidesMultimedia projector & computerPrinted materiale-learningProvide learning materialLearn through participationTable above shows various Classroom Facilities:_Teacher's Role:In the modern global learning environment teacher's role shifts from "dispenser of information" to "facilitator of learning" as he has only to guide the active students who are involved in using the e-learning material. Often MOOC courses are patterned after top tier universities, such as Harvard and Yale, which is great for learners who want quality training on a given topic for free. CBT initially delivered content via CD-ROM, and typically presented content linearly, much like reading an online book or manual. 8)._____Does digital learning work as good as or better than face-to-face instruction?There is no simple answer to this question for some reasons.First, there are so many types of online, blended, and digital learning that no single answer can cover them all.Second, comparisons of different school types or instructional models are notoriously difficult. According to a 2013 Pew Research study, 39 percent of Advanced Placement and National Writing Project teachers of low-income students believe their school is "behind the curve" when it comes to effectively using digital tools in the learning process. Other studies have also found that sex is a moderating variable for student learning outcomes when comparing online and traditional formats (Figlio, Rush, & Yin, 2010; Xu & Jaggars, 2013). Yet, these pockets of innovation are confined to a small number of schools and communities. The nature of the semi-autonomous and self-directed world of the Virtual Classroom makes innovative and creative approaches to instruction even more important. The screen mark-up can be on either a blank whiteboard or any computer screen content. Apps are designed after games, which provide a fun way to revise. Tutorials mostly offer pre-defined sequences to build up the desired knowledge and skills. Jay Samuels and Yi-Chen Wu, indicates that immediate feedback is incredibly effective in helping students understand content and improve performance as they can immediately learn from their mistakes._Examples of Simulations used in Education:Simulation tools used for education can be found across numerous industries, with new uses being implemented as technology continue to improve. While a mature market like the United States has access to fast internet that can support large data downloads required for digital books, most of the developing world still struggles with this.Let's face it, the biggest impediment to technological change has never been technology itself, rather it has been the people affected by the change. For one, there is the unlimited distraction of already being on the internet; social media, YouTube and news websites are as present as your next assignment. And, student-student interactions are generally more abundant.Bring together diverse people, cultures, communities and cities:Comprised of students logging in from all over the nation, online courses may tap into endless possibilities imaginable from bringing together diverse people, cultures, communities, and cities that expand our learning opportunities based on unique experiences and perspectives outside of our physical location.Multi-dimensional content and learning exercises:When every aspect of learning and engagement in a class takes place in the online environment, it is very easy infuse lots of multi-dimensional content and learning exercises throughout the course, including numerous technology-based learning opportunities. Misconceptions that technology is replacing teachers are common. We can think, we can repeat, we can recall and we can imagine, but we aren't built to memorize. In their reviews of the literature on motivation in an academic context, Murphy and Alexander (2000), and subsequently Moos and Marroquin (2010), underscored the need to take several motivation constructs into account, in order to understand the complex mechanisms involved in learning more fully. By using a combination of digital instruction and one-on-one face time, students can work on their own with new concepts which frees teachers up to circulate and support individual students who may need individualized attention. Any physician can tell you how frustrating it is when patients come to their offices with wrong information they've gathered from a search engine, which simply shows them the most popular answers. Avoid multitasking.-4. A paper by the National Institute of Education in Singapore assesses the current state of research on the effectiveness of digital technologies, primarily the use of podcasts, blogs, wikis, Twitter, and 3D immersive virtual worlds in the classroom.The researchers analyzed the 27 most relevant empirical studies and evaluated them according to discipline, learning goals, cognitive processes, pedagogical approaches, and specific learning activities. Educators can prepare their courses and programs using the best content previously developed by other colleagues, from their same department but also from other institutes. With most students being active social media users, this kind of an interactive platform encourages them to share, like and comment on course contents. The teacher guides this process to varying levels depending on the student, as appropriate.Using digital tools improves efficiency of grading, distribution of instructional materials, and other aspects of classroom management. However, and regardless of which one is beneficial still some people support the idea of traditional learning, while others believe in the E-learning system. The planning function is the one that bridges the gap between where one is in the present and where one aims to be in future. Many LMSs are now offered as SaaS (software as a service), with hosting provided by the vendors. Though, teaching in the online environment looks different than teaching in a face-to-face class. Learning outcome would be affected by learning mode, curriculum design, and teaching (Jude et al., 2014) that a lot of researchers discussed the effects of personal characteristics or learning behaviors on learning performance. When children are exposed before the age of seven, important developmental tasks may be delayed, and bad learning habits might develop, which "deprives children of the exploration and play that they need to develop." Research shows excessive time spent watching TV or using digital gadgets lowers critical thinking and literacy skills, especially in younger children. "Think" is a short answer question students can use for deeper comprehension. Then we tend to become the "coach" and we teach others, moving in a more horizontal way, until we reach the next level of proficiency, role, or promotion to energize our career. Social media has become a popular learning tool in part because services like Facebook, Twitter, YouTube and LinkedIn are second nature to many users. The researchers found that there are comparable learning outcomes for both groups and that there was the promise of cost savings and productivity gains over time for the hybrid course. So distance learning came into being. Just like a classroom has a set of rules, so does an online class. Dr. Dimitri Chistakis, another surveyor reported that the evidence is mounting that baby DVDs are of no value and may be harmful._Massively open online courses (MOOCs), although quite popular in discussions of technology and education in developed countries (more so in the US), are not a major concern in most developing or low-income countries. These students' learning and persistence outcomes are worse when they take online courses than they would have been had these same students taken in-person courses. Additionally, Ross and Schulz argue that a major disadvantage of E-learning is that the students need to have self-discipline.Numerous studies' authors think that in order to take a real course or a real exam, you need to be physically present in a certain place like a classroom and have a teacher or trainer to guide you at all times. The software used to train the workers involves reading and memorizing procedures for troubleshooting, replacing, and repairing the devices they are responsible for. This incorporation is a major contributor to student satisfaction and success in such courses. Most modern LMSs are web-based. Because of the immediacy of tracking progress, and the ability to diagnose which concepts an individual might struggle with, the teacher and the content can respond to the student. Digital tools can be effective in the hands of the right educator, but in the hands of the wrong educator, they can turn into wasted time. Digital can shorten revision cycles, include more people in feedback, scaffold the feedback, and deliver it embedded within the performance of the task. Under this framework the role of the teacher becomes that of a facilitator, providing guidance so that learners can construct their own knowledge. With online learning, you can have interactions with classmates and instructors in an environment that is suitable for learning and not for competing with others.Immediate Result:In the case of regular learning, the tests are taken by paper and pen. This doesn't happen with static textbook content which runs into pages and chapters. Similarly, institutional regard for or resistance to innovation is influential (Ertmer et al., 2012). In response, UNESCO is supporting the implementation of large-scale distance learning programmes and recommending open educational applications and platforms that schools and teachers can use to reach learners remotely. Online education, thus ensures, that students never miss any topics covered in the classroom.Interactive Content:While online education promotes classroom interaction, it also enables students to interact with their courseware. into bits. It is true that studying online requires more self-motivation and time-management skills, because you will spend a lot of time on your own without someone physically close to keep you focused on deadlines. This can be done in an email or a meeting.some assessment of privacy and security is required based on the level of risk (i.e. how much personal information in involved, the purpose of the online tool, the age of students using the tool). They argue that e-learning has many advantages that include flexibility of access from different locations, ease of access to other materials from other sources including non-educational ones. Web 2.0 does not only enable people to benefit from technologies, systems and tools at an instrumental level, but it also enables them to engage with them and get involved at social, cognitive and hedonic levels.Web 2.0 provides various tools for social participation, cognitive involvement and hedonic immersion of users including (Bower, 2015):-Text tools and forums for online discussion and chat-Note-taking tools to create collective and collaborative documents-Diagramming and mind mapping tools to visualize knowledge and map information-Presentation tools to present content-Digital storytelling tools to create comics, cartoon storybooks and animated videos-Wikis to collectively create and edit content-Blogs to create online journals or informative websites-Data analysis tools to conduct surveys and, collect and analyze data-Social networking sites to create public profiles and connect and interact with other peopleWeb 3.0 is the third generation of internet services for websites and applications that will focus on using a machine-based understanding of data to provide a data-driven and semantic web. At DeVry University, out of all students that are earning a bachelor's degree, 80% earn two-thirds of their requirements online. Computers are digital machines because at their most basic level they can distinguish between just two values, 0 and 1, or off and on. This is a remarkable example of how digital tools can help reduce inequalities in the world.On the other hand, level playing field disappears due to lack of access to internet & devices whether it be for economical or logistics reasons; and it exclude otherwise eligible students from the course especially in rural and lower socioeconomic neighbourhoods. Further, it also needs to be ensured that the students understand the expectations from this flipped model and have access to the necessary technology to succeed within this model.Tools for Flipped Classrooms:TEDEd:TEDEd is ideal for a flipped classroom model. Learning can now take place outside of the time and physical limitations of a typical school day. In a study performed across four different universities, it was found that only half of the students watched the lecture videos on a regular basis, and nearly 40% of students watched several weeks' worth of videos in one sitting. A few years ago, the notion of VR curriculum in schools was an exciting idea but nobody was putting it into practice. These powerful software suites enable digital learning by administering e-learning courses, online examinations and analyzing student performance data. A webcast is a (live) broadcast of the audio or video feed from educators to learners via the internet. Such services also usually provide an opportunity for personal information to be created within the space by the teacher and/or the student. — Immersive vs. A pioneer in the field is the University of Phoenix, which was founded in Arizona in 1976 and by the first decade of the 21st century had become the largest private school in the world, with more than 400,000 enrolled students. The Atkinson-Shiffrin memory model and Baddeley's working memory model were established as theoretical frameworks. Moore (2007) argued that "Administrators must also perform the particularly difficult task of channelling their faculty away from typical classroom roles and into those more appropriate for the information age".Organizational Barriers in Distance LearningStudent and teacher concerns represent the human aspects of distance programs. That statement may seem obvious to many, yet the practice of planning for technology in classrooms with little or no teacher involvement remains all too common. When the questions are factual, based on common knowledge, we can be relatively confident about the answers. At one end is "pure" distance learning (in which course material, assessment, and support is all delivered online, with no face to face contact between students and teachers). Therefore, it is useful to think of online classes before the turn of the millennium as first-generation online courses and those after as second-generation online courses. Today's students are digital natives. Significant gaps in technology access related to income and education levels remain a problem. The understanding gap.Some people may not really know how to use this kind of technology and how to benefit from it. School kids can copy and paste their homework projects without really learning anything.Anonymity and Fake Personas:Digital technology provides wide scope for users to hide their identities. This human participation is absolutely necessary, not only because highly regulated industries such as healthcare won't allow an algorithm alone to provide life-or-death answers to a healthcare provider, but also because, without an expert, you risk the "Dr. Google" problem. Students judged their comprehension as better online than in print. In addition, teachers often express concern about the impact of testing new ideas on evaluations of their own performance. Educators or teachers are essential to digital learning.For education and training to the masses on gigantic scale, for economic survival and to meet the ever-changing requirements of the society and also to meet the individual's special requirements and tastes, the conventional system of education based on brick-and-mortar schools, colleges and universities is not enough. Udacity and Udemy both open up the MOOC platform to the scholar/ practitioner/ faculty.Another highly effective digital resource that has emerged is the Direct Access Curriculum Personal Learning System such as Khan Academy and Knewton. Moreover, the pencils are also made of wood. Also the use of transportation by the students and teachers causes pollutions. The digital repository has been made available by NCERT to make sure that the students do not miss out on any important concept to be taught in the class. Allessi and Trollip (2001) give a simple but clear distinction between two types of simulations. Her model does not easily transfer to other contexts (she developed it with experience from an Open University distance learning course). Seeing this, textbook manufacturers have moved to producing digital textbooks packed with interactive features, lightweight (or the weight of a student's mobile device), lower cost, and easily updated with the latest and greatest information.Print books have the feel of a book that many readers love. For instance, learning contents focusing on convenience and flexibility were suitable for digital learning, while traditional teaching was better for courses which required practical operation or teamwork. Web 3.0 technologies offer benefits of 3Dwikis, 3D Labs; Intelligent Agent based search engines, Virtual environments like Avatar, Semantic Digital Libraries that may result in added advantage in delivery of effective eLearning to the mass._Figure above shows Web 3.0 Tools & Services:_Semantic web is another promising technology for realization of e-learning requirement. Techniques such as e-mail, web notices, discussion forums and video conferencing allow a student to access information without visiting the physical location of delivery. Interactive and adaptive software allows students to learn at their own pace, spending more or less time on lessons or subjects to achieve the same level of learning.Digital learning is meant to enhance learning, not simply continue it via a digital means. Online students are generally asked to complete more-frequent assessments so that professors can monitor their competence. Digital learning is meant to enhance learning, not simply continue it via a digital means. Only 34.1 per cent of them had internet connection good enough for streaming real-time lectures. Recent multimedia research has made a significant contribution to this debate in the form of the coherence principle:Students learn better when extraneous material is excluded rather than included. Recent years have shown an increase in classroom sets of computers that was made possible in part by federal funding. In other words, the teaching material contents made by instructors before lessons allowed learners using for several times and learning repeatedly. one-directionalAccording to the 70/20/10 model of learning and development, only 10% of learning happens in a formal classroom environment. Instructions are sometimes poorly presented, such as on a cluttered computer screen, and users often skip them. However, the level of instruction involved requires no creativity or critical thinking.Digital Learning:To prepare students for an ever-increasing digital world, they need to engage in robust digital learning experiences. Copyright and intellectual property obligations mean that schools must have parent consent before publishing, reproducing or communicating a student's work, information or image. But most often it does not. Controlling is a function of ensuring that the divisional, departmental, sectional and individual performances are suitable and in accordance to the goals and objectives of the organization. Here the learners dominate the teaching and learning process whereas the role of the teacher is reduced to that of a facilitator and advisor or counsellor. We thus expect to observe, research, measure and report on the impacts of active participation and learning by doing—interaction and experience—in simulation-based learning._Advantages of using Simulations in Education:Simulation tools offer many advantages compared to traditional teaching methods. Students use mobile apps and tools to complete and upload assignments to teachers, download course instruction and work in online social groups to complete tasks. 24). A 4GB tablet filled with 3,500 e-books weighs a billionth of a billionth of a gram more than if it were empty of data – a difference that is approximately the same weight as a molecule of DNA. The dashboard has options that allow instructors to explore this information in greater detail. Teachers are using tablets in many ways: to conduct digital field trips through the use of Skype, Google Hangouts or other web-based video collaboration tools; to foster peer-to-peer collaboration through the use of cloud-based tools such as Dropbox or Google Drive; and to reach special education students through apps designed specifically for those with learning disabilities._The internet or network is a vital element in delivering the digital learning experience. And academics and parents alike have expressed concerns about digital distractions, ways in which unequal access to and use of technology might widen achievement gaps, and more._____How Technology is being used in Education:_In the Classroom:Technologies both entrenched and nascent are helping enrich the learning experience in the classroom. As computer technology continues to improve, simulations will become more immersive and will continue transforming applications in education._Simulations offer opportunities for appropriate practice within contextualized learning environments that are not bound by what is safe, reasonable, or sometimes even possible in real life. By capitalizing on emerging market opportunities, many educational institutions hope to generate significant revenue.Serving as a catalyst for institutional transformation.Higher education institutions are being challenged to adapt rapidly to an increasingly competitive environment. Success rates are lower and employers—in addition to students, faculty, academic leaders, and the public—attribute lower value to online than to classroom degrees. With these telepresence robots, the remote students have a seat at the table or desk instead of being on a screen on the wall.In asynchronous learning, participants access course materials flexibly on their own schedules. But the thoughtful integration of technology to enable students to actively engage with ideas and their peers does enhance the learning experience. Technology ultimately comes down to affecting the relations between people, but this notion is obfuscated when technology is treated as an abstract notion devoid of good and evil. Gaming technology makes learning difficult subject matter more exciting and interactive. But in this age without technology dynamicity, emotion evoking, audience engagement etc. However, as with face-to-face, while in-person delivery may be appropriately used to describe how part of a program is being delivered, usually it is not used to describe the delivery of a program in its entirety.The term on campus has the same benefit as in person as it clearly articulates where the learning and teaching activities of a program will take place, rather than how students and staff will communicate during these activities. But tutorials may also serve instructional purposes in school subjects. That includes students taking courses online, of course. Because these games are designed to provide immediate feedback, students are intrinsically motivated to keep playing them, honing skills throughout.The disappearance of computersComputers used to be the main device for accessing the internet, but tablets and smart gadgets are taking the lead. Moreover, drill and practice programs are condemned for not optimally using the technological power of new generations of computers. That's not to say everything will go quickly and smoothly. "Universal design" means rethinking all tools to make them accessible to the greatest number of people, supporting a broader population of both students and instructors.Drawing on these core design principles to build individual components, the options for customization and personalization are endless. They understand better the things which they see rather than read. MOOCs are courses of study made available to a large group of people over the internet, usually for free. In the distance learning setting, such networking can enable students' connections with each other and thereby reduce their sense of isolation._____Various changes have taken place due to distance education:Availability of vast amount of information on the web has provided access to all types of learning material. The springing up of web discussion forums on different subject, creation of digitized courses and online learning tools such as class wikis, video tutorials, eBooks has changed the way students interact with study materials. Overall, campus life sounds overwhelming, and little to no flexibility may as well feel like a threat to their willingness to learn. The vast majority of online courses mirror face-to-face classrooms with professors rather using technology to better differentiate instruction across students. Listed below are resources and tools 21st century teachers can use for digital learning:RSS or Social ReadersGoogle+ CommunitiesYouTube ChannelsiTunesUCloud-based Word Processors (i.e. Google Drive)File-sharing platforms (i.e. Dropbox)EvernoteDigital PocketZoteroVideo conferencing software (i.e. TrueConf, Zoom, Cisco Webex, Microsoft Teams)_____Web based learning:Web teaching is all about making connections: connecting your students to one another and to resources around the world; combining different materials – music, motion, text, narration – into one presentation; collecting related information from multiple sources… enable students to make their own connections by offering materials

methods used have been inspired by the industrial revolution when an assembly line one-size-fits-all approach was setup in schools. Furthermore, speaking from an administrative point of view, if students cannot afford the technology the institution employs, they are lost as customers. The entire online community is based on the language of words and how to communicate them effectively. Examples of this include: terrorists using social media to promote themselves and encourage others; drug dealers using the dark web to trade; pedophiles using chat rooms and other places to exchange photos, videos and other information; and authoritarian regimes attempting to sway or distort elections in democratic countries.Plagiarism and Copyright:Digital media is remarkably easy to copy and reproduce. Consequently, audience-oriented approach, accurate synthesis of information and research-based learning methods have started taking root. An e-Learning design that accommodates interaction between instructor(s) and peers and provides opportunities to practice the eLearning material in simulated—or, when appropriate, real-life—work situations also promotes e-Learning effectiveness._____Online Training Effectiveness in a Corporate Environment:A variety of online training resources exist for use in K-12 classrooms, colleges and universities, and various types of businesses. The best way to deal with the harmful effects is by taking enough breaks.-Do not forget to blink: Usually, an eye blinks 15 times every minute. Nevertheless, sometimes the distinction is difficult. Most online courses allow the participants to set their own pace and choose their learning time freely. Admin is designed with some of the most intuitive and comprehensive tools to protect against students misusing their devices, including the ability to block VPNs and students attempting to access incognito browser modes via USB, both of which are popular ways in which students attempt to bypass web filters to access gaming sites or social media, search for inappropriate content, or use their devices at inappropriate times. Learners can skim material they feel they already know and reread information that is more difficult.One minute of classroom time does not equal one minute of online training. Therefore, research on the use of digital learning environments in higher education should pay particular attention to learning outcomes as a prerequisite for evaluating learning success._There are two main reasons why researchers and practitioners recommend the use of digital learning environments in higher education. One of the bigger benefits of blended learning is that it supports different learning styles better. Organizational problems, especially infrastructure and technology problems, also present challenges. Computer-assisted training methods use a combination of multimedia such as text, graphics, sound, and video in order to enhance learning. The learner then practices with slight variations of the sifted out questions. The second is the user interface that schools/ companies run within their browsers or integrate into their software. Digital learning tools will not replace good teaching. Also, the student does not experience the isolation that can occur in a completely online course. This applies even when students sign themselves up for an account under teacher direction or supervision. Consistent creation and analysis of student data allows teachers to focus on student growth.Technology allows teachers to better differentiate learning between students and personalize instruction for each student. Moreover, Gómez and Duart (2011) studied a hybrid postgraduate program in a university in Colombia and concluded that students had a very positive opinion of the subjects and the educational model in the program. Administrators and/or faculty members who are uncomfortable with change and working with technology or feel that online programs cannot offer quality education often inhibit the process of implementation. In short: we hear, we forget; we see, we remember and we do, we understand. However, other studies find the effectiveness of online learning is not positive or equivalent compared to the traditional format and some find that certain groups of students benefit from online learning while others benefit from the traditional format. Many businesses have used it to make it easier for people within their organization to access files from multiple systems, as well as to share information with different users on their network. This has allowed new techniques and socio-cultural conditions for the expansion of new social practices in the digital world, in which people not only receive, but also publish information on the Internet, which in turn demands us all to rethink and to review the roles of teacher and student. (2013) cautioned that, “While the costs associated with paper-based textbooks (e.g., printing, warehousing, selling and shipping) are eliminated; there are costs of going digital” (p. That is because fixed e-learning does not utilize the valuable real-time data gained from student inputs. Young people from less-privileged backgrounds who lack technology mentors tend to use their computing devices mainly for texting friends, taking photos, playing simple games, and accessing celebrity Websites, activities that do not develop key digital skills (Anderson, 2015b). They readily took their learning to the next level; this progress was evident when teachers, subsequent to adopting Digital Learning Objects (DLOs), seized the opportunity to expand on their managerial skills or risked venturing into new territory by transforming organizational culture or mastering new educational software. Moreover, eLearning tends to be structured with more and smaller segments that are easier to digest and also easier to work into a busy schedule. These students download apps to learn new things. A printed book is analogue form of information. Blended is also associated with models of delivery which require students to engage with timetabled onsite learning activities across the academic year, in addition to engaging with digital learning activities between these times. All factors are variables where some level (not always easily specified!) is required for success, too low levels may inhibit e-learning. Online courses are those in which at least 80 percent of course content is delivered online. This type of mixed distance and campus based education has recently come to be called “blended learning” or less often “hybrid learning”. This structure allows students time to articulate responses with much more depth and forethought than in a traditional face-to-face discussion situation where the participant must analyze the comment of another on the spot and formulate a response or otherwise lose the chance to contribute to the discussion.Within an online discussion, the individual student responds to the course material (lectures and course books, for example) and to comments from other students. The first online course was offered in 1986 by the Electronic University Network for DOS and Commodore 64 computers. Led by the federal government, the country is in the midst of a massive effort to make affordable high-speed Internet and free online teaching resources available to even the most rural and remote schools. Many commentators extend these freedoms into a transcendence of social and material disadvantage, with the Internet perceived as an inherently democratizing medium. Use what is necessary but avoid overdoing it or else the visuals will become more of a distraction than an enhancement.__Types of E-learning:Negash, et al., reported that there are six different types of E-learning as follow:E-learning with a physical presence and without E-communication (face-to-face)E-learning without the presence and without E-communication (Self-learning)E-learning without the presence and with E-communication (Asynchronous)E-learning with virtual presence and with E-communication (Synchronous)E-learning with occasional presence and with E-communication (Blended/hybrid-asynchronous)E-learning with presence and with E-communication (Blended/hybrid-synchronous)__E learning process:E-learning process ADDIE model (Systemic design of instruction) – Re-modeled by Dick and Carey (1996).E-learning process consists of the following:Analysis:During analysis, the designer identifies the learning problem, the goals and objectives, the audience’s needs, existing knowledge, and any other relevant characteristics. Analysis also considers the learning environment, any constraints, the delivery options, and the timeline for the project.Design:A systematic process of specifying learning objectives. Detailed storyboards and prototypes are often made, and the look and feel, graphic design, user-interface and content is determined here.Develop:The actual creation (production) of the content and learning materials based on the Design phase.Implement:During implementation, the plan is put into action and a procedure for training the learner and teacher is developed. Materials are delivered or distributed to the student group. Effective computer software programs engage the students and provide considerable learner control. Sebastian et al. Curriculum and teaching methodology that are successful in on-ground instruction will not always translate to a successful online program where learning and instructional paradigms are quite different. Web conferencing software helps to facilitate meetings in distance learning courses and usually contain additional interaction tools such as text chat, polls, hand raising, emoticons etc. According to Ertmer et al. Digital introduces new variables and possible combinations of people, process, and technology. And even if they have one they don’t have teachers,” he asked. They have mostly stimulation, love and safety needs, though they are developing a greater need for autonomy. However this system has limits:-The professor can teach only at the same pace for all the students-The interaction between students and professors is limited-The infrastructure cost is high (classroom, libraries, course material)-The learning can only happen at the same place and timeWith the development of new technologies, it became obvious that technology could improve the learning experience in schools, universities and also corporations.The idea of Digital Learning is to make trainings more efficient and to improve the learning experience of learners using the latest tools. You can hold it, turn the pages, and feel the paper. Studies suggest online interaction encourages participation and more substantive discussion (e.g., Karayan & Crowe, 1997; D. The same material can also be printed and the students are able to obtain it without having to copy them. Each individual can contribute to the course discussions and comments on the work of others. For instance, both Internet and education are concerned with information exchange, communication, and creation of knowledge. Screen-time at home may not be constantly monitored. Indeed, Internet users are often celebrated as benefiting from an enhanced capacity to self-organize and curate educational engagement for themselves, rather than relying on the norms and expectations of an education system.____________Section-4Digital learning tools:Classrooms have evolved along with our world. These extrinsic influences can be categorized into three groups: access to resources, institutional factors, and subject curriculum and assessment (refer to Figure above). Schools should understand that while consent can be freely given, it can also be withdrawn at any time. Taking courses online gives you the option to study in a setting that is most conducive for you. Students from class 1st to 12th and UG and PG level aspirants can get access the interactive learning through this medium. Internalizing new ideas until they are almost intuitive, it turns out, is a key component of learning. This doesn’t replace the need for experienced educators. Although these results suggest that blended learning environments can provide a learning advantage when compared to purely face-to-face instruction, the researchers emphasized the findings “do not demonstrate that online learning is superior as a medium...It was the combination of elements in the treatment conditions (which was likely to have included additional learning time and materials as well as additional opportunities for collaboration) that produced the observed learning advantages”. Alternatively, digital learning can be tailored to fit individual students’ needs. In asynchronous learning, participants access course materials flexibly on their own schedules._Micro-learning is a training methodology taking training to micro level by chopping down information to small digestible learning nuggets. Widespread collection of student information by educational technologies, including web browsing history, academic progress, medical information, and biometrics, created the potential for privacy and security threats if such data was compromised or exploited. The four levels within this model are Substitution, Augmentation, Modification, and Redefinition. This level of access is convenient for many students, but potentially lifesaving for students in underprivileged areas._____Some Best Mobile Apps that help you Teach Online:FoxFiAudiobooEvernoteGoogle HangoutTether______________Favorite Tools for Digital Learning:Whether you will be using a blended learning, flipped classroom, or distance-learning model, you’ll need to determine your objectives, assets, and logistics before you begin. In this sense, there is now considerable interest in the ability of the Internet to support powerful forms of situated learning and digitally dispersed communities of practice. A considerable share of faculty worldwide have shown willingness to support less traditional and digital education models. But the teaching approach varies depending on how students prefer to learn. Beliefs about digital technologies in teaching and learning are similarly influential (Hsu & Kuan, 2013; Pegler et al., 2010; Petko, 2012). Role-playing and application to on-the-job settings.Contextual perspective focuses on the environmental and social aspects which can stimulate learning.For many theorists, it’s the interaction between student and teacher, and student and student in the online environment that enhances learning (Mayes and de Freitas 2004). Time efficiency is another strength brought by the online learning format. Most of corporate e-learning is asynchronous and delivered and managed via learning management systems. In fact, data suggests that merely providing students with access to devices (e.g. laptop/tablet) doesn’t necessarily lead to better outcomes but thoughtful integration of technology to enable students to actively engage with ideas and their peers does enhance the learning experience._Research suggesting the advantages of digital learning over face-to-face learning remains problematic. The “flipped” classroom, a more recent coinage, refers to classes that are structured almost exclusively around a reversal of expectations for lectures and homework. Piaget’s constructivist theory of learning highlighted the importance of engaged learning where meaningful discussions were held between peers. There are two separate schools of cognitivism, and these are the cognitivist and social cognitivist. Learning does not simply happen within an individual, but within and across the networks. In a more conservative side, Bonk (2004, p.5) cited the three most common definitions of blended learning:A combination of instructional modalities (or delivery media)A combination of instructional methodsA combination of online and face-to-face instructionHowever, the third definition is mostly accepted by scholars. Asynchronous classrooms allow students to “go to school” whenever they need. There are many terms used to describe learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others. First, the server which will provide the means for “learning”. For example, students might have assignments due on Monday and Wednesday that are submitted online, but are expected to attend a Friday class on campus. mobile-assisted language learning (MALL) is the use of handheld computers or cell phones to assist in language learning.Collaborative apps allow students and teachers to interact while studying. Used productively, this information will provide dividends to both individual learners (giving students more tools to track and improve their own performance) and the institution as a whole (measuring impact and outcomes of various pedagogical approaches).Students rate tools for collaboration as one of their top priorities. Instead of using a one-size-fits-all approach, a teacher uses a variety of methods to teach._The adaptive learning system uses feedback from the learner to gauge the strengths and weaknesses of the learner in order to adjust the delivery of content. Yet outcomes often lag if we use only online avenues (Garrett, 2018), and blended learning has demonstrated efficacy across numerous learning designs (Bernard et al, 2014; Means et al, 2013). “When students report having access to classroom computers and using these devices on an infrequent basis, they show better performance,” Bouygues writes. Additionally, with Teacher, teachers are able to lock student devices at times they aren’t needed to avoid students using them during videos, presentations, or when guest speakers are visiting.Teacher Knowledge and Professional DevelopmentAnother common struggle of teachers attempting to integrate technology into their classrooms is a lack of knowledge and understanding of how to use technology, or discomfort with using it. Teachers may prefer to continue the discussion in classrooms, enabling everyone to share their views and opinions, and understand others’ perspectives as well. Organize anything. The shift to component-based architecture gives — the members of the higher ed community — an unprecedented opportunity to shape, rethink, plan, and design their digital learning environments in a way that they haven’t had since the advent of the LMS.____________Section-14Digital learning theories:In the twenty-first century, we are experiencing a paradigm shift in learning environments because of an underlying change in epistemology. Mobile learning provides a way for educational institutions to deliver knowledge and educational content to students on any platform, anyplace and at the time of need. Common variations include e-learning or online learning, used when the Internet is the medium; virtual learning, which usually refers to courses taken outside a classroom by primary- or secondary-school pupils (and also typically using the Internet); correspondence education, the long-standing method in which individual instruction is conducted by mail; and open learning, the system common in Europe for learning through the “open” university._Distance learning, also called distance education, e-learning, and online learning, form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication. While this technique works well for the test makers, it is generally not effective at pushing learners to think of new ideas. It is a term that can also be used to describe how a whole program will be delivered. The Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2009) highlights the importance of developing a teacher’s Technology Knowledge, Content Knowledge, and Pedagogy Knowledge. These papers are made by chopping down trees. Moreover, schools that serve students from different income levels differ less in their technology infrastructures than do students’ home environments. Moreover, the most empowering aspect of digital participation—the ability to create or modify online content—lies out of reach for many. This allows learners to focus on specific information and also eases knowledge reinforcement. Teachers, parents and policymakers certainly acknowledge the growing influence of technology and have responded in kind. For example, Dwerryhouse (2001) asserts that future learning is work-related learning, which involves learning embedded within the workday to promote higher levels of productivity. But course materials must be structured by a subject-matter expert, who approves answers before the AI responds. Providers use both to describe students’ engagement with learning that takes place partly in a digital environment (either onsite or remotely) and partly in-person, onsite.The proportions of the different types of engagement can vary considerably from program to program and can refer to individual modules or the whole program being a mix of approaches. The instructors at all levels of education prepare themselves for class lectures, lesson plans, assignments, tests and so forth through the use of digital technology._The efficient use of digital learning environments in higher education is an important research topic from both a scientific and a practical perspective. Fast forward to the present and the biggest names in tech and education, like Scholastic, Google, Lenovo and Microsoft now offer a huge and growing portfolio of VR headsets and curriculum to fuel digital learning. For instance, a recent systematic review comparing the learning of clinical skills in undergraduate nurse education between the online format and the traditional found that there was no significant difference between the two formats (McCutcheon, Lohan, Traynor, & Martin, 2015).In 2005, a year after Bernard et al. As students increasingly carry school items with them at all times, digital textbooks will lighten their load and provide access to all their materials at any time.One positive of digital textbooks is undoubtedly their price tag. Instead of using a one-size-fits-all approach, a teacher uses a variety of methods to teach. In this ecological change, one significant change will create total change._According to Branford et al., “technology does not guarantee effective learning,” and inappropriate use of technology can even hinder it. A University of Washington study of infant vocabulary shows that it is slipping due to educational baby DVDs. Published in the Journal of Pediatrics, a 2007 University of Washington study on the vocabulary of babies surveyed over 1,000 parents in Washington and Minnesota. Effective student engagement measures that reduce drop-outs are forum interactions and virtual teacher or teaching assistant presence – measures which induce staff cost that grows with the number of participating students.Corporate and professionalE-learning is being used by companies to deliver mandatory compliance training and updates for regulatory compliance, soft skills and IT skills training, continuing professional development (CPD) and other valuable workplace skills. How often does the student get stuck and need help? 77% felt that receiving text messages hurts my ability to learn during lecture.-2. Students prefer an interactive participatory role to a passive one._There are reasons for moving to digital learning from traditional learning:-1. Schedule flexibility is also a huge asset for people who work full-time or who have childcare responsibilities that would interfere with regular campus attendance.Individualized learning:Probably the most important benefit of this sort of learning is in the fact that a teacher or professor can personalize their students’ digital tutoring while not wasting as much time as it would require for in-person meetings with each and every student. are all impossible. Face-to-face instruction is the best approach to providing these levels of attention. This will support the school’s strategic thrust to enhance teaching and learning experience that is organically progressiveTo be based on the pedagogies practiced by each individual teacher, the proposed solution offers a comprehensive teacher training program to obtain education technology knowledge and skills to efficiently and effectively deliver 21st-century lessons that includes multi-modal learning experience for students. More effective use of digital teaching to raise attainment includes the ability of teachers to identify how digital tools and resources can be used to achieve learning outcomes and adapting their approach, as well as having knowledge and understanding of the technology. 31% felt that they get distracted when someone else sends a text during class.Thus, students recognize that texting in school not only interferes with their own learning, but also interferes with other student’s attention—yet 49% of them still felt it was okay to text during class (Rosen, 2012).Not surprisingly, allowing web access (i.e., not just texting access) to students during a lecture doesn’t fare well, either. Look at it this way: your online course will not only teach you geology or poetry, it will also help you become more self-motivated, a trait that will make you stand out in the workplace and beyond. These tools also support asynchronous participation by students being able to listen to recordings of synchronous sessions. This could mean information such as lecture information, training materials, grades, curriculum information, enrolment information among others.Computer Assisted Instruction (CAI)Computer Assisted Instruction (CAI), also sometimes referred to as computer-assisted learning (CAL), is another type of e-learning which uses computers together with traditional teaching. When the function of co-ordination is carried out in an appropriate manner, then the activities of the various departments will be taking place regularly and there will be close connectivity._Leading is an important function of management, where supervisors, managers, directors and other top most individuals in the hierarchy of the organization possess the power and authority to exercise this function. Because of this, learning gaps can be identified and addressed faster, rather than allowing a struggling student to slip through the cracks until exam time.You have more control over your schedule:Absenteeism and scheduling conflicts are virtually removed from the online learning equation. This transformation of knowledge is a complex area of decision making about how pedagogical techniques mesh with the nature of content and the needs and capabilities of the learner. Discriminating factors such as age, dress, physical appearance, disabilities, race, caste and gender are largely absent. Although the internet would not be created for another nine years, students were able to access class information with linked computer terminals. They can literally open up a new tab and Google the answer. In some classrooms and out-of-school programs across the world, educators are doing some pretty amazing things with technology. Or, they can create more interactive assignments, including videos, chat sessions and live interactions using technologies such as Google Hangouts or Facebook Live._Role of network:Digital learning relies on technology; therefore, schools need networks robust enough to meet the needs of the technologies that power a seamless, secure educational experience. Learning computing has to be introduced at schools as well. The classroom time is more likely to be for structured exercises that emphasize the application of the curriculum to solve problems or work through tasks. This dynamic is increasingly common in traditional school districts. (2010) found modest evidence that the traditional format has a positive effect compared to the online format. One central aim of higher education is to foster students’ potential for high-quality accomplishments and support them in applying their knowledge to future challenges in their professional lives. Most teachers value their role in communicating new information to students. In this case, the AI becomes part of a virtuous feedback loop, alerting instructors about gaps in the course content, which can help the class better address the needs of future students._AI and lifelong learning:Applying AI to constant education is not about replacing teachers. E-tasks are composed by teachers.Here are some of the major digital learning materials:There are many institutes that provide live online classes for the students. As of April 2015, the share of students that took a MOOC in the past year was still low – nine percent. Instead, digital tools can be used in flexible ways by teachers who choose how best to use these online resources.______Teacher training:Since technology is not the end goal of education, but rather a means by which it can be accomplished, educators must have a good grasp of the technology and its advantages and disadvantages. A learner-centered approach acknowledges what students bring to the online classroom—their background, needs, and interests—and what they take away as relevant and meaningful outcomes. There are multiple benefits of digital learning in transforming a child’s life like: Motor Skills, Decision Making, Visual Learning, Cultural Awareness, Improved Academic Performance and Inventiveness etc. The teacher and students do not meet face to face. Besides, blended instruction offers an active learning environment with flexibility in using resources for the students and provides more time for faculty members to spend with learners in small groups or even individually (Oh & Park, 2009). This has prompted many researchers to investigate the actual benefits of digital games, in terms of learning and motivation (Connolly, Boyle, MacArthur, Hainey, & Boyle, 2012; Gee, 2005; Prensky, 2001; Shaffer, 2006).Digital game-based learning:Until very recently, studies of e-learning environments tended to focus on how to optimize the processing of information contained in multimedia or hypermedia documents (Clark & Mayer, 2008; Mayer, 2005). Design that prioritizes easy engagement for the user and productivity with respect to the intended pedagogical goal is important. Other children and young students from all around the world can attend and contribute to lessons, creating global conversations through so many different points of view on the same topic, with the result of an enriched educational experience. Multimedia and additional content is available within the content repositories. It sets a very high standard for meta-analytical work, and its main finding is student learning outcomes are better for online learning than the traditional format, modest, but significant nonetheless._The Null Findings:In comparison to the number of positive studies, there are many, many more studies that found null findings for the effects of online learning. Other times, a student may feel pressured to get good grades and feel cheating is the only way to accomplish that goal. Chesser (2011) discussed the effects of training methods, computers self-efficacy, and learning mode on learning outcome and found out higher learning performance of learners in favor of abstract concepts. The online course presentations are updated regularly, taking into consideration the world’s constant academic evolution in online education.Some of the cons of online programs may involve a lack of determination, low retention rates and less social interaction. Digital learning has been positioned as the poor cousin of a classroom program, and therefore, priced very cheap or even, free. These resources are especially helpful when they provide an extension beyond what is covered in the classroom (i.e. materials on specific disciplines for Education majors who may be have deep knowledge in a specific discipline).Web-based teaching materials emerged as elements on personal Web sites with the proliferation and adoption of the Internet in the early to mid-90s. The main function that digital technology plays in implementation of these managerial functions is communication of information, knowledge, instructions and directions. Therefore, e-learning is more cost effective.Greener Approach:The regular learning method uses pen and paper. A survey by Scholastic found that 45% of children aged 6 to 17 say they prefer print books to e-books while 16% preferred e-books.____________Research on Print vs. Some universities have been starting to use robot proxies to enable more engaging synchronous hybrid classes where both remote and in person students can be present and interact using telerobotics devices such as the Kubi Telepresence robot stand that looks around and the Double Robot that roams around. “Fixed” in this context means that the content used during the learning process does not change from its original state and all the participating students receive the same information as all the others. You do not need to be proficient at computer programming languages and writing code to teach an online course. Thus, learners can see in real time their progress and instructors can monitor and communicate the effectiveness of learning. One of the most important features of LMS is trying to create a streamline communication between learners and instructors. Furthermore, the products should be round in shape, have friendly colors and support active exploration to meet the needs of children in this phase (Markopoulos & Bekker, 2003).The second stage of development is the emerging-autonomy stage (ages 3-7 years).Children of this age group enjoy fantasy and magic, they are fairly self-centered and they do a lot of parallel play (Markopoulos & Bekker, 2003). ... to new learn content. Some teachers divide students into different groups, such that the teacher can work with a smaller group of students, while other students are working on computers. Experiential learning fosters in-depth information processing and elaboration, as it builds up learning skills and leads to higher motivation for learning initiated by a learner’s direct involvement.According to Kolb (1984), experiential learning consists of four elements: concrete experience, observation and reflection, the formation of abstract concepts, and testing in new situations. Through in vivo coding, 34 factors were found and divided into the three categories: individual (subject), contextual scaffolding (context + object) and e-Learning solution and process (artefact) as seen in the table below:_Key factors influencing effectiveness of E-learning:The model in figure above shows the key factors (in grey) that were identified to influence the effectiveness of e-Learning (artefact). Also, there will be no more need to choose which paper book to buy among those in the long list of suggested coursebooks. These are recorded digital audio clips, which students can download and listen to whenever they want. Some teachers report that they have two versions of their lesson plans—one for using computers and one for paper when Internet access fails—but clearly it is not reasonable to expect most teachers to take on that level of planning. This website is designed to give students of any age access to online learning and even internet based certification programs.There’s an obvious attraction to taking free online classes from Yale. It is not a course delivered via a DVD or CD-ROM, video tape or over a television channel. With eLearning you have a much greater range of media to use: simulations, interactions, scenarios, and visual storytelling. In asynchronous online courses without the live in-person class component, students depend even more on the facilitation, assignment clarification, and feedback provided by their instructor. Smartphones can be very easy to hide and use inconspicuously, especially if their use is normalized in the classroom. Both types of library require cataloging input to allow users to locate and retrieve material. District-level technology initiatives in particular are increasingly considering the role of students accessing digital content, and entire courses, from outside the school.______Use of Web 2.0 technologies in K-12 and higher education: The search for evidence-based practice (2012):Research Question: Is there enough evidence to prove that the use of Web 2.0 technologies effectively enhances student learning?Study Design: As campuses and classrooms are flooded with tablets and new devices, teachers and parents are pausing to question whether there is enough evidence to support the wide-scale investment in new technology. Some are hoping to leverage the scalability of distance education to avoid overwhelming their bricks-and-mortar capacities.Capitalizing on emerging market opportunities.The public’s growing acceptance of the value of lifelong learning has fueled an increased demand for higher education services among people outside the traditional 18-24 age range. Understanding the meaning of a question is much more difficult than it might seem at first glance. It ignores the variety of learning approaches that are possible within computer mediated communication (CMC) and the range of learning theories that are available (Moule 2007).______Mayer’s Principles to Guide Multimedia Learning:Mayer identified 12 empirically supported principles to guide learning from multimedia. They don’t get grounded if they skip homework to go socialize. Even as digital education gains prominence during the Covid-19 lockdown, over 70% of 131 teachers who participated in a survey at Jawaharlal Nehru University (JNU) said online education cannot replicate classroom learning. Hence some find it difficult grasp the concepts through reading. Hoffman (2006) notes that the combination of auditory narration and the presentation of visual information can be distracting to the learner; therefore, the presentation of graphics with narration maximizes learning.Personalization Principle.People learn better from multimedia lessons when words are in conversational style rather than formal style.People learn better when the narration in multimedia lessons is spoken in a friendly human voice rather than a machine voice.People do not necessarily learn better from a multimedia lesson when the speaker’s image is added to the screen._______Coherence or interest: Which is most important in online multimedia learning? In addition, the online format allows physically challenged students (and teachers) more freedom to participate in class. The field has been described as a persisting initiative that seeks to bring learners, teacher, and technical means together in an effective way. ‘Spacing’ refers to revision throughout the course of study. As the technology progresses, it is quickly being used to enhance educational games in every discipline. However, on campus is most appropriate for providers that have campus-based sites of delivery. Many others suggest little to no difference (Holmes & Reid 2017, Means et al. You can also use it to learn new technical skills that are especially helpful if you want to increase your chances of landing a job or advancing in your current career. Şahbaz (2012) revealed that students with higher learning motivation would present higher learning outcome, i.e. positive correlations between learning motivation and learning outcome.______Table below depicts comparison of traditional and online learning:Face to FaceOnlineCommunicationVerbal and nonverbalVirtual through videos and chat forums, downloads and uploadsLearning MaterialsReal time access to Textbooks and lecture notesE-books, Lecture notes available 24/7Additional CostsFuel, parking (accommodation at times)Hardware and software, upgradesProcess of LearningReal Time and specific time frames for discussionsVirtual any timeFeedback and InteractionImmediate through visual and verbal models, but time constrainedAnytime but conducive to Lecturers availability, usually a 24hr turnaround time______Differences Between Online and Live Face to Face Courses:Online courses are predominantly asynchronous:Unlike their face-to-face counterparts on campus, online courses are predominantly asynchronous where the students (and faculty) each determine when they will engage and participate in their online courses. A post-LMS world won’t just reflect the technological innovations of the past decade, it will also model the shift in pedagogical approaches, with a contemporary classroom that is more student-centered and learner-oriented.In 2015, EDUCAUSE and the Bill & Melinda Gates Foundation launched an inquiry into what, exactly, this next generation learning system might look like. Computer-based training, Web-based training, Internet based training, online training, e-learning (electronic learning), m-learning (mobile learning), computer-aided distance education – online education goes by many names and comes in a variety of styles, but basically online education is electronically supported learning that relies on the Internet for teacher/student interaction and the distribution of class materials.Understanding eLearning is simple. Besides digital divide, there is digital use gap: without direction, engagement with online content is less sophisticated and less learning-oriented for students from poorer socioeconomic backgrounds. Digital literacy includes the ability to read and interpret media, to reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments. It will also mark any anomalies it discovers for the instructor’s review.Over-stimulation:Electronic devices such as cellphones and computers facilitate rapid access to a stream of sources, each of which may receive cursory attention. Digital ways of working are still linked to the storage and use of information, so it also does not carry with it any suggestion of being inauthentic. Online learning model allows further interaction by providing an online platform for discussions. The sample is not representative of all teachers, and this high level of computer usage is not a surprise in this sample. Pretraining may be most useful to novice learners because learning some of the material before they are exposed to the main lesson allows for improved and quicker learning of the main lesson.People learn better from graphics and narrations than from animation and on-screen text. Others, such as machine learning, have yet to make their mark, but have the ability to fundamentally transform the educational experience.Augmented/Virtual Reality: Imagine teachers being able to teach history by taking students on a tour through a battlefield or showing the architecture of ancient Greece—without leaving the classroom. But through the digital transformation and the rise of educational technology, teachers have begun making drastic changes to their instruction, assessments, even the physical make-up of their classrooms, and at a much faster rate than expected. These are equally suitable for students who don’t have easy access to coaching centers as well as the ones who prefer one-to-one learning.Students who want to study as per their convenience can opt for recorded lectures. Even if you miss certain classes, you can access the class notes and download files from the school website.Learn on his own: Also, nowadays, online study materials are easily available. Ads, pop-ups, games, news, fun websites, social media, text messages, and more are constantly competing for student attention. Technology is a tool to achieve our design._With passage of time, the education system all over the world has gone through a dramatic change. Computer managed learning systems operate through information databases. Attendance, location, lack of flexibility, and campus life are exactly the components that they find disturbing; therefore, they choose to withdraw. Furthermore, in the online environment, extroverted and introverted students stand on equal footing, which may result in more even, open, and honest discussions.Online courses are often more personal and individualized:Without synchronized meeting times and places for the whole-class like in face-to-face courses, student engagement in learning in an online course may feel, or even actually be, more personal and individualized than in a face-to-face setting. Students and institutions embrace online learning with good reason. As instructional designers, emphasis is placed on establishing the curriculum, methods and the media through which the content will be effectively delivered. Constructivist learning environments require students to use their prior knowledge and experiences to formulate new, related, and/or adaptive concepts in learning. Access to digital devices is increasing both the nature and the prevalence of bullying.-Altered leisure patterns – are affecting physical health, especially obesity rates.-Communication changes – from artificially extended ‘friend’ networks, to anonymity. Virtual Reality is a solution for situations where it is not feasible or scalable to provide real life experiences to users to achieve the learning outcome.Augmented Reality:Augmented Reality (AR) offers learners an interactive experience that enhances certain aspects of the real world through computer-generated perceptual information. Some students find that designating specific times for coursework helps them. In fact, the real hands-on time are 30-50% less which makes for a huge time and money savings for companies.With a new way of training comes a new way of speaking. They include: learning management systems (LMS), learning content management systems (LCMS), as well as virtual classroom tools and virtual learning environments (VLE)._Indian Government facilitates e-Learning Platforms for students amid COVID-19 outbreakE-learning platforms have emerged as one of the best measures to help the students continue their studies during COVID-19 outbreak.SHAGUN Online Junction:SHAGUN is an online junction under which the Department of School Education in the Government of India and all States and Union Territories (UTs) have launched several e-learning platforms. The paradox facing all countries is that, while these technological solutions seem to be the best way to minimize huge learning losses during the crisis (especially for vulnerable students), they also risk further widening equity gaps in education. With the instructor serving as facilitator, students are given more control and responsibility around how they learn, including the opportunity to teach one another through collaboration and personal interactions (Palloff & Pratt, 2013).Collaborative & Interactive Learning:Research has found that online instruction is more effective when students collaborate rather than working independently (Means et al., 2010; Schutte, 1996). Students visiting NROR platform will get an exposure to e-libraries, e-books, e-courses, chance to participate in events online, and theme based education. From cutting down trees to the production of paper, to printing, packaging, and shipping. Strictly speaking, distance learning (the student’s activity) and distance teaching (the teacher’s activity) together make up distance education. Open and distance learning (ODL) is one of the most rapidly growing fields of education now a days and it has substantial impact on all education delivery systems. Each lesson employs the following scaffolding: Watch, Think, and Dig Deeper. Web 3.0 based e-learning services will be having constructive impact on education. Use it as a word processor in a pinch. The authors qualify that this was not an exhaustive list of studies, most studies were limited to the span of one semester or less, and studies did not report effect sizes, so the results were interpreted cautiously.Findings: Unfortunately for educators and administrators who want to validate tech integration with supportive statistics, actual research-based evidence of the effectiveness of digital technologies is weak. LMSs range from systems for managing training/educational records to software for distributing courses over the Internet and offering features for online collaboration. In other words, digital learning games can be regarded as an entertainment medium designed to bring about cognitive changes in its players.Motivational benefits of DGBL:The benefits of DGBL, in terms of motivation and engagement, are often attributed to its entertainment aspect (Annetta, Minogue, Holmes, & Cheng, 2009; Hays, 2005; Lee & Peng, 2006; Lieberman, 2006; Moreno & Mayer, 2007; Rieber, 2005; Tobias & Fletcher, 2007; Tobias & Fletcher, 2008). Thus being knowledgeable relates to the ability to nurture and maintain these connections. By taking an online course, you can really focus on the subject you are interested in and choose from the variety of online courses and programs.Students learn more than they do in traditional courses:IBM have found that participants learn five times more material in online learning courses using multimedia content than in traditional face to face courses. When digital learning enters the classroom, everyone wins._____Impact of Digital Classroom on Teacher Practice:Digital classroom requires a shift from a teacher-centered to student-centered environment where the instructor must take on multiple new roles. These models include:Face-to-face driver – where the teacher drives the instruction and augments with digital tools.Rotation – students cycle through a schedule of independent online study and face-to-face classroom time.Flex – Most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support.Labs – All of the curriculum is delivered via a digital platform but in a consistent physical location. “Students with disabilities must be made aware of all the options and the range of choices of e-education available to them in an accessible manner. There may be differences in the concentration we bring to a digital environment, too, where we are accustomed to browsing and multitasking. Loss of student motivation due to the lack of face-to-face contact with teachers and peers, potentially prohibitive startup costs, and lack of faculty support are all barriers to successful distance learning.Student Barriers to Distance LearningProblems and barriers encountered by the student fall into several distinct categories; costs and motivators, feedback and teacher contact, student support and services, alienation and isolation, lack of experience, and training.Faculty Barriers in Distance LearningFaculty experience problems such as lack of staff training in course development and technology, lack of support for distance learning in general, and inadequate faculty selection for distance learning courses.Berge (1998) noted, “impediments to online teaching and learning can be situational, epistemological, philosophical, psychological, pedagogical, technical, social, and/or cultural”. Also there are so many online websites that have competitions, which are knowledge gaining platforms for kids where they can compete as well as learn intellectually. And undoubtedly the role of the teacher in online and blended schools usually changes relative to the roles of teachers in mainstream schools, sometimes in ways that teachers feel devalues their worth and importance.The teaching with technology landscape:Teachers are operating under a variety of different circumstances in their use of technology. However, even in rich countries where Internet connectivity is all but universal and there is little gap in access, the COVID-19 crisis has illuminated two more dimensions to the digital gap. This social interaction occurs through discussion boards, chat, forums and email.Instructor Focused vs. Because even if they miss out on a few topics, they can catch up with the help of online tutorials and other links. For Mayer and Johnson (2010), for instance, a DGBL environment should feature (1) a set of rules and constraints, (2) a set of dynamic responses to the learners’ actions, (3) appropriate challenges enabling learners to experience a feeling of self-efficacy, and (4) gradual, learning outcome-oriented increases in difficulty. “Teachers can only conduct exams after teaching has been done. Physical universities and newer online-only colleges offer select academic degrees and certificate programs via the Internet. Unlike regular eLearning courses, microlearning deals with only one learning objective per course. Then there’s potential for conversation right before and after class, office hours, chance meetings in the hallway...all opportunities that aren’t available for online learning.__________Section-19Limitations of digital learning:_Students miss out on lab work, sport:As the world battles the novel coronavirus, virtual classrooms have ensured that learning continues. The educational value of these programs (like all programs) depends on the quality of its instructional and technical design. But poorly implemented technology can fall into the same trap of expecting teachers to use digital tools in one way, regardless of circumstances. People assume fake personas for the purposes of scamming and defrauding. Differentiated learning is a way of teaching that matches a variety of learning styles. An LCMS may be solely dedicated to producing and publishing content that is hosted on an LMS, or it can host the content itself. Recruitment of individuals should be done in accordance to their abilities and job duties. Blended is the more commonly used term of the two and is applied in several different ways to describe different models of delivery and/or student engagement. When a teacher delivers a lesson, he/she simply instructs the system to give the class an exercise on a particular topic. Rapid brain development takes place for children in preschool to elementary school, where hands-on instruction is beneficial. Digital media objects continue that use and add other effects. They can progress at their own speed, and teachers know immediately when a student needs extra assistance or academic intervention.Smarter tools mean smarter students. In contrast, just 15 percent of those teaching higher-income students rate their schools poorly in this area. Motivating learners is one of the common challenges faced by the e-learning developers. The speed, scope and pervasiveness of digital technologies is profound, and affecting every aspect of the education system.Impact of digital learning on children are as follows:-Shortening attention spans, with multitasking now common in schools. In addition, although teachers sometimes report that students are more engaged simply by using computers to access information, other teachers report that they still have problems with students not studying assigned materials.Although students generally respond well to having increased voice and choice, some students don’t handle their increased responsibility very well at first. The second step involves students creating an identity online and finding others with whom to interact; online socialization is a critical element of the e-learning process in this model. In education, standardized testing has arguably redefined the notions of learning and assessment. From elementary schools to colleges, students spend more and more time sitting by themselves in front of computers. However, distance learning has become an established part of the educational world, with trends pointing to ongoing growth. “Using bare-bone technology can make a huge difference. study was that the publication year was a significant moderator for the effectiveness of distance education. Step-by-step guides provide practical steps and actions to protect, respond to or manage an online incident of concern.Manage personal information:Privacy and Data Security are important considerations when using services which operate online or within cloud technologies. Learning motivation allows students preparing for learning and would enhance the attention to and absorption of new knowledge. It automatically changes what comes next in a sequence, be it altered content or a different order of skills, in response to how student a student is performing. Online learning is a story that is still being written, and how it progresses will likely depend on those present.______Literature Review on the Impact of Digital Technology on Learning and Teaching, 2015:Key findings:There is conclusive evidence that digital equipment, tools and resources can, where effectively used, raise the speed and depth of learning in science and mathematics for primary and secondary age learners. Digital:Many of us book lovers cherish the tactile qualities of print, but some of this preference is emotional or nostalgic. As that number continues to grow, so does the need for increased focus on programs that teach digital citizenship skills. Also, in 2014, 2.85 million students out of 5.8 million students that took courses online, took all of their courses online. Classroom rent or institutional rent also involved. Most schools nowadays, both online and traditional, use different variations of computer-assisted learning to facilitate the development of skills and knowledge in their students._Technology is everywhere in education: Public schools in the United States now provide at least one computer for every five students. Personal attitudes and beliefs are strongly linked to professional beliefs and habits of mind, both of which control teacher practice (Cranton & King, 2003; Galvis, 2012). Educational technology is also thought to improve hand-eye coordination, language skills, visual attention and motivation to complete educational tasks, and allows children to experience things they otherwise wouldn’t. These disadvantages can be managed with strict rules and regulations on mobile phone use._While online programs have significant strengths and offer unprecedented accessibility to quality education, there are weaknesses inherent in the use of this medium that can pose potential threats to the success of any online program. In the hands of a great teacher they can push students to higher achievement, but in the hands of ineffective teachers, it can lead to reduced student achievement._____Strategic steps to guide teachers towards digital learning success:Determine your education goalsSchools that aren’t clear about what they are trying to accomplish are more easily distracted by technologies that may not deliver on their promise and are not aligned with school and district goals.Many academic goals can be supported by online, blended, and digital learning, including:-Improving math or reading proficiency-Increasing graduation rates-Enhancing student communication and collaboration-Increasing equity, including closing achievement gaps-Widening access to a range of opportunities for all students, especially in small schools and rural regions-Providing opportunities for students with health issues-Increasing college and career readiness by teaching technology skills-Breaking down barriers of time and space to extend learning to new places and modalities, including incorporating college courses, internships, and other activitiesConsider that digital learning encompasses a wide range of tools and strategiesThe tool we know best may not be ideal for meeting the goals at hand. However, existing systems were designed under the assumption that students progress at the same pace. Blended (sometimes called hybrid) instruction has between 30 and 80 percent of the course content delivered online with some face-to-face interaction. The learning objects must have an external structure of information to facilitate their identification, storage and retrieval: the metadata.”RLO-CETL, a British inter-university Learning Objects Center, defines “reusable learning objects” as “web-based interactive chunks of e-learning designed to explain a stand-alone learning objective”.Daniel Rehak and Robin Mason define it as “a digitized entity which can be used, reused or referenced during technology supported learning”._Adapting a definition from the Wisconsin Online Resource Center, Robert J. It was one of the earliest adopters of distance learning technology, although many of its students spend some time in classrooms on one of its dozens of campuses in the United States, Canada, and Puerto Rico. From the messages sent and received, the teachers and students can make changes to their teaching and learning methods. As such, they displayed leadership in shaping their learning experiences.Impact of Digital Classroom on Students:The student-centered nature of asynchronous online learning requires students to be actively involved with and take more responsibility for their own learning. Managing time wellWhile learning online offers the ultimate freedom to organize your studies around your private and professional commitments, it can lead to complacency and a false sense of security if the appropriate dedication and time is not set aside for serious study. Then they are submitting these products within an online dropbox. While simulations can be difficult to create, these models provide important feedback to the student in real time when accurately and realistically constructed. Failure to do this can alienate the class both from each other and from the instructor. E-Pathshala is also available in several language like the other digital platforms.SWAYAM:An initiative of Govt of India for the students pursuing education from class 9th to 12th and also for the aspirants seeking undergraduate and post-graduate level degree, SWAYAM facilities study material at one destination. When practicing individual learning, the students study the learning materials on their own (individually), and they are expected to meet their learning goals on their own. It is perhaps useful to think of online classes before the turn of the millennium as first-generation online courses and those after as second-generation online courses. Therefore it is important to emphasize on thinking skills, knowledge integration and application. Teacher’s role shifts from “dispenser of information” to “facilitator of learning” as he/she has to guide students who are involved in using the digital learning material. Almost 50% felt it hurt critical thinking and homework ability.-4. “Remix means to take cultural artifacts and combine and manipulate them into new kinds of creative blends.” (Knobel & Lankshear, 2011) Digital advances in the form of broadly available content libraries, home-based editing tools, and publishing platforms make it easy for teachers and learners to make their own modifications to a wide range of cultural artifacts. For these reasons, online education is not appropriate for younger students (i.e. elementary or secondary school age), and other students who are dependent learners and have difficulty assuming responsibilities required by the online paradigm.Lack of Control:Learners with low motivation tend to fall behind when using eLearning as there are no set times to be doing it and they are responsible for the organisation themselves. While early approaches to online learning were merely an extension of independently-driven correspondence courses, today’s approach to online learning focuses on engagement and active learning.______Theories of distance education are relatively new to the scene. Writing slates and blackboards have been used for at least a millennium. For example, a big reason that students in the study thought they learned better from digital text is that they moved more quickly in that medium. Whether it is language apps, virtual tutoring, video conferencing tools, or online learning software, there has been a significant surge in usage since COVID-19.____________Moral of the story:_Learning is a process of acquiring knowledge, skill, and performance. And although rather scarce, there are sound drill and practice programs which also stretches the capabilities of modern computer technology to its limits. Andrew Meltzoff, a surveyor in this study, states that the result makes sense, that if the baby’s “alert time” is spent in front of DVDs and TV, instead of with people speaking, the babies are not going to get the same linguistic experience. Children who attend schools in more-affluent communities and who have highly educated parents are more likely to use advanced technologies, such as simulations, and to encounter stimulating challenges such as opportunities to create products and address open-ended problems through technology. Some studies’ findings are more nuanced. Educational technology is succeeding in making learning collaborative and interactive. What age? In the United States, about 56 percent of students stated using a laptop or desktop computer in the classroom on a weekly basis. This can potentially pose problems for students and schools with old, outdated hardware and software.Problem 6. Digital education can be defined as the use of a combination of technology, digital content and instruction in the education system to make it more effective and efficient than the traditional education system. Technology may change the role of the teacher but it can never eliminate the need of the teacher. The process is completed by summative assessment using a new set of questions that only cover the topics previously taught._____Training management system:A training management system or training resource management system is a software designed to optimize instructor-led training management. E-learning gives them a good opportunity. This difference to the physical, real experience, however, is one of the implications of its use. But that’s not necessarily true. Digital learning can provide a learning environment that feels more like a game than a study session. But if you have the willingness and commitment, you shouldn’t be discouraged._____Advantages of Traditional education:Two-way communication.Increase Discipline and Punctuality.Increase morality.Giving them lots of examples to learn from students.Provide encouragement and motivation.It helps in creativity and initiative.Create a sound competition among students.It helps in reducing fear, the nervousness of a student.Disadvantages of Traditional education:Require fixed time and the physical classroom.Not good for jobholders.______The word “digital” describes any system based on discontinuous data or events. Extraneous material competes for cognitive resources in working memory and can divert attention from the important material, can disrupt the process of organizing the material, and can prime the learner to organised the material around an inappropriate theme. Many of the terms are synonymous, some overlap, and some have very specific implications. What works for one student might fall flat for the next. Furthermore, if the child gets stuck, the system will assist him with supplementary explanations inbuilt in the system. Edmodo provides a secure learning environment for any grade level/content area. Globally 1.5 billion students are out of the classroom. The use of digital games to teach educational content inevitably raises the question of their compatibility with deep learning, however serious digital game environment can promote deep learning. Research by Alexander and others has confirmed this faster pace. Technology that is designed for children in this development stage should be based on simple concepts, stimulate learning and give a feeling of safety. They often apply immediate feedback to guide learning in an effective way. eLearning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online. Podcasts that provided additional information and just-in-time facts (i.e., a narrative garden tour for landscape architecture students) led to higher student grades. For our new generation kids born in latest technological environments, everything seems boring when it is not connected with technology, and rather counterintuitively we expect that they would learn under the same old age classrooms systems. The study ‘Scenario amidst COVID 19 – Onground Situations and Possible Solutions’ was conducted by child rights NGO Smile Foundation with an aim of analysing the access to technology. Traditional teaching required all learners gathering at the same time and same place for the instruction that the teaching costs were increased.Effective accumulation of knowledge: The digital learning mode could systematically and completely record all online teaching materials and learners’ learning history. In 1997, Graziadei described criteria for evaluating products and developing technology-based courses that include being portable, replicable, scalable, affordable, and having a high probability of long-term cost-effectiveness.Improved Internet functionality enabled new schemes of communication with multimedia or webcams. The fifth step in Salmon’s model involves students looking for benefits from the system and using resources from outside of it to deepen their learning. The usage of technology within classrooms has led to an increase in the enrolment of students. While examining both the Knewton and the Khan Academy it becomes apparent that these operate at a more granular level and permit very specific focus on discrete information and learning objects. There are quite a few variables to consider. For example, they will need to look at cost, time, current resources, and additional resources that will be needed to successfully implement a digital curriculum. Quite often electronic versions are significantly cheaper than their paper versions (Lokar, 2015). However, Lee et al. These students consistently perform worse in an online setting than they do in face-to-face classrooms; taking online courses increases their likelihood of dropping out and otherwise impedes progress through college._Technology enables; it can limit, too:Dinesh Singh, former vice-chancellor of DU, strongly advocates higher education utilising the full power of technology. Students can participate in classes from anywhere in the world provided they have a computer and Internet connection. This is the idea that education should be accessible worldwide. Assignments are submitted online, discussions are in a forum format and emailing professors is very prompt. Most studies on distance or online learning do not examine this selection bias, which some researchers posit as a culprit for the “no significant difference” phenomenon.In a study that compares student learning outcomes in a microeconomics course, Brown and Liedholm (2002) found that students in the online format performed significantly worse on tests than the students in the traditional format even though they had better GPA and ACT scores. Children’s attitude can be improved toward writing, reading, mathematics, science as a result of using computers. Classrooms are also moving toward collaborative problem solving as a crucial exercise. And now, because learners are no longer tethered to their desks (the rise of the remote and mobile workforce), learning is being delivered to their hand-held devices where they can consume it on the go.Although e-Learning and m-Learning are used interchangeably in many cases, the two modes of learning differ in many aspects. It involves directing of manners, behavioural traits, tasks and functions of the individuals. Millions, if not billions, of dollars are being spent on programs and hardware to increase digital access. Smartphone ownership did not differ by racial/ethnic identity but did vary by income level, education, and geographic location. Delialioglu and Yildirim (2007) and Gülbahar and Madran (2009) believed that blended learning is the same as hybrid instruction, which combines the potentials of web-based training with those of classroom techniques. The perceived value in attending a campus institution, the social education, is also viewed as something not to miss, which can lead to cynicism when considering enrolling in online degree programs.Problem 5. Outdated hardware and softwareOnline learning makes standardized education accessible to students all around the globe. A more complete picture of possible uses of mobile technologies to support learning would perhaps enable learners to make better purchasing decisions and to take greater advantage of the devices already in their pockets.Photo-sharing could be a route to informal learning and then formal learning with others.Taking photographs and sharing them with others is a highly popular activity which is facilitated by camera phones, photo sharing sites, and the relative ease with which photos may be posted on blogs. Although virtual classes are a much-needed step to ensure studies are not affected, eye problems are also soaring amid the pandemic, with redness in eyes and headache being the most common ones. It has a digital panel tracking heart rate, calories burned, and multiple options for designing your own workout. Over the years, a combination of cognitive science theories and data-driven techniques have greatly enhanced the capabilities of ITS, allowing it to model a wide range of students’ characteristics, such as knowledge, affect, off-task behavior and wheel spinning. Some e-learning environments take place in a traditional classroom; others allow students to attend classes from home or other locations. In synchronous learning, all participants are “present” albeit virtually at the same time. This purpose could be well served by including highly interesting but unimportant information, often called ‘seductive details’, in instruction (Schraw & Lehman, 2001).In this study, 104 students from year 10, year 11, and first year university viewed either a concise or an extended online multimedia treatment on stellar spectra. Random professional development days are inadequate. Use of overhead transparencies allowed them to reuse written material but without improving them. In addition, blended learning has the potential to change students’ experiences and outcomes through learning (Davis & Fill, 2007). No matter the reason, if a student is planning to cheat, they will likely do it regardless of what materials you use.Problem 2: Your students must have Access to

TechnologyMany teachers are concerned that they don't have the right technology to make digital curriculum work in their classes. These cons fall into various categories:Equity and Accessibility to Technology:Before any online program can hope to succeed, it must have students who are able to access the online learning environment. EverywhereWhile technology takes a supporting role in blended learning, e-learning courses take place online and online only. Adding an in-person component to a purely online program (creating a blended program) can help to maximize incidental learning benefits.______________Section-22Pros and Cons of Online Learning:All educators approach this new paradigm with varying degrees of enthusiasm and concern. The structure of the information may best be typified as randomly sequenced. Like tutorials, also multimedia are primarily designed for the acquisition of knowledge. The use of media for instructional purposes is generally traced back to the first decade of the 20th century with the introduction of educational films (1900s) and Sidney Pressey's mechanical teaching machines (1920s). The same can be said for cloud in education. This is a common feature of groupware for virtual meetings, collaboration, and instant messaging. Struggles to adaptThe prospect of having an entire university experience compacted into a personal electronic device is unusual to say the least. The question is to what extent can we mimic human understanding?"_You might be tempted to think the act of studying a printed text—flipping pages, highlighting and scribbling notes, and folding corners down doesn't contribute to greater learning comprehension—but new findings indicate it might. Digital learning in the form of adaptive programming, games, or other formats can also go a step further by measuring not only comprehension but also decision-making ability with the content. But an online environment requires tech savviness. Some can feel that virtual is linked to artificial, inauthentic, or simply not 'real' experiences. But when it came to specific questions, comprehension was significantly better when participants read printed texts._Study-2New Zealand researchers, Hooper and Herath (2014), determined that the impact of the online environment on university students' reading included:-increased amount of reading due to the growth of online material-improved speed of reading-improved skimming ability.The impact also included:-change in patience as readers-multitasking-distraction-eye strain-scanning rather than reading through (in print 82% of participants read from beginning to end)._Study-3Researchers Schugar et. In second experiment, they showed that if learners are given regular feedback about their performance, the entertainment instruction results in deep learning. When the course contents become interactive, it helps students to retain information faster._______Differences between e-learning and blended learning:The fundamental differences between e-learning and blended learning are 1) the environment(s) in which learning takes place and 2) the nature of the learning experience.Where does learning take place? But to an algorithm, or someone designing one, a profession appears as something else: a long list of individual tasks, many of which may be mechanized. This year's theme is: Innovate! Every Classroom, Every Day with Digital Learning._____Note:In this article, the focus is on digital learning in primary, secondary and tertiary education, and not in business and corporate environment.____Abbreviations and synonyms:k-12 = kindergarten to 12th gradek-20 = kindergarten to graduate degreeCBT = computer-based training = computer-based learning =CBLCAI = Computer-assisted instruction = computer-assisted learning =CALCML = computer-managed learning = computer managed instruction = CMIVLE = virtual learning environmentWBT = web-based trainingMOOC = massive open online courseSMOC = synchronous massive online coursesSPOC = small private online coursesSSOC = synchronous small online coursesLMS = learning management systemLCMS = learning content management systemE-learning = eLearning = electronic learning = online learningM-Learning = mobile learning = mLearningILT = instructor-led trainingDGBL = digital game-based learningNGDLE = next generation digital learning environment______________Section-2Terminology and history of digital learning:While writing this article, it became apparent that the use of definitions pertaining to digital education are being used fluidly, often changing depending on context and the audience. A recent report from Digital Learning Now! (DLN), Data Backpacks: Portable Records & Learner Profiles, expands on the potential of technology to produce new and varied types of data that will together form a comprehensive, portable student record so that every student will have access to personalized learning from day one and through every transition from pre-K through college and career. Today, teachers are struggling to manage the number of students in a class thus making the quality of teaching inconsistent. The children play alone, but they are very interested in what other children are doing. PowerPoints are used for a large majority of business-to-business (B2B) training today. The use of learning management systems is almost ubiquitous. The social energy of a physical classroom can help with learning: There's lively discussion, people bouncing ideas off each other, forming groups, lifting each other up. It can serve as a conduit for submitting assignments, getting grades, and sending any relevant information to your students. Students are scanning rather than reading through on-screen while in print 82% of students read from beginning to end._When students report having access to classroom computers and using these devices on an infrequent basis, they show better performance but when students report using these devices every day, and for several hours during the school day, performance lowers dramatically. And when instructors are not skilled about the trendy coaching technology, the learning amongst the students can see a significant downfall.According to Lai, "the learning environment is a complex system where the interplay and interactions of many things impact the outcome of learning." When technology is brought into an educational setting, the pedagogical setting changes in that technology-driven teaching can change the entire meaning of an activity without adequate research validation. Web-based procedural simulations emphasize the cognitive elements such as the steps of the procedure, the decisions, the tools/devices to be used, and the correct anatomical location.____________Section-13Digital learning Trends:_Trends in Digital Learning Innovation:A new study from the Online Learning Consortium (OLC) and Every Learner Everywhere outlines seven primary trends in digital learning innovation as well as four secondary trends worth watching. You cannot stack it up. Look for a network provider who can handle every aspect of the network, from provisioning to management, installation, maintenance and repairs. The portal is available in multiple languages for students.e-Pathshala:Through this web-portal, students from class 1st to 12th will be able to access no less than 1886 audios, 2000 videos, 696 e-books (e-Pubs) and 504 Flip Books. The open nature of the online environment has pinned focus on encouraging innovation in learning, and changing the outlook of the education system to attribute importance to learning progress and not merely learning endpoints. They are also saved to YouTube accounts, enabling students to watch the hangout at a later time. Furthermore, thanks to digital tools, educators can measure how students learn most effectively, adjusting the learning modules to new evidence-based aspects.______Digital Learning contribute to Deeper Learning:Digital learning promotes deeper learning in three main ways: personalized skill building in preparation for deeper learning; schools and tools that foster deeper learning; and extended access and expanded options (see figure below). Cheating is a problem in many classrooms, but the reasons students cheat often vary depending on your students' experience and motivation. It remains to be seen, therefore, whether plans like ConnectED are sufficiently viable to be implemented within the next decade.______Digital literacy gap:Although digital literacy is clearly important in many aspects of modern life, not all students have equal access to technology. Online courses often require just as much work as traditional college classes, so putting off coursework can leave students struggling when important deadlines approach.Because online courses are not supervised in the same way traditional college classes are, the student must stay motivated and organized to succeed. More carefully designed studies over longer periods of time and those that consider the convergence of digital and mobile tools are needed before researchers can definitively say how technology influences learning.________The Effectiveness of Online Learning:Beyond No Significant Difference and Future Horizons, a 2015 study:This study examines the evidence of the effectiveness of online learning by organizing and summarizing the findings and challenges of online learning into positive, negative, mixed, and null findings. This means not just improving digital learning but fully rethinking it. These three elements represent complementary theories of change, important lines of evidence and research, and three distinct rationales for investment.Constant feedback and improved methods of tracking and reporting student achievement of deeper learning skills are important elements of an overall shift to more personalized learning. Personal web sites with static pages, designed for low bandwidth and slow performance connection of the Internet identify Web 1.0. Web 1.0 technologies include utilitarian tools, media and systems that facilitate people's daily and professional lives whereas they were comparatively limited in terms of user participation and co-creation. It also facilitates easy access to information while at work. In fact, this mode of teaching and learning has a long tradition from antiquity to the present day. This is why learning centers are built with good wi-fi connections to make sure this issue is addressed.____________Mobile learning:Mobile learning (m-learning) is education via the Internet or network using personal mobile devices, such as tablets and smartphones to obtain learning materials through mobile apps, social interactions and online educational hubs. Furthermore, the ideas and products are also student-generated.Digitized LearningDigitized learning encompasses the first two levels of the SAMR Model – Substitution and Augmentation. Web 2.0 Interaction involves not only sharing ideas or information with someone else, but also receiving feedback. This will be done on a case by case basis, thus creating a fairer educational system which is personalized for the needs of each and every student which guarantees equity.The system is preloaded with ready-made curricula based upon what is required by national governments. Zoom has certainly started to improve upon all the loopholes which it possessed some months back and it expects the MHA to pronounce a positive view soon. This is a spectacular advantage for online education providers, students in remote locations, and those without the funds to commence traditional campus study programs where fees and student debt frequently eclipse the joy of learning. A learner signs up for a course and receives video information or audio files of the teacher explaining concepts and terms to them. You can work and fit your work schedule (and your hobbies) around your coursework more easily; even more so if you are taking an asynchronous class: an online class where you don't have to log in at a specific time for a live session but you can study and interact with your instructor and your fellow classmates at your own pace through, for example, the discussion forum. Adaptive learning is similar to blended in that it, too, allows students to make decisions about things like the timeframe and path of their learning. mHealth has been used to promote prenatal and newborn services, with positive outcomes. However, websites that are just repositories of knowledge, without links to learning, communication, and assessment activities, are not learner centered and cannot be considered true web-based learning courses.Features of a typical web-based course:Course information, notice board, timetableCurriculum mapTeaching materials such as slides, handouts, articlesCommunication via email and discussion boardsFormative and summative assessmentsStudent management tools (records, statistics, student tracking)Links to useful internal and external websites—for example, library, online databases, and journalsThe first step in designing a web-based course is to identify the learners' needs and whether the learners are to be considered as part of a group or as individual learners. A physical library must spend large sums of money paying for staff, book maintenance, rent, and additional books. Additionally, schools can give students access to open-source educational resources—wells of information free for anyone to use.Possibly the most impactful effects digital textbooks have had are on learning itself. The learning path established in an mLearning platform is more personalized and continuous._Disadvantages of mobile learning:Mobile devices can be a great distraction. While Massive Open Online Courses have developed a poor reputation for high dropout rates that result does not inevitably carry over to blended workforce development programs. The classical way of learning in a classroom, with a professor that teaches to students has been used for hundreds of years, it led to many inventions and scientific discoveries. It is much more of a page-turner than the old-school schoolbookBlackboardThe blackboard of yesterday is the Smart Board of today. For example, in presenting a unit on the biology of a grasshopper, a teacher could provide classroom instruction including a short video and presentation of facts. Students then could log on to a particular site or app to perform a virtual dissection of a grasshopper, then take a short quiz to gauge their level of learning. Open learning environments (Bull and Kay, 2013) allow learners to observe their own performance scores on lessons and skills over time, which can be motivating and help develop metacognitive skills. The instructor can also offer several software options to choose from in order to create the assignment. There is always a teacher or professor interacting /communicating with you and grading your participation, your assignments and your tests.Distance Learning:This term is commonly used as a synonym for e-learning. Today, children are being watched by the hawk-eyed Big Master that is the CCTV camera in many schoolsTextbookThe textbook of 2020 is a tablet, a one-stop window for all learnings. Traditionally, content comes in a several hour chunk. This could mean interactive software for the students or the kind of training software used by Patrick Suppes of Stanford University in 1966. For evidence of this distinction, one need only notice that many schools allow their learners to use educational simulations at school, while games remain strictly 'verboten'._Digital simulation provides effective virtual learning experiences for learners in many fields, such as medicine, police training, engineering, physics, military and aviation. Lately, MOOCs are used by smaller universities to profile themselves with highly specialized courses for special-interest audiences, as for example in a course on technological privacy compliance.MOOCs have been observed to lose the majority of their initial course participants. Further, today's students have access to resources and materials that may be physically located anywhere in the world. Digital or e-education doesn't give a level playing ground to the persons with disabilities. It means any type of learning that includes using digital technology. The digital learning program is no longer driving achievement, but rather hindering it.We are racing towards digital learning as a new panacea for student achievement. Size of the screen matters, a laptop and computer at an arm's length is intermediate and are therefore, more suitable as against a tablet, book or mobile phone held close to the eye. Reportedly the use of lecture recording technologies can result in students falling behind on the materials. The education provided through video conferencing is doing them no good, they also maintained that the digital medium is adding to aggressive and irritable behaviour in these children. Simulators are also being used to train staff in kinematic controls in the field of robotics. When you deploy the course and leave the learners to their devices, chances are that the learners may not take up the eLearning course effectively as they would do in classroom training.Evaluating effectiveness:One of the common challenges in eLearning could be to evaluate whether your course has the intended impact on the learners.To attend class online, you'll need a certain degree of technological proficiency—including the ability to successfully log in, participate in classes, submit work, and communicate with teachers and classmates. Learning is a process of acquiring knowledge, skill, and performance._Various pedagogical perspectives or learning theories may be considered in designing and interacting with educational technology. Students from different cities, states and countries can all take the same course together.Blended Learning:Blended learning refers to a mix between a traditional classroom and an e-learning or online learning course. They concluded that additional tools and variegated materials in a course would be more beneficial than the exclusion of them.Lastly, there is the ubiquitous threat of selection bias: the endogeneity of learning environment choice. These new ways of teaching and learning benefit teachers as well. For example, with the proposed upgrades, it is envisioned that whole classes would be able to use next-generation learning applications at the same time. Open-ended questions are encountered in the workplace on a regular basis and any effective learning space will simulate conditions for students to practice such inquiries. The dashboard also can provide more general information about a student based on multiple lessons, such as: What percentages of lessons is she completing? Instructional strategies linked to the use of digital tools and resources, such as the creative use of time and space, individualized pacing, and competency-based progression, may be developed by teachers individually, or planned and implemented by the school or district._Teaching with technology provides benefits to teachers and students:Teachers value the ways that digital tools and resources allow for student content creation and collaboration. If you've ever fallen asleep during a lecture or had more doodles in your accounting notebook than actual numbers then you know just how helpful being able to review material is.Retention of information:Traditional teaching methods drop the ball in multiple ways, but one of the worst is that there is often a lot of info presented in a short period which makes it harder to retain or pay attention to for students. Private institutions may become more involved with on-line presentations as the costs decrease. Therefore, this particular issue must be examined thoroughly. _Concluding Remarks:It would be too easy altogether to jump on the online learning bandwagon or to dismiss it as a fad that will go away (and come back as many educational fads have been known to do). However, even at the college level for privately run universities, access to internet and computer is under 33% and 54% respectively._About 56 per cent of children have no access to smartphones for e-learning in India:The lockdown induced by the COVID-19 pandemic in March 2020 prompted schools and colleges to move to the virtual world for teaching and learning activities. Here is a list of some of the major benefits of online programs:The main advantage of asynchronous online learning is that it allows students to participate in high quality learning situations when distance and schedule make on-ground learning difficult-to-impossible. An important advantage to digital conversion is increased accessibility to users. These exercises form part of a continuous assessment methodology implemented through the system. Accessibility and convenience are important advantages of this mode of education. These platforms are suitable for bringing communities of learners together and allowing them to share e-learning content. These situations result in smaller conversations taking place simultaneously within the group. The reputation of tutorials is better than that of drill and practice programs, although also tutorials fit more easily in a tradition of knowledge transmission then in more constructivist visions on teaching and learning.Figure above: Tutorial – 'The law of cosines' _Multimedia (or hypermedia) refer to programs that contain text, images and sound which are interacted in a non-linear structure. It remains to be seen if massive open online courses (MOOCs), due to the sheer numbers of users and open access feature, are substantially different enough to be classified as third-generation or if it is simply a continuation of the second-generation._Massively open online courses (MOOCs), although quite popular in discussions of technology and education in developed countries (more so in the US), are not a major concern in most developing or low-income countries. E-Learning or online learning is defined as a pedagogy whereby content is delivered exclusively through digital means and without a live teacher physically present. This type of digital curriculum allows for a blended learning environment or an entirely online learning environment. Currently it is targeted only at advanced level students. While this does not mean that the learner should be fluent in programming languages, they are required to adapt to emerging applications and information management trends readily._The coherence principle states that all non-essential information in multimedia messages should be eliminated to minimize demands on cognitive resources. However, there are distinct blended learning models suggested by some researchers and educational think-tanks. In addition to computers in the classroom, a growing number of mobile devices such as tablets and even student-owned smartphones are being put to work as tools for both learning and student engagement.Tablets not only help keep students engaged, they also can be money-savers for schools, combining books, calculators and word processors into one device. Through LMS, teachers may create and integrate course materials, articulate learning goals, align content and assessments, track studying progress, and create customized test for students. This survey has found that children with disability and special needs have become vulnerable to the changing paradigm of education. The concept of hypertext is traced to the description of memex by Vannevar Bush in 1945.In the mid-1960s, Stanford University psychology professors, Patrick Suppes and Richard C. It also prepares students for the corporate world, where sharing PPTs with the clients is a regular task.Going through facts or benefits related topic, people often like to read infographic as it helps in easy understanding about the subject.An electronic book, also known as an e-book or eBook, is a book publication made available in digital form, consisting of text, images, or both, readable on the flat-panel display of computers or other electronic devices. There are a variety of ways for students to collaborate online, including synchronous and asynchronous discussions and small group assignments. This engagement, which can be likened to intrinsic motivation (Eccles & Wigfield, 2002), stems from a symbiotic relationship between the challenges faced by the individual and the skills needed to meet those challenges (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003)._Digital game-based learning: Impact of instructions and feedback on motivation and learning effectiveness, 2013 study:Although many studies have investigated the effects of digital game-based learning (DGBL) on learning and motivation, its benefits have never been systematically demonstrated. Blinking is essential and parents should ensure that kids blink their eyes more.-Follow the 20-20-20 rule to prevent eye strain – that is, every 20 minutes, look at something 20 feet away for 20 seconds._Difficult for least prepared:Online courses have expanded rapidly and have the potential to extend further the educational opportunities ofmany students, particularly those least well-served by traditional educational institutions. Students with special talents or interests outside of the available curricula use e-learning to advance their skills or exceed grade restrictions. The teachers teaching the student get the salary from the institutes. After all, who wouldn't want to learn something from an Ivy League instructor? The amount of work given to them, both at school and at home, might be either too easy or overwhelming for some. The Internet is therefore portrayed as allowing education to take place on an any time, any place, any pace basis. This makes for a more effective learning technique. Experts have coined a term for this tech-savvy knowledge: Digital literacy. operate both alone and in conjunction with one another. These systems use big data to recommend courses that can satisfy the interest of students, also advising them on which are the probability of getting good final results. Listed with the videos are interactive quizzes and print-friendly materials. Rather our brains are designed to think and automatically hold onto what's important. E-learning tends to be structured with more and smaller segments that are easier to digest and also easier to work into a busy schedule. In fact, one of the most common questions teachers ask about using digital curriculum is:"My classroom doesn't have enough computers for every student. Educational games have a (often hidden) learning purpose. Adaptive learning is a learning technology that utilizes the latest AI advances to measure, and analyse a learner's comprehension of a subject. Tolman, Clark L. For instance, it has been reported that motivation is a skill that cannot be developed when students are allowed to complete tasks at their own leisure and not to complete tasks under pressure time.Jaggars concluded that many students need the flexibility of online coursework in order to balance school with work of family demands, while others struggle in online courses due to relatively low levels of self-directed learning skills. This technology has now evolved not only to project text and figures, but also animations, video clips etc. An example of a physical simulation is pictured in figure below.Figure above: Simulations – a physical simulations about elastic and inelastic collision_Educational Games (vide infra)Educational games are sometimes perceived as simulations. Many argue that class discussion boards, for example, are far more useful if the participants have met face-to-face first. But there are also computer games, for example combat games that are only designed for entertainment and do not have any educational value. Not all children respond to interactive technology in the same way. This platform may include reading materials, assignments, and even a forum or chat room for class discussions. However, negative emotions can do the opposite; if learners are upset or angry, their chances of retaining the information decrease significantly. Some users like the features of enhanced e-textbooks, since they are accustomed to interacting with technology that allows them to click on a link or video and instantly be sent to additional information on the topic they desire.E-textbooks are relatively new, yet some people like the benefits of a digital format and already prefer this medium to printed textbooks. It is hard to say whether this trend will continue in the future._Now I quote some studies on Digital versus Print:Study-1Recently educational psychologist Patricia Alexander, a literacy scholar at the University of Maryland, published a thorough review of recent research on the topic. She was "shocked," she says, to find that out of 878 potentially relevant studies published between 1992 and 2017, only 36 directly compared reading in digital and in print and measured learning in a reliable way. For example, more than 80 percent of adults with at least a bachelor's degree reported smartphone ownership, compared to just 41 percent of those who had not completed high school. The teacher's lecture notes are no longer the primary focus of a learning process, and the teacher's role and the student's learning process is changing.Paradigm Shift:Paradigm shifts in today's world have identified the Machine / Industrial era being replaced by Technology / Information era. Not that it has emerged overnight, it was always around, in the wings, at best a supplement to the real deal, i.e. the classroom.The biggest challenge we face in a classroom of 30 to 60 unique individuals, is that we design our content to an assumed average. The primary aim of the SHAGUN initiative is to facilitate both teachers and students with a platform where they can interact, however through digital medium for further learning.National Repository of Open Educational Resources (NROER):With approximately 16000 registered users, and 14527 e-learning resources, NROER is one of an excellent initiative launched by the Ministry of HRD. 2017).Unfortunately, research into the level of sociability in digital learning and its effects on student learning is sparse, largely because digital pedagogy studies tend to measure content and design over student learning outcomes. This year it was observed on February 27. Digital Learning Day is an event in which education leaders highlight great teaching practices and showcase innovative teachers, leaders, and instructional technology programs that are improving student outcomes. In addition, online classes are more likely to present material in attention-grabbing, multimedia formats that may be better suited to today's students.Feedback is faster and more frequent:Believe it or not, online learners may actually have more contact with their educators than classroom learners. From kindergarten through advanced degree programs, students can take their education with them on the go. This has also transformed the way students engage with assignments, as the multiple avenues to source study materials from helps create a more diverse understanding of different subjects and topics. The findings suggest that, similar to the modality and cueing effects (Tabbers et al., 2004), the coherence principle does not generalize easily to authentic settings.One possible explanation for the lack of difference in post-test scores is that the extra material encouraged learners to pay attention to the extended treatment (Mitchell, 1993). The goal of using such computer applications is to increase peer-to-peer interactions through digital means, in order to replicate real-life 21st century communication skills.Computer technologies have been developed to help disabled students in different ways depending on their disabilities (visual impairments, or mobility impairments, or speech, language and learning impairments).For students with visual impairments, some available technologies are: screen reading program, large print screen, screen magnifying system, Braille computer systems and Braille software._"Why the sudden rush to put computers in the classroom?There are three major reasons: the development of instructional uses for computers, technological advances and financial accessibility through the microcomputer revolution, and extreme student interest in and curiosity about interacting with computers.''(Henry S. When any weaknesses or limitations are found, then it is the job of the supervisor to direct the individuals to make improvements. Compounding this, dozens of smaller companies are now joining the fray.Gone are the days where students are expected to sit quietly at their desks. Educators can post announcements, grade assignments, check on course activity, and participate in class discussions. Funding should be provided to create an administrative unit that is to be responsible for managing the program. This means students are able to learn in relation to their own abilities and needs, ultimately personalizing the education experience.Used an effective teaching tool – compared to older teaching methods that saw teachers stood at the front of the class talking, technology today means that teachers can utilize ICT to share videos, images and other content that's interesting and relevant to that lesson – from anywhere in the classroom.Enhances student engagement and collaboration – utilizing technology in the classroom keeps students focused for longer and encourages engagement and collaboration with peers as they work together on projects and interact with one another to solve problems.Makes learning more fun – our children of today like technology – it's a fact we can't deny. It is interactive in that you can also communicate with your teachers, professors or other students in your class. Furthermore, the links can affect fluid reading of narrative and increase the learner's cognitive load. Learning styles and the methods of collecting information have evolved, and "students often feel locked out of the worlds described in their textbooks through the depersonalized and abstract prose used to describe them". While these are also possible in the classroom, the limitations of time and often, logistics challenges, prevent these methods from being used effectively.Encourages students to talk rather than listen in Classrooms:The flipped classroom approach has gained popularity in recent times for its ability to reverse the traditional teaching model. Others prefer to watch a video, listen to a recording, or dig into hands-on activities. The redesigned learning space is laden with integrated technology, which means students aren't just using these things, but they are understanding how to use them in order to achieve a specific goal. Semantic web facilitates flexible and personalized access to the learning material. The survey covered the top challenges and priorities for both teachers and administrators. Some users pay a fixed monthly rate for their Internet connection, while others are charged for the time they spend online. This curated content consumes time and effort that are often the reason for the increase in implementation costs.Technological changes and issuesDigital curriculum is not one-time investments. For example, Mitchell (1993) proposed that a learner's interest could be caught and held during instruction to improve retention. In short, it referred to instructors delivering teaching materials in the teaching activity to learners through interpretation. Constant learning is increasingly the norm for more and more jobs. This includes the purpose and benefits of the tool, what personal information is involved, who is able to see it and where it is stored. There are three considerations to keep in mind about how attention affects learning:-We can hold our attention for only about 20 minutes.-Multitasking inhibits learning.-When training includes too much content in the same modality, it can lose learners' attention.The temptation with e-learning is often to cover too many subjects at once or to use long, information-rich modules. Particular attention is paid to the meta-analyses on the effectiveness of online learning, the heterogenous outcomes of student learning and the endogenous issue of learning environment choice. These action logs are comparable to invisible breadcrumbs left behind by learners, marking the path they took as they engaged with the environment and providing fine-grained information about when and how they interacted with specific components of the environments' user interface. Students with different disabilities need to be consulted before making any decision or drafting any policy which will inherently affect their future. The platform is available for both teachers and students requiring learning material. E-learning theory examines these approaches. The Internet and a proliferation of Internet access devices have given students the ability to learn anywhere and everywhere.Path: Learning is no longer restricted to the pedagogy used by the teacher. These theoretical perspectives influence instructional design. Virtual reality has the potential to increase visual literacy, technology literacy, and attention to audience._Cloud-based learning refers to learning online while data are stored in the cloud. One significant barrier to teaching online courses has been faculty concerns. Digital technologies appear to be appropriate means to improve basic literacy and numeracy skills, especially in primary settings.The effect sizes are generally similar to other educational interventions that are effective in raising attainment, though the use of digital learning has other benefits. They took an active role by determining a wider vision for their learning journey, taking part in the process from start to finish. Because chatbots are equipped with Natural Language Progression, as found in Siri, they have the human capability of answer questions about homework, helping students through a paperwork process like financial aid or paying bills, and easing the workload of the people who would normally serve these roles. Students are able to reinforce theoretical knowledge with hands-on-training through simulation tools, giving a better understanding of the material.Simulation tools can track student progress and provide standardized feedback that can aid in developing skills. IT literacy can serve as a significant barrier for students attempting to get access to the course materials, making the availability of high-quality technical support paramount. The findings obtained showed that both perceived usefulness and simplicity of use have a positive impact on attitude toward using blended learning in the university. Within the classroom, students may be required to use tablets, complete online research, and take digitized assessments. As more and more school districts examine the costs and benefits of making the switch from print to digital textbooks, equal access to the Internet is a top-of-mind concern.________________Digital library:A digital library, digital repository, or digital collection, is an online database of digital objects that can include text, still images, audio, video, digital documents, or other digital media formats. With the change to Web 2.0 technologies in the late 90s, the dynamics of the Internet changed dramatically. Emerging student segments, such as executives seeking further education and working adults, may be more lucrative than traditional markets. And this process of making meaningful connections is at the core of all learning. Videos are available for almost any content area, and with one click, users can search YouTube for more videos. Similar to an enterprise resource planning (ERP), it is a back office tool which aims at streamlining every aspect of the training process: planning (training plan and budget forecasting), logistics (scheduling and resource management), financials (cost tracking, profitability), reporting, and sales for-profit training providers. The former focuses on the understanding of the thinking or cognitive processes of an individual while the latter includes social processes as influences in learning besides cognition. He or she can also easily differentiate for students based on their instructional needs and learning styles. This gives graduate students the opportunity to access advanced information for their thesis and researches in the exact moment when they need it the most, while undergraduate students can benefit from the flexibility – a brand new concept for the traditional education – that allows them to stay updated with the school agenda while doing other important experiences such as internships or temporary study abroad.One of the most powerful and positive impact on education provided by the digital transformation in schools is the possibility to build learning modules in a faster way. While running away from our friendly neighborhood tiger, we don't think "You need to remember this! Tigers are bad! Don't forget! They're bad!" We simply run away, and our brain remembers for us.So how do you remember better?Repeated exposure to information in specifically timed intervals provides the most powerful way to fix memory into the brain. Students need the skills needed to cope with vast quantities of information, while also critically evaluating that information.-Other issues to consider include the potential impacts of artificial intelligence and machine learning on our sense of autonomy and self-control. Instruction is what the digital learning teachers provide to personalized guidance and assistance to ensure students learn and stay on track. This leads to heightened stress levels on the brain that, at first, boost energy levels, but, over time, alter the neural circuitry of the hippocampus, amygdala and prefrontal cortex resulting in impaired cognition and lead to depression. Some institutions refer to this type of course as a "fully online" course. Just a single breach can mean vast amounts of private information going into the hands of criminals, terrorists, foreign enemies, or other malign entities.Crime and Terrorism:The internet is fertile territory for malevolent forces to operate, thanks to its international nature, large scale, and the relative anonymity that users can enjoy. Here are some of the potential benefits of online education:Learner-Centered Education:Palloff and Pratt (2013) explain that an effective online instructor is someone "who is open to giving up control of the learning process" by making students active participants in their learning process (p. Although these distractions affect adults too, young people may be more influenced by it as their developing brains can easily become habituated to switching tasks and become unaccustomed to sustaining attention. This is how internet augments knowledge._Digital learning means any type of learning that includes using digital technology. Over-stimulation due to technology may begin too young. Learning feedback is used to adapt learner's lessons according to the learner's comprehension and retention rate. For example, high quality business games are best classified as simulations, because a model of reality ground their operation. Completion rates, therefore, are in low single digits.There are many reasons and ways online learning can be superior to the classroom counterpart. Reading was significantly faster online than in print.-3. The initial whiteboards, analogous to blackboards, date from the late 1950s. For teachers & students to be successful in their use of technology, the devices, Internet access, online content, and software must work well and consistently. Early e-learning systems, based on computer-based learning/training often replicated autocratic teaching styles whereby the role of the e-learning system was assumed to be for transferring knowledge, as opposed to systems developed later based on computer supported collaborative learning (CSCL), which encouraged the shared development of knowledge.Videoconferencing was an important forerunner to the educational technologies known today. To make sure that children are not treated as a homogeneous user group of interactive products, four stages of child development are distinguished below. Digital learning can be online or offline. All of the apps lists below are entirely free, but can be upgraded for enhanced performance at a cost. Given the high cost of hard-backed textbooks, is it wiser to save the money and the back strain by going digital?Do we learn better from printed books than digital versions?The answer from researchers is a qualified yes.Today's students see themselves as digital natives, the first generation to grow up surrounded by technology like smartphones, tablets and e-readers. The following are the eight top issues they cited:75.9% — Budget limits53.9% — Inadequate professional training41.4% — Teachers resistant to change38.2% — Inadequate network infrastructure30.9% — Unreliable device/software options29.6% — No systems to use technology for curriculum17.8% — Other13.2% — District doesn't see immediate need for more technologyOn the brighter side of things, the survey narrowed down the top three technologies that have impacted learning: notebooks (62.1 percent), interactive white boards (54.8 percent) and tablets (50 percent).Other survey results showed that education leaders are beginning to grapple with the gap between available technology and educators' mastery of it. TEDEd contains original lessons, created by instructors and animated by professionals. Many courses offered by both open universities and an increasing number of campus based institutions use periodic sessions of residential or day teaching to supplement the sessions delivered at a distance. Similarly production process has moved from Products to Knowledge, Workplace has moved from Physical to Virtual and its focus has changed from Worker to Customer.In terms of education this means we should create Knowledge that is accessible virtually with the focus on the student. Some companies are trying to gain a foothold in a crowded market. In online courses, teacher-led lectures and in-class exercises are replaced with student-directed learning options that are universally designed for all learners. When book-sharing with an adult, conversations during eBook reading are often about the platform while print book conversations are more often about the book content. Organize by notebook, literary genre, class, student, academic year. The result? Lastly, the article points out survey responses show 90 percent of students will multi-task while reading on-screen, but just one percent will multi-task while reading hard copy text. Popularly known as the flipped classroom model, this inverted classroom dynamics is becoming vastly popular with the rise of EdTech. These two schools, however, share the view that learning is more than a behavioral change but as a mental process used by the learner.Constructivism:Educational psychologists distinguish between several types of constructivism: individual (or psychological) constructivism, such as Piaget's theory of cognitive development, and social constructivism. Mastery goals refer to the desire to develop skills or to master new knowledge or new sets of abilities (e.g., improving one's knowledge about a particular topic). The benefits of digital game-based learning, in terms of motivation and engagement, are often attributed to its entertainment aspect. Traditionally, in formal education this interaction occurs largely between the student and the teacher, but as students and teachers become distanced from each other in the virtual classroom, creative strategies for instruction continue to be developed. E-education is limited to metro cities and urban areas. With online learning, the training can be conducted from practically anywhere in the world. The teacher can support students in a way that AI cannot, but is unable to process the large amount of real-time data analytics provided by the computer system. These services usually require certain personal details to create an account or 'login'. And Edgenuity's boast takes credit for substantial test score gains that preceded the use of its online classes.A Hechinger Report review found dozens of companies promoting their products' effectiveness on their websites, in email pitches and in vendor brochures with little or shoddy evidence to support their claims. Too much information, coming too rapidly, can overwhelm thinking.Technology is "rapidly and profoundly altering our brains." High exposure levels stimulate brain cell alteration and release neurotransmitters, which causes the strengthening of some neural pathways and weakening of others. One of the stated goals of MOOCs is to provide less fortunate populations (i.e., in developing countries) an opportunity to experience courses with US-style content and structure. Much has changed, and the classroom of today reflects all of the technological advances that have taken the world by storm. The networked relationships that Internet users have with online information have prompted wholesale reassessments of the nature of learning. Move purposefully: Digital learning tools will not replace good teaching. Adding technology to the classroom increases the overall amount of exposure to electronic devices. Technology is at the center of their lives, touching every aspect of their day-to-day experiences and influencing their decisions. From the early twentieth century, duplicating machines such as the mimeograph and Gestetner stencil devices were used to produce short copy runs (typically 10–50 copies) for classroom or home use. There are no live question and response interactions.Dynamic Interactions: These are interactions that are two-way interactions in which the teacher and the student interact as if they were face-to-face. Nowadays, technology has obviously made our lives easier. Now the student's focus is totally on the learning process than on copying note as the learning material can be accessed at a future time. Computer Assisted Learning eventually offered the first online courses with real interaction. Unprecedented levels of engagement and student success. If a student doesn't have a laptop or internet and cannot receive what I am sending, it is not fair to conduct their examinations online or offline," said Kidwai, who teaches at the Centre for Linguistics, School of Language, Literature and Culture Studies._____Myth: Learner outcomes are not as good with digital learning.Fact: Planned learning outcomes have been shown to be the same if not better with digital and online learning. The free online courses supported self-regulated learning by the individual who needed to change fields. About 56 per cent of children were found to have no access to smartphones which have emerged as essential tools for online learning during the coronavirus-induced lockdown, according to a new study that surveyed 42,831 students at various school levels. They are able to demonstrate abstract concepts, allow interaction between users and simulated equipment, and provide users with feedback that allow users to improve their knowledge and skills._Applying artificial intelligence (AI) to education is not about replacing teachers. entertainment instruction). There are so many e-learning authoring tools and learning platforms to choose from and so little time. In other words, the teachers tended to believe certain problems were easier than they actually were. This adds it to the cost. Just 20 years ago, there was very little in the way of online education or digital learning. Some may prefer images, some prefer just reading words and some prefer to talk about or actually do a task in order to learn.Isolation:A lot of questions are a lot easily answered when face to face with someone when you can guarantee an instant answer. They have to share their product for feedback and to incorporate that feedback into a finished, published version of their project – providing them with a more authentic audience for their endeavors. This includes:-A course syllabus.-Course format.-Recommended background and experience.-Materials needed.-Course at a glance information.Students who finish a course may often receive a statement of accomplishment from the instructor.We Schools is a free eLearning website that is dedicated to teaching students the various aspects of web design. Our relationship with technology is no longer one-dimensional where we exploit its resources and affordances, rather it is reciprocal where both sides benefit from each other. And the content is also embedded with multiple interactive elements such as external links, videos, audio etc., for better engagement. Studying online at your own convenience allows you to no longer worry about class location when choosing what to learn next. Teachers are also welcome to add their own material to the system. But it goes beyond primary and secondary education. About 65 percent of faculty supports the use of open educational resources (OERs) in teaching, and 63 percent showed support for the competency-based education system._Students have also shown willingness to embrace digital learning technologies (DLT) and practices. This is just one way; there are many innovative ways to use technology and improve learning and teaching."However, while technology is enabling, it can also be limiting, especially in India, where basic access is a challenge. Thanks to the digital transformation, students can check out only one device – a smartphone, a tablet or a laptop – to access many different contents at school, at home, wherever they are and regardless of their economic status. Expenditure for an average program is estimated at $300 per student for new equipment and technical support and a further $500 per class ($20 per student) for professional development and support. E-learning is not always the right solution. There is also the suggestion that online can be considered as happening at a physical distance from a provider, when students could be detached from onsite classroom learning. Finally, when faced with the dreaded exams, some of them tend to panic and fare badly. Learning feedback is used to adapt learner's lessons according to the learner's comprehension and retention rate._Experiential learning is the process of learning through experience, and is more specifically defined as "learning through reflection on doing". An image file can be managed as a regular computer file and can be retrieved, printed and modified using appropriate software. He found a job in a rural area that required a number of new skills, including knowledge of agriculture and statistics. Most of the current conversations and studies in the literature are focused on the second generation of online courses.In summary, most of the no significant difference studies found that overall there are no significant differences. The bad news is, some people can't handle the pressure in the traditional classroom setup. University professors and departments often provide similar resource pages to augment learning opportunities for their students. Many students are not provided with the high bandwidth or the strong internet connection that online courses require, and thus fail to catch up with their virtual classmates: Their weak monitors make it hard to follow the Course Management System and their learning experience becomes problematic. You can learn on the go. Watching a video on a smartphone for fun is a far cry from studying an instructional video, and then posting and answering related discussion questions. Examples of asynchronous e-learning methods include the use of a message boards, discussion groups and self-paced online courses._Table below shows classification of online distance learning applications:_Applying the two dimensions of "time distance" and "number of participants", one can classify online distance courses into four distinct groups:-MOOCs (massive open online courses): unlimited in the number of participants, enabling them to learn asynchronously at their own pace.-SMOCs (synchronous massive online courses): unlimited in the number of participants, in which students participate synchronously and in real-time.-SPOCs (small private online courses) number of students is limited, learning takes place in an asynchronous manner.-SSOCs (synchronous small online courses) number of students is limited, require participants to follow the lessons in real time._____Characteristics of distance learning:Four characteristics distinguish distance learning.First, distance learning is by definition carried out through institutions; it is not self-study or a nonacademic learning environment. Teachers encourage students to use computers collaboratively to create documents, spreadsheets, and presentations, which they believe leads to greater student engagement.Learning management systems and digital tools such as online quizzes provide teachers with increased student achievement data. Hybrid is not as prevalent in the higher education sector. In today's world, digital technology has not yet been applied much in education, although it is widely in use elsewhere in the society and in work life.If we look back to 100 years from today, we will see advancement in almost everything like: transporting systems from steam locomotive to superfast trains and airplanes, similarly there is lot of differences in the communication system from past to present. The early forms of distance learning were geared toward homebound students (and vocational education at a postsecondary level), and used pre-World Wide Web delivery methods including print materials, CD-ROMS, and video conferencing to deliver instruction and facilitate communication. Ads, pop-ups, games, news, fun websites, social media, text messages, and more are constantly competing for our attention. Hangouts can occur with multiple circles of students, and they can be streamed live so that anyone can participate. Zhao et al. Other studies of DGBL have looked at the relevance of flow theory (see Hays, 2005; Lieberman, 2006, for reviews). The look of the technological products should be mostly realistic and have to contribute to the user's image; the look must correspond to how the user wants to profile himself towards other people (Markopoulos & Bekker, 2003)._How digital learning is impacting children:Shortened attention spans and the rise of "selfie culture" are among the negative impacts of digital learning on today's students, according to a new analysis. The key to successful incorporation of podcasts was not the audio itself, but how teachers incorporated them into lessons. However, games neither necessarily are based on a model of reality, nor is playing a game mainly aimed at learning such a model. These systems then adjust instructional materials to meet students' needs. That's a lot of students logging on at once._Outside the Classroom:Technology's impact on learning extends beyond the school, as well. "Education is not just about classes. There are so many teachers who upload their recorded lectures for the students who want to study by listening to the study material. You can very well access your curriculum wherever you are. YouTube users can also post and access educational content for free on YouTube, as well as comment on and rate the videos.LinkedIn also has a paid platform for e-learning embedded within it called LinkedIn Learning which features over 1,000 business courses. Ogden Lindsley developed a learning system, named Celeration, that was based on behavior analysis but that substantially differed from Keller's and Skinner's models.Cognitivism:Cognitive science underwent significant change in the 1960s and 1970s to the point that some described the period as a "cognitive revolution" particularly in reaction to behaviorism. The instructor's personal mood on any given day could also change the level of quality instruction as well. In these instances, the question of "is it better than face-to-face?" is nonsensical, because the student doesn't have a face-to-face option. While these systems have continued to improve and expand, adding features and enhancing usability, they are still based on the same core paradigm. The individuals mostly communicate with their professors and supervisors through email or send them text messages. Teacher knowledge is an example of such a domain. For example, the portability and connectivity of mobile devices, such as tablets or laptops, provides children access to a broader and more flexible source of learning materials than materials that are offered in traditional classroom settings, such as blackboards or books (Goodwin, 2012).One of the great challenges for those who create these interactive products for education, is to develop effective tools or learning environments that help children to use their inborn learning abilities and to improve learning when comparing to traditional forms of teaching (Blackwell, Lauricella, Wartella, Robb & Schomburg, 2013). Simulation tools offer many advantages compared to traditional teaching methods. This requires a high level of critical thinking. Formal assessments or quick informal quizzes at the start of a class allow the teacher to take the pulse of the room and understand where students may need help. People commonly resist change, even if the changes are superior to what they had previously. Thus eLearning developed. If unchecked, the underlying structure of the brain could be altered. They include: learning management systems (LMS), learning content management systems (LCMS), as well as virtual classroom tools and virtual learning environments (VLE). Given the abstract nature of online learning, motivation in particular can take a hit, especially if you have already spent the day at work in front of a computer screen.Problem 8. For instance, it has been defined by Jama, et al., as a type or system of learning which is utilizing electronic technologies to access educational curriculum outside traditional classrooms. Researchers call this failure of insight poor "calibration."The point of such research, as Alexander herself notes, is not to anoint a winner in a contest between digital and print. Several authors have come up with definitions of DGBL. This may limit the choice of subjects or courses to take. Azizan (2010) concluded that utilization of technology in physical classrooms offer extra resources for the students and this is expected to enhance learners' confidence and competence as well as improve the quality of learning. We all swim in a sea of electronic information and there's no turning back the tide. In his view, the linear format of a traditional book is well suited for narratives but not necessarily ideal for academic texts or scientific papers. Watching a video doesn't quite evoke the same joy as witnessing the teacher do the experiments followed by us doing them ourselves. At this point, for example, access to the Internet is widespread, but the tools to use the current generation of digital learning resources and to create content for online distribution is much less so. The teacher determines, dominates and is responsible for learning process in many ways. The study showed a deviation between how math teachers rated the difficulty of problems and actual student performance on the same problems. Therefore multimedia are apt for teacher education._Simulations are programs that contain a model of a system or a process (De Jong & Van Joolingen, 1998). Teachers deliver all assignments and curriculum materials via an online learning management system (LMS). Today, special programs are able to suggest what courses a learner should take depending on the courses he previously completed, his scores and his aptitude. — Online vs. Therefore this particular kind of learning is called heteronomous learning. If you want to learn all about SEO, or digital marketing, or cyber-security, or the new sales methodology – you are going to have to commit some time. On the other hand, digital classroom software provides the feature of recording the qualities that enable the learners to view all lectures that have been delivered by educator.A digital classroom is a classroom that is fully immersed in technology. A recent eLearning Guild™ member survey of 32K cross-sector organizations reported 83% of the organizations had been able to reduce costs to under $150/beneficiary thanks to digital learning – significantly less than the cost required to administer the equivalent programs in-person. The key drivers behind these cost benefits are greatly reduced capital costs, reduced instructor costs (due to a greater student-to-teacher ratio possible with same quality) and content creation costs. One prominent class of AI-enhanced educational technology is intelligent tutoring systems (ITSs), designed to provide immediate and personalized feedbacks to students. But this is not the case in e-learning. Gamified e-learning doesn't need to be overcomplicated, and we can look outside the training industry to find great examples of apps that work. In contrast, a digital clock is capable of representing only a finite number of times (every tenth of a second, for example). Another form of synchronous learning that has been entering the classroom over the last couple of years is the use of robot proxies including those that allow sick students to attend classes. The survey highlighted various interesting things regarding how technology is evolving the education, leading to a purely digital learning environment. This article provided me opportunity to understand digital learning._____ Despite of the orientation, the educational potential of computer simulations is high, because simulations optimally use the interactive possibilities of computer technology. Moreover, simulations allow to handle situations that would be too dangerous or time-consuming in real life. But now, this has come down by half, because of increased screen time. An example of this type of instruction is to design an authentic project and to share it in order to receive immediate feedback from others. There are a range of options available depending on the specific needs of the institution. Some of these studies are direct contradictions of the studies with positive results: they find that students performed worse in the online format compared to the traditional format. In education, that might be marking or motivating, lecturing or lesson planning. The individuals, who have special needs, for who are experiencing visual or hearing impairments, or those who belong to deprived, marginalized and socio-economically backward sections of the society, for them, technology has contributed to a major extent in the enhancement of learning._In higher educational institutions, individuals are dependent upon technology to a major extent. For instance, Xu and Jaggars (2013) used a dataset of about 500,000 courses taken by over 40,000 students in Washington state, and they found that there were detrimental effects for all types of students in the online format, but most particularly for male students, younger students, black students, and lower achieving students.In one of the first experimental studies on the effects of traditional instruction versus online learning where students were randomly assigned to live lectures versus watching the same lectures online while supplemental materials and instructions were the same, Figlio et al. Parents considering digital learning should consider their kid's age, learning ability and ability to monitor time spent online. Other studies have also arrived at similar conclusions. As these examples suggest, learning technology is most useful when it is designed to meet specific needs and contexts.______Digital Learning Environment:Jarkko Suhonen, the senior Researcher from the University of Eastern Finland defined digital learning environments (DLEs) in his doctoral dissertation as technical solutions for supporting learning, teaching and studying activities (Suhonen, 2005).Digital learning environments is a term that refers to the total of digital resources (computers, software, storage, software, and systems) used to manage an academic enterprise and support, enable or manage learning. This has kept the attendance rates staggering, close to 30 per cent. These 'new literacies' are described as "skills students will need for the society in which they will work", including "strong communication and collaboration skills, expertise in technology, innovative and creative thinking skills, and an ability to solve problems". Multimodal content online is delivered through videos, podcasts, screencasts, video conferencing, and presentation software._______Factors affecting success in e-learning are depicted in table below:The factors in the framework can obviously be either enabling or disabling – lack of access to technology is disabling while ample supply is enabling. Among other tools discussed, the paper reviewed the effectiveness of podcasts and blogs.Of the nine studies that examined podcasts, seven reported increases in student performance. Similarly, computers are used as an aid to enhance the teaching-learning process and not as a replacement for the teacher. However technology could be the stimulus for youngsters to explore the world around them. The tools need to talk to each other. Sangra, et al., defined E-learning as "A method of teaching and learning that fully or partially signifies the educational model used, based on the use of electronic media and devices as tools for enhancing availability of training, communication and interaction that helps in accepting novel ways of comprehending and establishing learning". All in all, the sound pedagogical structure of digital tools promotes enhancement of skill sets and encourages critical thinking.Inverted Classroom DynamicsIn a traditional education set up, teachers would deliver a lecture on a particular topic or lesson, which culminated with class and home assignments for students. They believe that face-to-face learning provides live interaction with the instructor and face-to-face learning helps students to get organized with their studies. Represented by primary players such as Blackboard, Canvas, and Moodle, as well as Sakai, eCollege, and Desire2Learn (D2L), these online platforms saw a wide and enthusiastic level of adoption across all institutions of higher learning. Researchers analyzed 2,800+ responses from demographically-diverse teachers, parents, and students and some of the results might surprise you.Digital Education Survey 2016 revealed some interesting findings that compelled the academic researchers and corporate Learning & Development (L&D) professionals alike to dig into the secrets about digital learning that made it ever so popular. For instance, if during an online class electricity or space or both are not available, then a student will be unable to attend the class and be left out._Digital divide in India's digital education:According to the Internet and Mobile Association of India report, on the national level, fewer women (33 per cent) have access to internet compared to men (67 per cent), with rural areas experiencing more disparities (28-72) compared to urban areas (38-62). In low and middle-income countries, mHealth is most frequently used as one-way text messages or phone reminders to promote treatment adherence and gather data.______Learning objects:A learning object is instruction that may be used as a single topic or may be cross disciplinary. It might be viewed singly, grouped, arranged, or chunked so that patterns are formed that present different perspectives. The Learning Technologies Standards Committee call learning objects any entity, digital or non-digital, which can be used, re-used or referenced during technology supported-learning (LOM, 2000).Chiappe defined Learning Objects as: "A digital self-contained and reusable entity, with a clear educational purpose, with at least three internal and editable components: content, learning activities and elements of context. Microlearning teamed up with mobile learning or social learning can be even more effective in engaging learners and enhancing knowledge retention.In "micro-learning," we can quickly read, view, or consume and it only take 10 minutes or less. For kids in the age group of 2-5 years, screen time should be limited to one hour a day of high-quality programs. It also called on private companies to support the effort by donating computing equipment and support services to the nation's poorest schools. He argues that it does not necessarily matter what the technological medium is, but whether or not the content is engaging and utilizes the medium in a beneficial way.Future digital learning Concerns:-1. This approach also lets teachers learn about new techniques and provides them the time to try these ideas in their classrooms before moving on to a new topic.Supportive, successful professional development is based on teachers working together. Converting information into these binary digits is called digitization, which can be achieved through a variety of existing technologies. You will have course corrections and you'll want to have created the buy-in to allow for some changes along the way. The emergence of these highly granular systems requires academics to rethink their view and model for the structure of their curriculums architecture._E-Learning:Rosenberg (2001) defines the term e-learning as, the use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance". e-learning is based on three fundamental criteria suggested by Rosenberg:Networked for instant updating, distribution, storage/retrieval and sharing of information.Content delivery via computer using WWW.It focuses on the broadest view of learning and learning solutions.Thus, e-Learning may be taken as the latest form of distance learning mediated by state-of-art technologies like Internet and World-Wide-Web. Computer – based conferencing that enables group communication, and is itself enabled by Internet and WWW – is one of the key characteristics of e-Learning which makes it qualitatively much superior to the conventional distance learning paradigm.Key attributes of e-Learning may be explicitly stated as:Many-to-many (i.e. group) communicationAny place (place independence)Any time (asynchronicity, time independence)Text, enhanced by multi-media andComputer-

conferencing (i.e., computer mediated messaging)In order to facilitate learning & education, web is being used as the backbone and we cannot underestimate its value in delivery and promoting effective learning to the people._Online courses are those in which at least 80 percent of course content is delivered online. Whether it's in your room, in the library, at a coffee shop or the park, all you need is a laptop or tablet with a reliable internet connection.There is less pressure:Students have different ways of dealing with pressure in schools that create a competitive environment. With Web 2.0 advances, sharing information between multiple people in a network has become much easier and use has increased. One of the main reasons for its usage states that it is "a breeding ground for creative and engaging educational endeavors.": Learning takes place through conversations about content and grounded interaction about problems and actions. Commuters' experiences are liable to change without warning, e.g. when new types of seating are introduced on buses or trains._The research has yielded interesting examples that can help start conversations between teachers and learners, in the spirit of listening to learners and promoting mutual understanding (Table below).Examples of personal mobile device uses, reported by learners:AustraliaSend photos of landmarks to friends to find out where I amCreate e-resources with audio such as Powerpoint presentationsRecord things on my iPhone and replay them in the iPod functionHong KongUse the dictionary, listen to news to learn EnglishTake photos of billboard advertisements and pictures in reference books Download a lot of books for readingPortugalEnter contests and use my mobile to answer quizzesListen to podcasts and class summariesRecord music samples, share music with my studentsSwedenListen to educative radio showsLearn songs and words of songsMake calls to friends who are experts in a diversity of fieldsUnited KingdomSend texts and pictures to the Moblog communityListen to BBC podcasts while I cycle to workRead blogs when waiting for dentist who has free Wi-Fi in surgery These examples of personal mobile device use show that learners are actively using their cell phones, smartphones, PDAs and mp3 players to create, collect and access useful resources, to communicate inventively in a variety of ways with other individuals and communities, and to make best use of time wherever they happen to be.Over the period of research (2005-10), new activities have gradually started to be mentioned more frequently, which can be grouped under five headings (Table below). Students will increasingly use digital portfolios to demonstrate their skills and knowledge as they apply for college and jobs._Online learning requires Digital Literacy. As such, some providers only refer to virtual learning in a context where virtual reality technology is involved, to avoid any implication of inauthenticity. Moreover, the fact that mobile learning is accessible any time, any place by the users, helps learners stay on track with their training, which results in less dropouts.Perhaps one of the most significant benefits of mobile learning in education is that of multi-device support. The concept of the digital divide is a gap between those who have access to digital technologies and those who do not. Access may be associated with age, gender, socio-economic status, education, income, ethnicity, and geography.Computer Literacy:Both students and facilitators must possess a minimum level of computer knowledge in order to function successfully in an online environment. If you wish to get a better understanding of what MOOCs are, a great place to start is the EDUCAUSE Executive Briefing on MOOCs. MOOCs are being driven by some very heavy hitters in Higher Education. In order to successfully participate in an online program, student must be well organized, self-motivated, and possess a high degree of time management skills in order to keep up with the pace of the course. Examples include development of interpersonal relationships and cultural awareness (Kerka, 2000; Wang, 2014). Thus, long hours in front of your computer or mobile phone may result in refractive errors. Teachers need to consider how these learning experiences could be encouraging to students who are performing this type of mental work. Every different day, a new edition of software emerges and it not only gets difficult to hold pace but to also fund these assets. Unlike e-learning, it doesn't even try to fit all the participants into the same mold but instead, takes different learning styles and preferences into consideration, so that the participants can make the most of their preferred learning channels.What is the experience like? And it is a very demanding and ambitious way of learning.Both approaches are and will remain important, especially in distance and open education.______Collaborative and social learning:Group webpages, blogs, wikis, and Twitter allow learners and educators to post thoughts, ideas, and comments on a website in an interactive learning environment. In a study performed by Cornell and Stanford universities, student-drop-out rates from MOOCs have been attributed to student anonymity, the solitude of the learning experience and to the lack of interaction with peers and with teachers. However, many classes still exist which are based on lectures and rote memorization of material. Providing the professional development necessary for instructors to use these digital dashboards effectively is a challenge. Some newly developed digital counterparts, however, such as Apple's iPad textbooks, encourage a personalized learning experience. Finding quality materials to support classroom objectives is often difficult. These may be a video, a blog, or a set of instructional questions that help us think differently than we did before. But you do need to be comfortable working within a learning management system and basic computing programs such as email, Google apps and publisher software (such as Word), as well as comfortable with helping students troubleshoot basic technical difficulties. Regarding using digital communication tools, Dzakiria, Mustafa and Abu Bakar (2006) claimed that the interaction between students and lecturers as well as scholarly discussion both in synchronous or asynchronous video conference is the privilege offered by blended learning application._There is a general consensus among education innovators that blended learning has three primary components:In-person classroom activities facilitated by a trained educator.Online learning materials, often including pre-recorded lectures given by that same instructor.Structured independent study time guided by the material in the lectures and skills developed during the classroom experience.A course created in a blended learning model uses the classroom time for activities that benefit the most from direct interaction. Any use of student's personal information online must be appropriately assessed and implemented to ensure students are safe and parents are informed and assured that our obligations are being met. The results of the study also proved that high interaction between students and instructor exist in this type of environment. You can make groups open or closed, giving you control over the transparency of data and interaction.By far the most consistently underrated digital learning tool we see, YouTube Channels have evolved YouTube from a steaming cesspool of mixed garbage, to a serious distribution tool for any kind of content—academic or not. Students can access their courses at any time of day or night. Basic courses in computer literacy enhance students' knowledge in the field; having a fundamental knowledge of computer hardware would help them participate in online classes without interruptions and hindrances.Problem 9. The emerging use of these tools causes a transfer of the traditional learning model where the classroom is the central place of learning driven by the teacher, to a modern learning model in which the teacher is no longer at the center of the learning process. This has further implications for the educator and in how much online resources need to be revealed to the student but also ensure it is at the right level for the intended student.From an educator's perspective, most recently, it has been noted that providing effective feedback is more time-consuming (and therefore more expensive) when electronic media are used, in comparison to traditional (e.g. paper-based) assessments. Because there is no instructor to answer questions directly, courses must do a better job of focusing on explaining required information to the students with their vocabulary and abilities in mind. Moreover, digital learning environments also support educational opportunities for all types of learners and provide digitally-enhanced instruction. Teachers feel that it is essential for students to learn to handle equipment, chemicals etc., at schools to progress to higher classes.Apart from practical, another important component that cannot be substituted by virtual classes is sports and games. But a large new study suggests their presence in the classroom is far from universally positive. Learning outcome is an indicator to measure learners learning effect (Lubega et al., 2014) as well as a major item for the evaluation of teaching quality. Content formats should be standardized.Personalization NGDLE ModelWhen disparate components are operating in seamless cooperation, the student experiences the result as a dynamic personalization. Others contend that instruction should consist solely of information related to the learning outcomes. Such systems have built in customizable features including assessment and tracking. In 2009, California passed a law requiring that all college textbooks be available in electronic form by 2020; in 2011, Florida lawmakers passed legislation requiring public schools to convert their textbooks to digital versions.Given this trend, teachers, students, parents and policymakers might assume that students' familiarity and preference for technology translates into better learning outcomes. As a term, it is not as widely recognized as the others, but when used appropriately, may ensure that there are fewer misunderstandings when communicating a type of delivery to students.____________Since digital learning is still so new, the language to describe it is ever-evolving. Students, parents, and community leaders will as well. In most cases, students with low abilities might not get enough assistant to help them improve, whilst students at the higher end, do not get enough help to get them to excel. OER is similar in that the individuals who create these resources are licensing the content so that it is publicly accessible and may be re-purposed by others for educational applications.OER include:Learning content: full courses, course material, content modules, learning objects, collections, and journals.Tools: software to support the creation, delivery, use and improvement of open learning content including searching and organization of content, content and learning management systems, content development tools, and online learning communities.Implementation resources: Intellectual property licenses to promote open publishing of materials, design-principles, and localization of content.__________Section-6Overview of digital learning:_Learning is the result of experience. For this reason, interactive e-learning is considerably more popular than linear, as it allows teachers and students to communicate more freely with each other.Individual Learning:Individual learning in this context refers to the number of students participating in achieving the learning goals, rather than the student-centeredness of the material. Digital learning materials or e-learning materials are study materials published in digital format. Covid-19 pandemic has led to closure of schools and colleges worldwide._Internet isn't just a powerful tool for communication. Web 2.0 technologies that are being utilized within the classroom have made it possible for essential learning to be introduced to students during their elementary levels of education and to be refined through their middle, high school and collegiate experiences. Between the age of 13 and 15, activities become more socially and goal oriented. Conversely, the next generation digital learning environment is an ecosystem. Keep e-learning modules simple, straightforward and recapture learner's attention every 20 minutes.-2. Institutional leaders must be committed to distance programs.The last area of concern lies in the distance courses themselves. Students already use this type of the device for school related activities. VR has been found to be best suited for cognitive skill and psychomotor skill training relating to remembering and understanding spatial and visual information, and visual scanning skills.Figure below shows person in VR training:_______Web-based simulation:Web-based simulation (WBS) is the invocation of computer simulation services over the World Wide Web, specifically through a web browser. The study found that for every one hour that babies 8–16 months of age watched DVDs and Videos, they knew 6-8 fewer of 90 common baby words than the babies that did not watch them. "Watch" contains a quick multiple choice quiz students can use for assessment. Additionally, some of these technologies are providing people in developing countries, remote locations or with limited mobility, access to education, which enhances overall quality of life. It requires research of various areas, internal and external to the organization. Digital learning can shapeshift to fit a wide-range of schedules, with no tools required other than a compatible device and internet access. They also rarely complete the associated homework assignments. About 92 percent of students worldwide are interested in personalized support and information on degree progress. Digital learning can manage most of these concerns.Around the world, as students of all ages prepare for their future, the education industry is rethinking its teaching systems. Educational games for this age group can be placed in the context of a fantasy world, in which the children have to search for items that enable them to reach a final goal, such as finding something. Fortunately, many strategies for incorporating technology into your curriculum can be implemented without breaking the bank.We've all had to deal with next-to-impossible deadlines that made us lose sleep and deal with unhealthy amounts of stress. It needs to be recognized as "ecological" rather than "additive" or "subtractive". Nothing is more important in learning than feedback. Sites devoted to specific topics began aggregating links to these resources in efforts to capture educator audiences in the late 90s. Mobile phones are the most popular medium of accessing internet in both urban and rural areas._Various methods have been successfully employed to overcome existing hurdles to accessibility without requiring new technologies, such as:Establishing community centers with shared accessMaking content available offline and syncing the device when it comes back onlineBypassing the broadband network in favor of cell phone network (feature phones)._An NSS report (2017-18) said that only 23.8 per cent of Indian households had access to the internet. In transferring the notion of a 'user' from the human-computer interaction studies and assigning it to the 'student', the educator's role as the 'implementer/ manager/ user' of the technology has been forgotten. Great time management skills are crucial to succeed.Students Misusing TechnologyWith the introduction of technology in your classroom, you are sure to encounter students attempting to misuse it, largely for entertainment purposes instead of educational ones. CSCL is similar in concept to the terminology, "e-learning 2.0" and "networked collaborative learning" (NCL). These attitudes changes are particular importance in subject such as mathematics where "math anxiety'' often distracts from learning basic concepts and skills. Intrinsic motivation refers to the inner desire to engage in a task out of interest or amusement, or even because of the challenge it offers (Deci & Ryan, 2000; Martens, Gulikers, & Bastiaens, 2004). It is referred to the act of synchronizing and unifying the actions of members of the organization. With the invention of projection through a computer, a teacher can easily update his material as well. In such cases students interactively participate in the learning process. However, in authentic learning settings, interest may mitigate the effects of the coherence principle. The urban-rural difference in smartphone ownership rate was 20 percentage points (72% versus 52%)._Some prefer the term "digital inclusion" rather than "digital divide," to signal that degree of access ranges along a continuum and that the issue is unequal participation in online activities, rather than complete lack of access for certain groups (Livingstone and Helsper, 2007). Rovai and Jordan (2004) examined the relationship of sense of community between traditional classroom and the blended format, and they found that students in the blended format had a stronger sense of community than students in the traditional format. E-books come with font flexibility, making reading easier and e-readers can store thousands of e-books on a single device.A high school that's done away with print textbooks entirely, learning through a digital medium enables students to:-Search for desired information, just like on Google.-Instantly access a library of digital textbooks.-Access learning aids like interactive maps and subject-related speeches and documentaries.-Interact with homework-help tools like sites that grade not only for grammar, but for sentence structure and repetitive ideas.At some schools the switch to digital textbooks is making waves in and out of the classroom. The same goes for complicated mathematical equations or even long essays. This applies in all schools.Where learners use digital learning at home as well as school for formal and non-formal learning activities these have positive effects on their attainment, because they have extended their learning time. Mobile learning may also consist of a multi-faceted approach to learning through mobile devices that use both social and contextual interactions in addition to video and digital learning applications. Basically, synchronous e-learning requires all the participants to be present, albeit virtually, at the same time, whereas asynchronous e-learning does not.Examples of synchronous e-learning methods include the use of scheduled and timed online tests, virtual classrooms, web conferencing technology or interactive shared whiteboards that learners can use to collaborate. Handling different devices, gadgets, software and hardware day in and day out as part of the education process goes a long way in shaping a tech-savvy generation with skills that are aptly suited for the world they'd eventually venture into.Digital learning has helped assignment formats, learning contexts and assessment methods to evolve. In 2016, the self-paced e-learning product market amounted to 46.67 billion U.S. dollars and is projected to decrease to 33.5 billion U.S. dollars in 2021. 23). These provide the benefits of e-learning to students in states where charter online schools are not available. In the meta-analysis which used stringent criteria for selecting studies that utilized a rigorous research design, compared online learning with the traditional format, quantitatively measured student learning outcomes, and provided enough information to calculate an effect size, the researchers analyzed 45 studies and on average, they found that students in an online format performed modestly better than those in the traditional format. Education is therefore a wholly controllable aspect of one's personal life, with the Internet facilitating a digital juggling of educational engagement alongside daily activities and other commitments (Subrahmanyam and Šmahel 2011). Tools that employ adaptive technology allow this type of content customization for every student. In other words, it's important for the instructor to create an interactive, supportive, and collaborative learning environment for students to reap the potential benefits afforded by online learning.__Audio, Visual and Beyond:While much of how instructors teach in a traditional classroom can't be directly transferred to a virtual environment, there are a variety of other tools that can be used to adapt. It expands access, improves learning, seamlessly integrates into life and work, sustains continuous improvement in individuals and organizations, shortens the time between knowledge development and implementation, improves scholarship, and changes virtually everything regarding learning system design and that means every aspect of a elementary, secondary, and post secondary or tertiary educational systems.______Digitized and Digital Learning:The SAMR Model developed by Dr. Ruben Puentedura provides a guideline for explaining the digital transformation. So many experts say the digital divide in India may turn online classes into an operational nightmare._UNESCO (2020) indicates that over 60 per cent of the world's student population is affected by school closures and that trust in public education services is undermined and could potentially corrode human rights in the present and post pandemic world. Other researchers believed that the systems called blended learning integrates face-to-face instruction with computer mediated one (Graham, 2006; Stubbs, Martin & Endlar, 2006; Akkoyunlu & Soylu, 2006).Figure below shows Blended Learning Environment:_Blended learning Models:There is little consensus on the definition of blended learning. While teachers are irreplaceable, pairing them with advanced, digital learning programs creates a dynamic duo. The Internet is associated with an enhanced social autonomy and control, offering individuals increased choice over the nature and form of what they learn, as well as where, when, and how they learn it. A training management system can be used to schedule instructors, venues and equipment through graphical agendas, optimize resource utilization, create a training plan and track remaining budgets, generate reports and share data between different teams. The dynamic capabilities of the Web 2.0 also enabled the formation of new online communities, further blurring the lines between the real and digital worlds. Online learning encourages students to develop research skills, solve problems, and gives instant feedback. This is true of all spheres: online learning, offline learning and blended learning. Colleges and universities are creating more informal campus learning spaces because they understand the importance of creating and collaborating 24/7, not just when class is in session.The use of AI in higher education has already proven useful. For example, e-textbook developers highlight possibilities for making information available in side-boxes or through embedded links as desirable features that allow students to click out of the reading to pursue learning about certain topics. Apart from making education a more collaborative and hands-on process, digital learning has also opened up avenues to learn new skills that help nurture a generation of future-ready youth. Simply, E-learning courses are specifically delivered via the internet to somewhere other than the classroom for enhancing or supporting learning. They should better understand each other's role in the overall process of education and how they may support each other.__________Internet as educational tool:For many commentators, the Internet has always been an inherently educational tool. At Gurgaon's Ridge Valley School, boys and girls from classes III to V use iPads for English, math, science and social studies. It remains to be seen if massive open online courses (MOOCs), due to the sheer numbers of users and open access feature, are substantially different enough to be classified as third-generation or if it is simply a continuation of the second-generation. Then as technology evolved, lessons were not only delivered to mailboxes but also reached learners on their computers. Professors can also customize their feedback based on student, lesson, group and more. Within the simulator, they can become familiar with aircraft controls, and practice flying in different weather and landing conditions. These can be viewed as a continuum. New learning technologies provide real-time data that gives teachers the information they need to adjust instruction to meet the unique needs of each student.Pace: Learning is no longer restricted to the pace of an entire classroom of students. It will even allow parents to look at their child's feedback in real time, so they can stay up to date about how he or she is doing in class.Communication in the classroom can be a challenge, especially if you have a large group of students to manage. The level of motivation of the individual(s) interacting with eLearning (artefact) influences the time they spend using the product, and previous online or professional experience appears to have a largely positive impact on effectiveness. Even those who have monitored or limited Internet access still use their laptops for offline gaming. This is most likely the reason why fewer degree choices are offered online than through traditional learning. As computers have become more accessible, inexpensive, and powerful, the demand for this technology has increased, leading to more frequent use of computer resources within classes, and a decrease in the student-to-computer ratio within schools. Through a digitalization of the learning experience, both teachers and students are able to improve their skills, with a common goal: to create a more engaging and effective education process.Digital tools of learning are transforming the educational structure by encouraging deeper collaboration between students and teachers. Wisdom is the capacity to apply knowledge effectively to new situations. 34). A few costs include software, hardware, installation, network infrastructure, supporting equipment, internet access, maintenance, operational costs, upgrade and replacement costs, curriculum development, support staff, and professional training (Lee et al., 2013). It is easy to forget about hidden costs when the unit prices of e-textbooks are generally less than print versions, but there are costs associated with going digital that need to be taken into consideration. Districts need to examine their own situation, devices, support, and infrastructure before they make the decision to adopt e-textbooks._School districts who want to make the switch from print to digital textbooks have several potential hurdles to overcome.First, states generally only change textbooks on 7-to-10 year cycles, which means if a print textbook was purchased last year, convincing officials to spend money this year on new digital technology and textbooks might be a challenge.Second, the cost of laptops and tablets has gone down drastically in the past decade, but making the case for the extra expense these pose could take some work.Third, some students may not have Internet access at home. Conducting multiple interviews with teachers and students, researching the social, psychological, and personal teaching aspects is a must when working on an LMS creation.__________Barriers to Learning in Distance Education:Distance learning is an excellent method of reaching the adult learner. Integrating technology into the classroom environment is critical to enhance learning and elevate student achievement and collaboration, but it doesn't end with the installation of devices and networks on campus.____________Safe use of digital technologies:Schools have a responsibility to educate young people responsible behaviour when using digital technologies.Online safety practices and issues should be included within the school's curriculum planning and taught explicitly.Bully Stoppers – supports parents, teachers and principals in working together to make sure schools are safe and supportive placesClassroom resources – links to downloadable classroom activities, videos, interactive learning modules and quiz, advice sheets and other useful resources to use in the classroomSafer internet day student activities – developed to support primary and secondary teachersThe eSafety Commissioner – the Office provides a range of up-to-date information and resources, coupled with a complaints system to assist children who experience serious cyberbullying and image-based abuse._Supervision and duty of care online:Principals and teachers have a duty of care to take reasonable steps to protect students from any harm that should have reasonably been foreseen, including those that may be encountered within the online learning environment. Today, it evolved into online education. Digital learning advocates often call for increasing students' growth mindset and believe that digital tools and resources help students focus on growth, persistence, and grit. There are several online resources on how to design web based learning programs:Advantages of web based learning:-Ability to link resources in many different formats-Can be an efficient way of delivering course materials-Resources can be made available from any location and at any time-Potential for widening access—for example, to part time, mature, or work based students-Can encourage more independent and active learning-Can provide a useful source of supplementary materials to conventional programmesDisadvantages of web based learning:-Access to appropriate computer equipment can be a problem for students-Learners find it frustrating if they cannot access graphics, images, and video clips because of poor equipment-The necessary infrastructure must be available and affordable-Information can vary in quality and accuracy, so guidance and signposting is needed-Students can feel isolated__Traditional Learning versus Web / E-Learning (using IT)Figure above shows difference between traditional learning and Web based learning.__Experts in the field believe that some of the most promising features of modern e-learning platforms will be Web with intelligence, i.e., an intelligent web. It is described as a loose network of various components, designed to work together — "a confederation of IT systems and application components that adhere to common standards, both technical and otherwise, that would enable diversity while fostering coherence." Or, "a dynamic, interconnected, ever-evolving community of learners, instructors, tools, and content." The LMS could continue to be one part of this broader ecosystem; the NGDLE doesn't so much replace the LMS as supplement it, creating a context.The EDUCAUSE Learning Initiative (ELI) proposes a so-called "Lego approach," a set of interchangeable but seamlessly integrating pieces, with the final structure defined by both the institution and the user.As an EDUCAUSE report states:"The core insight from the NGDLE research is that learners and instructors must have the ability to shape and customize their learning environments to support their needs and objectives. This part creates, manages and delivers courses. In such a case, an institution that is not aware of the importance of proper facilitator training, essential facilitator characteristics, and limitations of class size would not understand the impact that these elements can have on the success of an online program.Digital Learning can be fairly expensive and the faculty administrators might have to burn a hole out of their pockets to hold their school abreast with the brand new technologies in coaching. Same for Matific, which gives students math practice tailored to their skill level, and Edgenuity, which develops online courses.All three of these companies try to hook prospective users with claims on their websites about their products' effectiveness. Even when overall outcomes are similar for classroom and online courses, students with weak academic preparation and those from low-income and under-represented backgrounds consistently underperform in fully-online environments. Here, sounds and visuals go hand-in-hand which is easy for the child to grasp.Attention to details: Interactive online presentations or practical sessions in educational content through interactive screen time help the students to pay more attention to details which enable them to complete their activities on their own.Quick completion: Using tabs, laptops or notepads, instead of pens and pencils, motivates children to complete their tasks quickly.Vocabulary: Active online screen time helps students develop language skills. Because choices tend to become strongly fixed in material equipment, economic investment, and social habit, the original flexibility vanishes for all practical purposes once the initial commitments are made. Well-designed programs can also bridge intellectual, cultural, and social differences between students.Third, interactive telecommunications connect individuals within a learning group and with the teacher. MOOCs have not had a significant impact on higher education and declined after the initial expansion, but are expected to remain in some form. A student needs to use their best level of writing.You must follow the community norms. Teachers should not control the learning process as well as they should allow students to perform collaborative work and make some decisions on their own.Student's Role:Some classrooms are equipped with computer access to all students. Not only can it help you to grade, but it can also make it easier to send reports and quizzes to your students.RSS or Social Readers (e.g., Flipboard)While Google Reader is going the way of the dodo, social readers like Feedly and Flipboard continue to surge in popularity because they're attractive, accessible across devices, and make it easy to skim large amounts of information at onceYou can share documents, publish videos, socialize project-based learning artifacts, communicate with colleagues, send messages, participate in threaded discussions, and interact with families and community members in a social media setting. When a lesson is flipped, a unique URL is created for that lesson. To study the impact of E-learning on academic performance, it will be better to be presented with a brief discussion of E-learning concept. From the age of 14, they are also able to understand more difficult concepts and develop the ability to integrate new ideas, points of views and concepts. Because online courses give students full control over their own learning, students are able to work at their own speed. Whatever the medium, interaction is essential to distance education, as it is to any education. The result is that all stakeholders can benefit from this solution.____________Section-10Digital learning games:Digital learning games have become a medium of reference in the education field over the past few years. Many researchers believe that technology is a tool that used to remove geographical barriers and to facilitate learning anytime and anywhere without presence of lecturer which may foster deeper learning. Tutorials are very common in learning software applications. The terms virtual classroom is synonymous with the term digital classroom (vide infra) and online classroom.Some Virtual Classroom Technology and Apps:Virtual ClassroomBrainCertVirtual BlackboardEliademyGoogle ClassroomElecta LiveLiveBoard Interactive WhiteboardEZ talks WebinarBlackboard CollaborateWizIQIn higher education especially, a virtual learning environment (VLE) is sometimes combined with a management information system (MIS) to create a managed learning environment, in which all aspects of a course are handled through a consistent user interface throughout the institution. A typical interactive e-learning system will have these characteristics and thus demonstrates the paradigm shift.Classroom Level:Use of technology at classroom level was not possible until the teacher's delivery mechanisms were aided with technology. Although the digital divide is narrowing as the Internet becomes more pervasive, many students do not have pervasive and ubiquitous access to the Internet – even in their classrooms. There's a script (lesson plan), a dress rehearsal (practicing and preparing your lecture), and a performance (the class session itself). In parts of Asia, North and South America, Europe and Africa, digital technologies are enabling students to learn more effectively and from entirely new perspectives._What is Brick and Mortar Education?You can basically understand the context of brick and mortar education by its own name. I learnt a lot from other's work through internet and others learnt a lot from my work through internet. Nearly any higher education course will include some type of digital learning. Indeed, the impact of these changes has been realized in different literacies experiences, such as in the characteristics of vernacular literacies (Barton & Lee 2012), and in innovation, creativity and design as sources of value in literacy practices (Cope & Kalantzis 2011), such as writing assessments (Cope et al. According to Jenkins, "Rather than dealing with each technology in isolation, we would do better to take an ecological approach, thinking about the interrelationship among different communication technologies, the cultural communities that grow up around them, and the activities they support." Jenkins also suggested that the traditional school curriculum guided teachers to train students to be autonomous problem solvers. Not just simple apps, there are mobile apps for specific exams as well as NEET, JEET etc.The term Podcast is actually a portmanteau of iPod and Broadcast. Because experiential learning is often equated with high levels of learner activity, simulation-based learning is thought to be ideal especially for those who may be less motivated to learn with traditional materials. The primary value of CAI is interactivity – it allows students to become active learners instead of passive learners, by utilizing various methods such as quizzes and other computer-assisted teaching and testing mechanisms. Students are expected to watch lectures online at home and do homework while they are in class. According to the report, this constant surveillance resulting from educational technology can "warp children's privacy expectations, lead them to self-censor, and limit their creativity". There is indicative evidence that the same can be said for some aspects of literacy, especially writing and comprehension. In a methodologically rigorous study conducted at Ithaka (Bowen & Ithaka, 2012), students were randomly assigned to the traditional format (control) and a hybrid interactive online learning format that met once a week where students did most of the work online (treatment). Measures focused more on inputs that heighten institutional visibility and student perceptions cannot effectively measure actual learning outcomes. Khan Academy certainly has youth appeal with its avatars and ability to earn badges, but it is also an extremely viable option for adults wanting to improve their technical skills, or learn about subjects such as entrepreneurship.Coursera has partnered with museums, universities, and other institutions to offer students free classes on an astounding variety of topics. Professional learning models and associated resources typically focus on developing teacher knowledge and skill (Angeli & Valanides, 2009; Ertmer & Ottenbreit-Leftwich, 2010; Groth, Spickler, Bergner, & Bardzell, 2009; Harris & Hofer, 2011; Jimoyiannis, 2010) and design thinking – the act of creating new knowledge in response to challenges (Tsai & Chai, 2012)._______Can digital learning tools decrease teacher effectiveness?Unfortunately, the answer is yes.If teachers do not effectively monitor and guide students, then digital learning can be a waste of time and it can decrease teacher effectiveness.On its own, digital learning could not compensate for a weak teacher. Otherwise stated, the medium of distance education, whether it is mail correspondence or the TV or the Internet, explains the least of the variation in learning outcomes, which supports Clark's (1994) claim and is later confirmed by Means et al. He has completed free online courses to fill these knowledge gaps, has earned a dozen certificates, and now has a leadership role in his new field.These examples suggest the range of ways technologies can support learning in varied sociocultural contexts. Feedback loops in a digital class ensure that students receive input from their professors in a timely manner. Simulations (and games too) are being discussed with renewed interest in both formal and informal educational circles. While temporary school closures as a result of health and other crises are not new, unfortunately the global scale and speed of the current educational disruption is unparalleled and, if prolonged, could threaten the right to education. They can also resume their course easily, without unlearning previous content. For some, it takes time to find the intrinsic motivation to buckle down and do the work. Next, you must question logistics and available assets. A virtual learning environment (VLE) simulates a virtual classroom or meetings by simultaneously mixing several communication technologies. You may already be familiar with open access journals and books. As of April 2015, about 56 percent of students worldwide wanted their instructors to enable them to use their laptop more in a learning context. A lack of routine or fixed schedule can mean eLearning becomes complicated with various deadlines often given to different people at different stages of their learning.Learning Approach:It doesn't appeal to all learning styles so some learners will not enjoy the experience – especially strong activists and pragmatists. It is still a challenge to make eLearning appeal fully to these groups as different people learn better or worse using different styles. The students, who sit at the back of the classroom face problems in observing and understanding the concepts. For instance, teachers make use of blackboards and write on them with chalks to provide training and instruction to the students. In step 3 students are giving and sharing information relevant to the course to each other. Others sell some of the most widely used education software in schools today. The point, in short, is that AI doesn't have to match the general intelligence of humans to be useful – or indeed powerful._As artificial intelligence (AI) becomes more prominent in this age of big data, it has also been widely adopted in K-12 classrooms. In the present existence, there are usage of projectors and computers in classrooms, so that students are able to observe and understand the content in an effectual way. The constructivist theory that supports asynchronous learning demands that instructors become more than dispensers of knowledge; it requires that they become instructional designers, facilitators, and assessors of both grades and their teaching methods. The instructor found that students in the latter group improved their writing compared to the group that did not have blog access. Australia's Deaken University used IBM Watson to create a virtual student advisory service that was available 24-hours a day, seven days a week. (2010). In traditional learning, the teacher presents contents and the learners receive them, store them in their memory and recall them when being asked for in examinations. Social networking encourages collaboration and engagement and can be a motivational tool for self-efficacy amongst students.______Digital Technology in Education:The use of digital technology in education is an imperative aspect that has gained prominence. The access gap.Some people may not have the most technologically advanced devices or the latest software versions that can support such activities. Some academic debates raise on "the tension between education as conservative and progressive" (Phillips & Siegel, 2018). The variations in how online learning was implemented did not affect student learning outcomes significantly, but it should be noted that there is a small number of studies for this particular finding (N=13). Drawbacks of mobile learning include poor internet connectivity, distraction and screen too small for certain tasks._By digital learning tools we mean hardware (computer and mobile devices) and software including platforms for teaching and learning which work with digital learning materials like text, images, audio, and video. Moreover, she emphasized that most EFL/ESL students enrol in hybrid classes too.Usta, and Özdemir (2007) studied students' opinions about blended learning environment and their findings proved that students have generally positive opinions about blended learning environment. After approval, however, the expert need not review answers to that question until the material changes, and AI can help there too, notifying the expert when content appears to have changed.What if a student asks a question to which there isn't an answer in the course materials? There are of course many media and technologies available to support e-learning. Learners can have direct and immediate access to their instructor for instant feedback and direction. Digital learning requires a combination of technology, digital content and instruction. These are the brain regions that control mood and thought. Technology for this age group can be very similar to technology designed for adults. found the presence of the Hawthorne effect where there was a tendency to find favorable findings for distance or online education if the researcher was also the instructor of the course. 182). There are several suggestions of why this may be the case. For example, print is familiar and comfortable to use (Bouck, Weng, & Satsangi, 2016). Traditional textbooks can also be used without the need of a special reading device or software. The new role often leads to students having more control over their learning, and teachers must become comfortable with this change.Technology advances more quickly than human behaviors and systems, so choose a strategy to support, and stick with it. The new words educatainment or funderstanding refer to this integration of play and learning. Because goals vary, measures will vary as well.While thoughtful planning and stakeholder engagement takes more time up front, they pay off many times over in success. Social media can be used as ice-breakers and for community building purposes.______________Section-23Digital divide and digital learning:A digital divide is any uneven distribution in the access to, use of, or impact of information and communications technologies between any number of distinct groups, which can be defined based on social, geographical, or geopolitical criteria, or otherwise. Educational technology encompasses e-learning, instructional technology, information and communication technology (ICT) in education, EdTech, learning technology, multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, digital educational collaboration, distributed learning, computer-mediated communication, cyber-learning, and multi-modal instruction, virtual education, personal learning environments, networked learning, virtual learning environments (VLE), m-learning, ubiquitous learning and digital education._During the last two decades education in general and higher education in particular have undergone a "renovation" of methodologies in teaching and research, namely influenced by new technologies of communication, developing an affordable ´ecosystem´ for education (Castells, 2005; Galego, 2016; Gisbert Cervera & Johnson, 2015). Further, they have continuous access to lectures, course materials, and class discussions. This share is slightly higher than 2013 and 2014 figures, when 46 percent and 47 percent of the students stated taking this type of course. When you're not surrounded by classmates and instructors in a physical setting, it may be tempting to procrastinate. So students, can access exclusive online study modules of various subjects, which help them to enhance their knowledge even without a teacher.External guidance: With online education, students can even further connect with distant counsellors and faculty to seek guidance or resolve queries.______________Section-16Students' perspective in digital learning:Many individuals would like to advance their education, but face difficulties in attending traditional college degree programs because of work or family obligations, geographical location or other obstacles. Pedophiles use fake personas to gain access and befriend children.While an online method of education can be a highly effective alternative medium of education for the mature, self-disciplined student, it is an inappropriate learning environment for more dependent learners. Performances goals, on the other hand, refer to the desire to demonstrate one's ability to succeed, particularly by surpassing others while expending as little effort as possible (e.g., achieving the highest score in a game). Students usually take traditional classes in this model as well.Self-blend – Students choose to augment their traditional learning with online course work.Online driver – Students complete an entire course through an online platform with possible teacher check-ins. During a hangout, participants can share files and collaborate on projects via Google Drive. Moreover, some of these learning spaces aren't even in the classroom. In 2014, more than three million Chromebooks were used in educational institutions. Electronic textbooks quickly open on a tablet, smartphone, laptop, or computer.The curriculum of any online program must be carefully considered and developed in order to be successful. Courses can be accessed in between work shifts, around after school activities, and around the world. Learning styles vary but teaching styles do not; we end up boring some students whereas others feel lost. In order to track progress, programs can:Track course completion: While this does not prove that learning was absorbed, it does guarantee that it was consumed.Verify acquisition of skills post-training: Much like traditional classroom learning, digital learning can incorporate learner assessments to track the level of skill attained post-training. A student must function within the norms and rules of netiquette set up by the instructor (or, better yet, agreed upon by the class itself).You must be your own advocate. Student information such as attendance records and grades are available for parents to access, keeping them in the loop regarding their child's academic status. This provides students with real-time feedback on their performance to help continuously improve their techniques.Mathematicians, game theorists and economists use simulation to model and analyze probabilities and statistics in theoretical events. Both online and offline digital learning can be combined with traditional face to face learning, known as blended learning.Online learning or E-learning:This is another broad term, but slightly narrower than digital learning. Given the protean nature of digital technologies, teachers also need time to learn and plan (Skues & Cunningham, 2013). The majority of other studies also showed improvements in student writing, although the results were not statistically significant.Small but insignificant positive gains were repeatedly found for studies on wikis, Twitter, and 3D Virtual worlds. In a face-to-face course, they may have only had that one time it was said during class.Digital literacy and netiquette is a must:Digital literacy and netiquette is a must – for instructors and for students. Most schools do not have IT infrastructure that can support large-scale eBooks and digital curriculum distribution. Elaborating further, Ali said disabled people are also economically disadvantaged and cannot afford to buy computers, smartphones, tablets etc. Codecademy works because it makes coding accessible to any interested student, provides practical recommendations for students who want to learn how to code but don't understand how these new skills might apply to their current job.Open Culture is a website where free online educational opportunities are curated. A supportive and resourceful learning environment (context) must be in place. The idea to provide the "best education for the best is the best education for all" (Phillips & Siegel, 2018) acquires a different perspective in contemporary education and turns the curriculum more transversal and "flexible", breaking the approach of having a static track for all.Historically, the aims of education are the transmission of knowledge, skills and the development of autonomy. Numerous studies concluded that there were significant differences in learning outcomes between E-learning and traditional learning. Their emergence and adoption have more to do with learning than technology, although technology developments have been essential in their evolution.There is no doubt, based upon the overwhelming evidence, that the Digital Learning Environment is the dominant learning venue of this millennium. Moreover, a key concern is connected to science labs (physics, chemistry, etc.), impossible to put into practice without in-person instructions and courses relying mostly on hands-on work (i.e. nursing, art classes).Problem 14. The teacher connects personally with the students in the brick-and-mortar classroom and that relationship extends online. At the very least, they increase academic achievement, student motivation, and diversify learning opportunities. As a result, education has changed dramatically, with the distinctive rise of E-learning, whereby teaching is undertaken remotely and on digital platforms. The level of explanations can also be tuned to match the abilities of the student. However, e-learning does require the necessary computer equipment to run online learning platforms. Now I enumerate various challenges facing digital learning:Learning online is good at multiple-choice questions. Smith & Hardaker, 2000). In particular, MOOCs (Massive Open Online Courses), which are open-access online courses that allow for unlimited participation, as well as SPOCs (Small Private Online Courses), are said to have revolutionized universities and the corporate education landscape. It is the combination of learners, teachers, content, activities, and motivational forces that make a learning experience. Although parents report a positive experience, the impact of such use has not been systematically assessed.The age when a given child might start using a particular technology such as a cellphone or computer might depend on matching a technological resource to the recipient's developmental capabilities, such as the age-anticipated stages labeled by Swiss psychologist, Jean Piaget. While this does not mean that the learner should be fluent in programming languages, they are required to adapt to emerging applications and information management trends readily. Air traffic controllers also learn with simulation tools. Once the design is in place and executed, the instructor must then facilitate the communication and direct the learning. When you deploy the course and leave the learners to their devices, chances are that the learners may not take up the e-learning course effectively as they would do in classroom training._Limitations of digital learning include missing out on practicals, lab work and sports; learning difficulty for disabled and least prepared; poor internet access and lack of devices; loss of learning in translation; and eye strain._It is important to recognize that some subjects should not be taught online because the electronic medium in its current state of development does not permit the best method on instruction. (2012) organized the advantages of digital learning for the comparison with traditional teaching.Learning no problem: Digital learning allowed learners not being restricted on time and space as traditional learning so that learners could select the time and location for online learning and had no pressure and obstacle of time and space through the instructors' online interaction mechanism (Jude et al., 2014).Rich network resources: The Internet covers rich and diverse information that learners could acquire data simply by searching key words. Now, people can directly share their doc. Teachers are using tablets in many ways: to conduct digital field trips through the use of Skype, Google Hangouts or other web-based video collaboration tools; to foster peer-to-peer collaboration through the use of cloud-based tools such as Dropbox or Google Drive; and to reach special education students through apps designed specifically for those with learning disabilities.Tablets also are being used increasingly as a vehicle for digital content, including textbooks. However, for others, e-learning offers an opportunity to progress at their own pace, without the additional social pressures of a classroom, and with access to the kind of assistive technology they may be unable or embarrassed to use in public situations. Constructivist educators must make sure that the prior learning experiences are appropriate and related to the concepts being taught. And although having a mobile phone can support young learners, in accessing information or connecting with their teachers, for example, around 56 million live in areas that are not served by mobile networks; almost half in sub-Saharan Africa. Children favor computers over television. Educational tools with adaptive SEQUENCE continually analyze student data in real-time and make split second decisions based on that data. Some institutions use the term blended, particularly internally, as a generic term for provision that includes any element of digital learning. But, with the help of online courses, students can go through the courseware at their convenient time or when they feel they are in attentive state. Many teachers do not yet use digital platforms frequently and systematically in their classrooms. In a 75 minutes session, we can have good interactions with a dozen students, at most. What lies ahead of us looks burdensome and we need to live with this ruinous virus for a really long time, keeping in view, the dearth of an effectual vaccine which could accost this virus. Even if they are aware, parents are not well trained or equipped to teach their disabled children," he said. The Aviation Industry Computer-Based Training Committee (AICC) specification provides support for content that is hosted separately from the LMS._____Virtual learning environment and Virtual classroom:A "virtual" learning environment (VLE) or managed learning environment (MLE) is an all in one teaching and learning software package. Additionally, there are many resources available for parents and educators to introduce technology to young children or to use technology to augment lessons and enhance learning. As schools continue to transition toward more digital learning efforts, many educators are playing catch-up, learning how to incorporate these new tools within their curriculum.Respondents were asked to name the three greatest challenges they face in providing access to education technology in their district. The effectiveness of a simulation largely relies on the accuracy of the simulation. Due to its interactive and immersive nature, blended learning subjects the participants to a lot of different stimuli and encourages them to apply the things they've learned into their work on a daily basis. The second-generation online courses are able to build upon the first-generation courses and improved student learning. If an adult comes around, they simply hit a button which switches the screen to a legitimate activity.School systems that are switching to all digital experiences for their students must ask themselves if the advantages are worth the distractions. Though qualifications are accredited by esteemed university institutions, validity and credibility is met with skepticism because the format is relatively new, and the progress of students is not overseen in the flesh. Paradoxically, overall comprehension was better for print versus digital reading.-5. When AI looks at and explains things in a more human way, learning is easier. These theories can be placed into four main categories: 1) theories of independent study (e.g. Charles Wedemeyer, Michael Moore); 2) theories of the industrialization of teaching (e.g. Otto Peters); 3) theories of interaction and communication (e.g. Borje Holmberg); and 4) a synthesis of existing theories of communication and diffusion and philosophies of education (e.g. Hilary Perraton). However, the equivalency theory of distance education posits that all students should have learning experiences of equal value and that it is the responsibility of the instructional designer to create learning experiences for the distance learner that will be successful in meeting the course objectives. One of the most cited (1900 citations!) and well-known studies for the effects of distance and online education on student learning outcomes is the seminal work by Thomas Russell (1999). Properly trained staff must also be hired to work with students online. Printed textbook information is static, the books are heavy, they're costly, and they quickly become outdated. Many of them cannot operate basic programs such as Microsoft Word and PowerPoint and therefore are not able to handle their files. By espousing a component-based architecture based on standards and best practices, the NGDLE encourages exploration of new approaches and the development of new tools."Five core aspects of next generation digital learning environments (NGDLE):To offer a true paradigm shift, the NGDLE must express these five core aspects:Interoperability and IntegrationFor the ecosystem to function successfully, all potential components should have full integration capabilities. Blended and online courses not only change how content is delivered, they also redefine traditional educational roles and provide different opportunities for learning.In 2010, the U.S. Department of Education released a meta-analysis and review of empirical studies focused on online learning in K-12 schools and higher education from 1996-2008. Teachers need more time and support than they usually receive.Understand that initial efforts are an investment that pays off over time. files on the drive, make edits, which can easily be seen by other users by clicking on the 'revision history'. Students who are nervous about getting in over their heads can relax. Multimedia components such as text, audio, images, animations, video make the simulation tool more immersive. Although we have seen every aspect of life changing with the change of time, we see almost no change or advancement in the education system in many parts of the world. Digital learning enables publishers and educators to update content at any time. Most online courses typically don't have admission requirements, such as GMAT Scores, SAT Scores or Academic Transcripts, which make them very accessible. Therefore, e-learning is very beneficial for all the students who wish to study in groups.Easy Updating:In regular learning methods notes have to be regularly updated by the students. The content may be a MOOC or an instructor-led program that includes simulations, group discussions, and exercises._What works for one student might fall flat for the next. Digital tools also help teachers work with students who miss time due to sickness, sports, or other reasons.Teachers in schools and districts that have formal technology programs extend learning beyond the classroom walls and the hours of the school day.Although not a new concept, the flipped classroom model allows teachers to focus class time on more difficult ideas and hands-on work while assigning basic concept acquisition for homework. They also need to be trained to deliver distance and online education. To this end, Moos and Marroquin (2010) analyzed several studies of motivation, allowing them to identify the following construct categories: goal orientation, intrinsic-extrinsic motivation, interest, and self-efficacy. Understanding how to support teachers in a realistic, highly differentiated, self-paced classroom, remains an open research problem._AI and real-time learningThis is a perfect application for artificial intelligence (AI), but the solution isn't to replace teachers. Web conferencing, videoconferencing, educational television, instructional television are examples of synchronous technology, as are direct-broadcast satellite (DBS), internet radio, live streaming, telephone, and web-based VoIP. An educator designs learning environments and experiences with intent and purpose. At a broad level this is true of formal learning that occurs in schools or other educational contexts, of what we learn informally through life experience, and of learning that results from personal reflection. They are also cost-effective over the long-term.Simulation tools can transform abstract concepts into interactive visual content, making it easier for students to understand the performance and relationship between different system parts. A lot of valuable study time can pass if you don't monitor your internet usage closely. Open universities may employ specific teaching methods, such as open supported learning or distance education. A polling feature allows the teacher to survey the class and notifications show up on the side of the screen, allowing the teacher to receive updates at a glance.Kidblog:Another recommendation for a blended learning model is Kidblog. This is further confirmed by Reich, Yau and Warschauer in their 2016 report on using tablet-based eBooks with very young children (0 to 2 years), which comments that enhanced eBooks with sounds, animations, and games can distract children and reduce learning. In that time, there is not a single successful, scalable digital program that doesn't rely on teachers to facilitate successful student outcomes. They may treat these self-appointed times as a student in a traditional degree program would treat class times. A series of 2013 and 2014 surveys conducted by EDUCAUSE and ECAR reported high rates of satisfaction with these systems, with 74% of faculty calling the LMS "a very useful tool for enhancing teaching." In these surveys, a majority of students reported satisfaction with their institution's LMS and expressed a desire to see it used in more of their courses.However, students also found some areas for improvement, particularly with regards to:CommunicationCollaborationEngagementPersonalizationAccessibility from a mobile deviceThese gaps between the LMS offering at the time and the student-driven vision of what it could be were understandable. By the time you finish your online course, you will have gained more work experience and learned new skills that will help you advance in your career!Self-discipline and responsibility:Who says that having to be more self-disciplined is a disadvantage? To change something, build a new model that makes the existing model obsolete."_Even before COVID-19, there was already high growth and adoption in education technology, with global EdTech investments reaching US$18.66 billion in 2019 and the overall market for online education projected to reach $350 Billion by 2025. In contrast, children attending schools in less-privileged communities are more likely to use technology for drill-and-practice and for taking online benchmark assessments (Warschauer and Matuchniak, 2010; Wenglinsky, 2005)._In 2013, the federal government unveiled a plan to provide 99 percent of all public schools with broadband Internet access within 5 years. There is even a mobile app, which can allow students to view and edit them from their tablet or smartphone.A large part of teaching is managing the classroom, and ClassDojo makes the process easier. Take pictures of papers or learning products. Another learning platform, Osmosis, was created by doctors for doctors and has revolutionized the way medical students study: Using evidence-based educational concepts such as questions, flashcards, and videos, images correlated with memory anchors, adaptive spaced repetition, collaborative learning and gamification, Osmosis maximizes learning and retention. …to get feedback on your performance. Homework now can include watching instructional videos on YouTube or creating a wikipage on a particular topic with other class members, for example. Coursera provides plenty of information about each class. It is noted that adult disabled students prefer online environment better than the traditional format. It's also possible to email students and send them plagiarism report.Almost every child in America has a smartphone, and Remind is a great way for teachers to use them to their advantage. School based cyber-safety education and conversations with adults are two major factors that influence young people's online safety strategies. And while these developmental relationships may theoretically only account for 20% learning, it's the 20% that can make or break a learning experience.Ideal use cases for e-learning:E-learning is best suited for short-term, tactical training courses that consist of practical how-to videos, interactive exercises, and preferably training sessions that allow the participants to ask questions and contribute to the learning experience freely.Ideal use cases for blended learning:Blended learning, on the other hand, is better suited for longer-lasting, more complex organizational learning programs, such as leadership training, where it's important that the participants can repeatedly apply the things they've learned to their work and get ample support from the learning community around them._______Difference Between e-Learning and m-LearningThe need to disseminate education efficiently imposed that classrooms should no longer be confined within four walls. Also these facilities require knowledges and competences (digital literacy) (European Commission, 2010), leading to an effective "digital environment" for learning. Public-school systems offer specialty courses such as small-enrollment languages and Advanced Placement classes without having to set up multiple classrooms. Everything is noted using electronic devices. Most of the studies examined technology tools across different disciplines and usually at the post-secondary level. Students are expected to watch lectures online at home and do homework while they are in class.__Advantages of blended learning:Parallel with the growing use of ICT in the educational setting, blending learning approach can be contributing tools to complete face to face experiences (Ginns & Ellis, 2009). Massive open online courses (MOOCs), offering large-scale interactive participation and open access through the World Wide Web or other network technologies, are recent educational modes in distance education. E-learning or online learning has received much attention in recent years globally, with an estimated 5-7 million students now are enrolling in at least one online course each year.The introduction of multimedia technologies and the internet in learning in many universities has been observed as a means of improving accessibility and quality of delivery and learning among the students and teachers. Some argue that interesting material is essential for learning, even if only of tangential relevance. You can save PDF files and can go through the same whenever you get time.Google Drive's Doc. There are two treadmills. Similarly, Tselios, Daskalakis, and Papadopoulou, (2011) investigated Greek students' views toward blended learning. In other words, a collection of resources that together constitutes a complete online course.E-Textbook:Finally, e-textbook or digital textbook is the narrowest term; it refers to a single work that has been made available in an e-reader compatible format like .pdf, .epub, or .txt._____What is Digital Learning?Digital Learning is "learning facilitated by technology that gives students some element of control over time, place, path and/or pace."Time: Learning is no longer restricted to the school day or the school year. Instructional content can be written and re-written or recorded and re-recorded over and over again until it is effective in meetings it's intended instructional goal. Budgetary worries also stand up when colleges should spend money on teaching their faculty, considering that all forms of instructors cannot acclimatize themselves to the use of technological teaching tools. The connections of learners, teachers, and instructional resources become less dependent on physical proximity as communications systems become more sophisticated and widely available; consequently, the Internet, mobile phones, and e-mail have contributed to the rapid growth in distance learning.Finally, distance education, like any education, establishes a learning group, sometimes called a learning community, which is composed of students, a teacher, and instructional resources—i.e., the books, audio, video, and graphic displays that allow the student to access the content of instruction. In her five-stage model, individual access and the ability of students to use the technology are the first steps to involvement and achievement. "In a country like India, we don't have enough teachers or easy access to good institutions — we should, therefore, adopt a focused, systematic program of using the power of technology to enable learning," he says. There is no need for papers and pens. One treadmill has a few buttons to adjust speed and incline, and that's it. Instead of using the

digital programs to drive differentiation and achievement, teachers may turn it over to students without any monitoring or oversight. However, the use of games to teach educational content inevitably raises the question of their compatibility with deep learning (Graesser, Chipman, Leeming, & Biedenbach, 2009). Anything that makes this formerly cumbersome process more streamlined deserves a spot in your browser.____________Section-18Problems, barriers and challenges to digital learning:_Problems with Digital Learning:Problem 1: Students may cheat when using Digital CurriculumOne of the most common frustrations teachers face with digital curriculum is the fact that students cheat on classwork, homework, and assessments. Kristen (2011) explored the effects of ability, self-efficacy, and personal goal on effectiveness and discovered that learning outcome could indeed be affected by learner traits. This is a significant problem, as these students can miss out on several hours' worth of study each night compared to their peers who can log onto the Internet to access textbooks and educational resources. According to a 2014 article by Amy Novotney for the American Psychological Association, students have been exposed to increased risks of anxiety, depression as well as suicidal thoughts. Additionally, Oye, et al., and Keshavarz believe that E-learning has a positive impact on academic achievements of students in terms of reduces costs, saving time and increases accessibility of education as well as enhances academic performance.On the other hand, and despite these benefits, numerous studies pointed that E-learning has a negative impact on students' achievements, they argue that students may feel isolated, parents may have concerns about children's social development, students with language difficulties may experience a disadvantage in a text-heavy online environment. Effective translation into other languages and cultural contexts requires even more investment by knowledgeable personnel._A learning management system (LMS) is a software application for the administration, documentation, tracking, reporting, automation and delivery of educational courses, training programs, or learning and development programs. With correctly formatted support and through clear explanations an eLearning course is likely far superior to an instructor-led course where there is far more chance for human error. Similarly, text comprehension and metacognition can decrease when readers switch from print to an e-reading format (Ackerman and Goldsmith, 2011). Instead of measuring a student on fact knowledge and discrete skills, assessments should focus on application of knowledge. So, iPads here are like living textbooks, the content of which is uploaded by teachers in sync with the syllabus. This difference was most pronounced for complex questions and least pronounced for basic questions. Each rationale determines the organizational structure, governance and financial model required to serve it. The ultimate goal of Web 3.0 is to create more intelligent, connected and open websites._Computer Managed Learning (CML)In the case of computer-managed learning (CML), also known as Computer Managed Instruction (CMI), computers are used to manage and assess learning processes. Disadvantages of this form of educational technology are readily apparent: image and sound quality is often grainy or pixelated; videoconferencing requires setting up a type of mini-television studio within the museum for broadcast, space becomes an issue, and specialised equipment is required for both the provider and the participant.The Open University in Britain and the University of British Columbia (where Web CT, now incorporated into Blackboard Inc., was first developed) began a revolution of using the Internet to deliver learning, making heavy use of web-based training, online distance learning and online discussion between students. Do my students have smartphones, iPads, laptops, etc.? These concepts were then extended to the Learning Management System (LMS) and Learning Content Management System (LCMS) as a way for instructors to organize and provide access to learning materials already available online. By reading eBooks or accessing study materials online, they learn new words and expand their vocabulary.Learn at his pace: Many a times, a student hesitates to ask a question to his teacher in classroom training. Participants access the Virtual Classroom through their computers instead of having to "go to class" physically.The Virtual Classroom is accessible 24 hours a day, seven days a week. Doing that requires making the platform sufficiently flexible to meet learners' needs. In addition, the relative anonymity of online discussions helps to create a "level playing field" for quieter students or those from typically marginalized groups. In addition to their normal duties as learners, students are required to:-Become proficient with the technology required for the course;-Use new methods of communication with both peers and instructors;-Strengthen their interdependency through collaboration with their peersStudents use background knowledge and then interpret, implement, analyze, and evaluate it to create a new product. Leaders have numerous roles to perform within the organization, they have to ensure allocation of resources takes place in an adequate manner, they make important decisions, listen to the grievances of the employees, and have to ensure there is teamwork and co-ordination between the members of the organization. Students judged their comprehension as better online than in print.-4. The institutions may or may not offer traditional classroom-based instruction as well, but they are eligible for accreditation by the same agencies as those employing traditional methods.Second, geographic separation is inherent in distance learning, and time may also separate students and teachers. Enhancing educational access might cause us to focus on general education courses, whereas capitalizing on emerging market opportunities would lead us to offer courses in the state's high-growth fields such as financial services, genomic sciences, or marine sciences.____________Blended learning:The body of literature on blended learning proves that there is no unity on the definition of blended learning. The second dimension is the digital use gap: without direction, engagement with online content is less sophisticated and less learning-oriented for students from poorer socioeconomic backgrounds. As Our world is growing in rapidly fast in technology, the number of computers in schools in the United States is growing in rapidly since 1983 and continues to grow especially in the years since the Internet and World Wide Web became popular. Still, the free versions are more than sufficient and can be expected to play at least a small role in your overall achievement in higher education. How often does she use digital help facilities? Traditionally, this usually involved correspondence courses wherein the student corresponded with the school via post. The goal is not to entirely abandon classical training but rather to enhance it using technology.With the use of digital learning solutions, the goal is to help the learner gain the skills or knowledge needed by having over:-The place and time of the training-The learning path (difficulty)-The pace of the training-Interactions with othersDigital learning solutions are not perfect, but they can and already have a profound impact on our society. The same methodology can also be used at home, where the homework is automatically generated by the system and appropriate explanations are provided to help the student get through it. You can also add more detailed information about the student's performance or behavior, and you can send public or private messages to parents about his or her progress. Moreover, this body of literature suggests that researchers should move beyond the "no significant difference" phenomenon and consider the next stage of online learning._The Positive Findings:There are a large number of studies that find positive statistically significant effects for student learning outcomes in the online or hybrid format compared to the traditional face-to-face format. Learning occurs best when new information is incorporated gradually into the memory store rather than when it is jammed in all at once.'Spacing' refers to revision throughout the course of study._The cohesive structure for learning is called AGES Model. (Many of the other studies zoomed in on aspects of e-reading, such as eye movements or the merits of different kinds of screens.)Aside from pointing up a blatant need for more research, Alexander's review, co-authored with doctoral student Lauren Singer and appearing in Review of Educational Research, affirmed at least one practical finding: if you are reading something lengthy – more than 500 words or more than a page of the book or screen – your comprehension will likely take a hit if you're using a digital device. For learners, it could efficiently and step by step accumulated personal knowledge. Michel Rich, an associate professor at Harvard Medical School and executive director of the center on Media and Child Health in Boston, said of the digital generation, "Their brains are rewarded not for staying on task, but for jumping to the next thing. For example, the use of robots in the industrial workplace may increase productivity, but they also radically change the process of production itself, thereby redefining what is meant by "work" in such a setting. Experiential learning fosters in-depth information processing and elaboration, as it builds up learning skills and leads to higher motivation for learning initiated by a learner's direct involvement._Digital learning games can be regarded as an entertainment medium designed to bring about cognitive changes in its players. This function is primarily focused upon the performance of the individuals. This is the way traditional digital learning is done. Excessive time spent using digital gadgets lowers critical thinking and literacy skills, especially in younger children. The student-teacher relationship is at the heart of education. After the check teachers can upload plagiarism reports or view the history of checks in the library. Indeed, many people would argue that the main characteristics of the Internet align closely with the core concerns of education. It refers to learning as "all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used" by the human mind. However, thanks to voice AI, such as Amazon Alexa, it is now possible for the learner to ask a question and, through AI, receive a response back from the 'teacher.'_Promising applications and services:Technology's role in education is growing, but a number of nascent applications and services could help it become essential to teaching and learning alike. More than an understanding of technology, more than a perfection of writing skills, the ability to collaborate is one that must be used comfortably online.You need to be able to set goals for yourself. However, it doesn't focus on the standard "gold star" method that has been used by teachers for years. With some systems, feedback can be geared towards a student's specific mistakes, or the computer can navigate the student through a series of questions adapting to what the student appears to have learned or not learned. Lack of interactionDuring the online lectures, it's hard to keep students engaged without a teacher's physical presence and face-to-face contact. But traditional textbooks can be used without the need of a special reading device or software and they are easier on the eyes since there's no eye strain that comes with an electronic device or e-reader._Open educational resources are teaching, learning, and research resources that reside in the public domain and are freely available to anyone over the Web. For most people, there's no contest. Many others suggest little to no difference, while many still point to the benefits of face-to-face learning. Simulation tools have found numerous successes and advantages in education, being used for teaching, training, and testing applications. Many times, in an institution's haste to develop distance education programs, the importance of the curriculum and the need for qualified professionals to develop it is overlooked. Less costs for customer support, software installations, and data management.-2. In authors' first experiment, they sought to identify the conditions under which DGBL is most effective, by analyzing the effects of two different types of instructions (learning instruction vs. Online is also linked to convenience and a lack of engagement with what may previously have been a physical, in-person experience. Laurillard's conversational model is also particularly relevant to eLearning, and Gilly Salmon's Five-Stage Model is a pedagogical approach to the use of discussion boards.Cognitive perspective focuses on the cognitive processes involved in learning as well as how the brain works.Emotional perspective focuses on the emotional aspects of learning, like motivation, engagement, fun, etc.Behavioural perspective focuses on the skills and behavioural outcomes of the learning process. It is in this unpacking of ideas where many experts fail.The expert's blind spot is a hypothesis that suggests that instructors are not always good at predicting the difficulty level of new ideas for students. The so-called digital teaching material contents refer to e-books, digitalized data, or contents presented with other digital methods.Digital tools: It stresses on learners proceeding learning activity through digital tools, such as desktop computers, notebook computers, tablet computers, and smart phones.Digital delivery: It emphasizes that learners' learning activity could be delivered through the Internet, e.g. intranet, internet, and satellite broadcasting.Autonomous learning: It focuses on learners engaging in online or offline learning activity through digital learning by themselves. Do reading and note-taking on paper offer any measurable advantages for learning? Technology has impacted education by introducing new methods of learning, such as adaptive learning, flipped classroom models, and massive open online courses (MOOCs), but more shifts will occur as technology continues to evolve.With so many new types of digital devices, educational software and mobile apps continuously developed, it's hard to keep up with the latest and greatest advancements in educational technology. The main concern raised regarding cloud-based learning is the security risk._Digital portfolios can be used for not only keeping learning records, but also building digital profiles, analyzing learning data, and as a tool for managing learning communities. Several universities offer online student support services, such as online advising and registration, e-counselling, online textbook purchases, student governments and student newspapers._____Computer-aided assessment:Computer-aided assessment (e-assessment) ranges from automated multiple-choice tests to more sophisticated systems. An LMS may allow teachers, administrators, students, and permitted additional parties (such as parents, if appropriate) to track various metrics. Teachers can create tests and quizzes and have the results auto-populate the grade book. Learners can sign up to take classes on a variety of subjects that are offered by a variety of colleges and universities. Although many schools are using computer labs or carts, teachers who are further along in implementing technology express frustration at not having better and easier access to computers.Teachers are especially concerned about students accessing inappropriate online material. Depth of understanding will be required than breath of knowledge.Assessments:With changes to the learning process the assessment methods should also change. Lessons can be viewed conceptually (by subject) or thematically (by series). There are several states that are utilizing virtual school platforms for e-learning across the country that continue to increase. They are not excited when faced with resources or methodologies, some of which have not been updated for years. Now that typing has become a digital process, this is no longer an issue, but the QWERTY arrangement lives on as a social habit, one that is very difficult to change.Neil Postman endorsed the notion that technology impacts human cultures, including the culture of classrooms, and that this is a consideration even more important than considering the efficiency of a new technology as a tool for teaching. Just these two create significant economic advantages to adopting digital learning. Some people use these terms interchangeably while others had differing definitions for the same term. It's important to understand these nuances to better set expectations with students, be precise in promoting course offerings, and more.Digital Learning:Digital learning is an umbrella term, the broadest term on the list. The plan, called ConnectED, set goals for providing bandwidth to rural areas that would support Internet upload and download speeds needed to access digital resources for learning. "But students who reported a high use of school technology trailed behind peers who reported moderate use."These results do not prove causation, but they're certainly cautionary."While there's clear evidence that technology can improve learning outcomes," the report concludes, "our data suggests that technology may not always be used in a way that prompts richer forms of learning. Many teachers report that even if students appear comfortable with computers, they may not be ready to use computers to learn. Classes, which prior to the digital era were restricted to lectures, talks, and physical objects, no longer have to be designed in that manner. This highlights the need for institutions to design studies that deliberately discern where, when, and how these tools are effective.In any case, improvements in student learning shouldn't be viewed as a direct result of merely having new technology, but as a result of how teachers integrate it in the classroom. B.F. Skinner wrote extensively on improvements of teaching based on his functional analysis of verbal behavior and wrote "The Technology of Teaching", an attempt to dispel the myths underlying contemporary education as well as promote his system he called programmed instruction. …to understand assignment descriptions. Critical thinking is the analysis of facts to form a judgment. But that's not necessarily true.In 2005, researcher Ziming Liu noted that:With an increasing amount of time spent reading electronic documents, a screen-based reading behavior is emerging. The big challenge in corporate e-learning is to engage the staff, especially on compliance topics for which periodic staff training is mandated by the law or regulations.There is an important need for recent, reliable, and high-quality health information to be made available to the public as well as in summarized form for public health providers. On the other hand, in the case of e-learning, there is no rent involved. When posed questions in advance, students have the opportunity to compose thoughtful responses and have their voices heard, as well as respond to one another in a manner not usually afforded by face-to-face instruction (Kassop, 2003).Metacognitive Awareness:Since online learners have more autonomy and responsibility for carrying out the learning process, it's important that students understand which behaviors help them learn and apply those strategies proactively. Distance education can catalyze institutional transformation.Each of these rationales has its merit, but in exploring them it became obvious that we could not meet all four goals with a single model of distance education. The literature on goal orientation makes a distinction between mastery goals and performance goals (Ames & Archer, 1988; Pintrich, 2000). The organization of activities and functions should be carried out in accordance to the skills and abilities of the individuals._Directing is a managerial function that is concerned with directing the individuals towards rendering an adequate performance. The virtual classroom provides a structured schedule of classes, which can be helpful for students who may find the freedom of asynchronous learning to be overwhelming. The National Center for Education Statistics estimate the number of K-12 students enrolled in online distance learning programs increased by 65 percent from 2002 to 2005, with greater flexibility, ease of communication between teacher and student, and quick lecture and assignment feedback.According to a 2008 study conducted by the U.S Department of Education, during the 2006–2007 academic year about 66% of postsecondary public and private schools participating in student financial aid programs offered some distance learning courses; records show 77% of enrollment in for-credit courses with an online component. The recent development and usage of virtual reality for training already has positive results, with research indicating that training done through VR is more memorable than training though text and video content. The tests are taken through online quizzes or some pre-designed software which first conduct the test and then check them. In the case of e-learning, this becomes a very limiting factor, as it does not allow two-way communication between teachers and students. To borrow Anderson and Krathwohl's (2001) categories, this process involves moving from lower-order thought processes (for example, remembering, understanding, and applying) to higher-order ones (for example, analyzing, evaluating, and creating)._____DSS 1.0 to DSS 3.0The Digital School Solution (DSS) 1.0 consists of digital classrooms that feature basic projection, computer + console and other visual equipment that enables teachers to display e-content for teaching and learning in a developing school environment. However, simulations may also designed with a behavioristic orientation in mind. This format is flexible in meeting the needs of students and can be synchronous or asynchronous.Tools for Distance Learning:Project Share:Project Share is a tool where there are copious (yes, copious) numbers of courses that are available at no charge to educators and students within the state. The Cognitive concepts of working memory (formerly known as short-term memory) and long-term memory have been facilitated by research and technology from the field of Computer Science. According to this model, we retain information when we focus enough attention on the material, take an active role in generating knowledge, have the right emotions in play and revisit the information regularly spacing. In 2002, MIT began providing online classes free of charge. The students then use the access code to join the class.-One of the features of Edmodo is "Note." Using this feature, the teacher can post an announcement to the class, share files, and engage in dialogue with students.-"Assignments" is another feature and allows students to access files and links to complete a task. Moreover, there were at least two sources of external validity threats: volunteer effect and grade incentive (half a grade boost to students who volunteered to be in the experiment). Furthermore, many students find fixing basic computer problems troublesome, as they have no knowledge in this area. And because an ever-growing wealth of online content and collaborative tools exist, you will want to spend time researching to discover the best resources.The first question you should ask is "What are my learning goals and/or objectives?" This question will help determine which method or platform is best for delivering content. And this part here is probably one of the biggest advantages of mobile learning education. This means that it can be used to avoid misunderstandings when certain parts of teaching and learning are directed by staff, but not delivered by them, in person. For students, showing up for class is replaced with scheduling their time to work through the learning exercises of the course and interact with their classmates. It is imperative that researchers and educators consider the effectiveness of online learning compared to traditional face-to-face format and the factors that influence the effectiveness of online courses.Research suggesting the advantages of digital learning over face-to-face learning remains problematic. Many of them belonging to the lower strata of the society cannot afford a smartphone or a laptop to facilitate education digitally and have no option but to consider dropping out.On the other hand, for learners with disabilities or special needs, online education has been a game-changing development in terms of the educational opportunities it provides. Detrimental effects of the increased cognitive load engendered by the extra material may have been balanced by heightened interest and attention. Interactive and adaptive software allows students to learn in their own style, making learning personal and engaging. Currently, one out of three college students take at least one online course while in college. It is considered as the lifeline of learning. However, the study revealed that online students were less intimidated about participating, and that there was a higher-quality of interaction between students and the professor. Inclusion of digital literacy at the very core of education helps students internalize new digital technologies as they are launched, thus, helping them stay competitive in the real world. Foremost is a reduction in instructional time, which impacts learning achievement. What mostly passes off as e-learning is videos of classroom sessions, uploaded to a portal, along with a few quizzes and assignments. Increasingly, the web is being looked upon as an environment for providing modeling and simulation applications, and as such, is an emerging area of investigation within the simulation community.Web-based simulation is used in several contexts:In e-learning, various principles can quickly be illustrated to students by means of interactive computer animations, for example during lecture demonstrations and computer exercises.In distance learning, web-based simulation may provide an alternative to installing expensive simulation software on the student computer, or an alternative to expensive laboratory equipment.In software engineering, web-based emulation allows application development and testing on one platform for other target platforms, for example for various mobile operating systems or mobile web browsers, without the need of target hardware or locally installed emulation software.In online computer games, 3D environments can be simulated, and old home computers and video game consoles can be emulated, allowing the user to play old computer games in the web browser.In medical education, nurse education and allied health education (like sonographer training), web-based simulations can be used for learning and practicing clinical healthcare procedures. The third step is to understand the general principle under which the particular instance falls. These information retrieval systems are able to exchange information with each other through interoperability and sustainability.Traditional libraries are limited by storage space; digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain it. Digital education is the term used to refer to all online educational practices. This impact can be minimized if parents and teachers limit the number of hours students spend in front of screens.Distractions:Technology can be a minefield of distractions. It is also used where there is not a requirement for regular onsite attendance, but there may be options for students to attend in person should they choose (for example, residential study weekends)._Distance or remote learning?Distance learning and remote learning are terms that are used interchangeably by providers when describing teaching and learning activities. Online courses are typically conducted through a virtual learning platform. Online education ensures that students never miss any topics covered in the classroom. These current trends are making headlines in education because of the ways in which they are impacting student learning:Augmented Reality / Virtual Reality / Mixed RealityIf you think HD video-based curriculum places heavy demands on classroom networks, that's nothing in comparison to what's coming next: virtual reality. While different from its face-to-face counterpart, which involves more lecture- and dialogue-based learning exercises, the advantage of having diversely communicated course content is that students may read or view and review the course materials over and over again (as many times as needed), thereby better supporting student achievement.Students depend even more on the facilitation, assignment clarification, and feedback provided by their instructor:In a face-to-face course, students can plan on getting information and feedback about their learning and performance whenever they attend class. This collaborative learning differs from instruction in which the instructor is the principal source of knowledge and skills. The neologism "e-learning 1.0" refers to direct instruction used in early computer-based learning and training systems (CBL). Directly linked to the accelerated development of internet communication technologies, the development of digital badges, electronic passports and massive open online courses (MOOCs) have a very direct bearing on our understanding of learning, recognition and levels as they pose a direct challenge to the status quo. If the participants' time online is limited by the amount of Internet access they can afford, then instruction and participation in the online program will not be equitable for all students in the course. In addition, secure communications could be sent from teacher to parents, or vice versa, helping promote a constant flow of information. By arousing positive emotions such as excitement and joy, you can engage learners and help ensure that their new knowledge sticks._Misconception that technology is replacing teachers is too common. 2011 and possibilities for the creation of innovative learning environments (e-learning) afforded by new educational technologies (Cope & Kalantzis 2009, 2013, 2015)._____21st century literaciesThe term "21st century literacies" was coined by The National Council of Teachers of English to describe the social nature of learning that is supported by the ability to collaborate using digital technologies in learning. Some technologies pair neatly with different perspectives on learning. Brown and Liedholm (2002) also found that female students performed significantly worse, six percentage points worse, than male students in the traditional format, but there was no significant difference for the sexes in the online format. These distractions can interfere with focusing and learning. Google's course creation tool, "coursebuilder," looks promising; it brings the best tools from Google into the online learning experience.______Digital Curricula:Depending on when and where you went to school, you may have learned with books, such as textbooks from an official program bought by the school or district. Vast space to capture and store data.The main concern raised regarding cloud-based learning is the security risk. In traditional classroom setups, the students are at a loss if in case they are unable to attend classes. In academia, we can leverage AI to understand student questions in the way humans understand it and then partially automate the process to provide people with answers that have been validated by a human expert. Technology shifts can have an important impact on existing content. Students can view assignments, access outside-classroom resources such as video links and sites to visit, and even submit homework to their instructor, either through the portal or via email. Parents and auditors have the conceptual ability to monitor any classroom to ensure that they are satisfied with the education the learner is receiving. While it has been argued that access to resources has been largely addressed in some educational jurisdictions, such as United States of America (Ertmer et al., 2012), the other extrinsic factors remain influential.Intrinsic Influences:In addition to extrinsic influences, teacher practice is also subject to intrinsic influences, also called second-order barriers (Ertmer, Ottenbreit-Leftwich, & York, 2007). Studies show that people are much more likely to behave anti-socially if they don't think that there will be any consequences. Therefore, a more modern approach is necessary to supplant the communicational of skills and abilities.Collaborative Learning:Collaborative e-learning is a modern type of learning method, through which multiple students learn and achieve their learning objectives together as a group. With online learning, students can access relevant, updated material and new learning activities with ease.The stand out benefit of digital learning is the opportunity to learn anytime, anywhere. However, just because you may be able to complete a college course without ever leaving your house doesn't mean that the work is easier or that there won't be any challenges along the way.Virtual Classroom EngagementPerhaps the most common challenge students face in online degree programs is the lack of face-to-face engagement with professors and other students. The question then becomes under what conditions does online learning, or other educational technology work?Researchers looking at the use of technology in traditional classrooms and schools at scale demonstrate that technology is only as good as a successful implementation, which relies heavily on teachers, school leadership, professional learning, student support, and many other factors. This covid-19 pandemic, and its multiple effects on the health, income and well-being of individuals and communities, put a strain on the psychological reserves of all, including students and parents/guardians.______Important Apps and Digital Learning Tools for University Students:The smartphone has become one of the most valuable tools for students in higher education and has come to play an important role in in-class learning, study organization and management, student/community life and planning, dealing with finances, and personal safety and security. Different terminologies had been used to define E-learning. Even those students who surfed only on topics related to the lecture showed significantly worse memory of the lecture's content than those who kept their laptop closed (Carr 2011).Yet, multiple studies reveal that the majority of students say that they use their electronic devices during class to text, browse, or consume media. While training management systems focus on managing instructor-led training, they can complete an LMS. This makes learning Interactive._There is no doubt that digital information and communication technologies have heavily impacted social and cultural life of our societies, and, particularly, have enabled new literacies, especially with the development of Web 2.0 technologies (O'Reilly 2005), in which ways of thinking, informing, communicating have been created and/or transformed. You can manufacture the conditions for insight by, for example, giving the learners a simple puzzle to solve that links new information to previous knowledge.Arousing the right emotions also activates the hippocampus and helps learning stick. Students have to work together and practice teamwork in order to achieve their common learning objectives. And last but not the least is school digital gap: the vast disparity in schools' capacities and capabilities to provide individualized, or suitably levelled and sequenced, digital learning for students._The Covid-19 pandemic has forced school closures in 191 countries, affecting at least 1.5 billion students and 63 million primary and secondary teachers. Some of these individuals need personal, one-on-one attention with qualified educators to make progress. In the flipped classroom model, students can finish lower order of cognitive work before the class and when they come to the class they can engage in higher cognitive levels of learning through interactions._Synchronous learning is online education that happens in real time, whereas asynchronous learning occurs through online channels without real-time interaction. Generally, instructors interact with students more frequently on an individual and personal basis, facilitating the learning of each student throughout the course. Now, ministries of education around the world try to ensure learning continuity for children and youth through distance learning. While online learning materials can help participants cram theoretical concepts into their minds, these learnings often lack context. Themes playing in the present and close to home are most appealing (Acuff and Reiher, 1997). But it also includes students doing internet research or watching online videos in a classroom and teachers using digital tools like smart boards and tablets. Thus establishment of basic literacy and focusing heavily on job specific skills is pointless, as one has to change jobs or manage many jobs by themselves. Personalized Learning requires someone to design a learning journey that is curated or created specifically for a particular learner and/or learning objective. This is more scalable and caters to the individuals scheduling constraints.Mobile Learning:Mobile Learning (sometimes called M-Learning) is a term used for learning processes that can be engaged across multiple platforms. …to see how new concepts are applied. One possible and very likely significant internal validity threat, which the authors fully acknowledge, was treatment diffusion for the "live-only" students since they could look at the online lectures using a friend's account, while "online" students were prevented from attending live lectures. The most successful schools are those that embrace technology sensibly. In general, copyright in print, musical and artistic works, sound recordings or film contained on the internet will not be infringed, where the copy or communication is done with the permission of the copyright owner. Many of the qualities that make a successful online facilitator are also tremendously effective in the traditional classroom.________Cons of Online Learning:New technologies are frequently accompanied by unrealistic hype and promise regarding their transformative power to change education for the better or in allowing better educational opportunities to reach the masses. Successful models incorporated questioning, peer reviews, and self-reflection. Students don't have to search for learning; digital learning can come directly to them. Listed below are common pedagogies, or practices of teaching, that combine technology and learning:Blended/hybrid learningOnline learningFlipped learning1:1 learningDifferentiated learningIndividualized learningPersonalized learningGamificationUnderstanding by Design (UBD)Universal Design for Learning (UDL)_Digital learning takes many forms—from barely blended learning to gamified, mastery learning. This instructional method has been given many names: blended learning, mediated learning, hybrid instruction, web-assisted instruction or web-enhanced instruction. Today, it's hard to imagine higher education without some form of digital interaction.______Heteronomous & Autonomous Learning:The traditionalists believe that learning takes place when expository teaching and receptive learning fit together: the teacher presents contents and the learners receive them, store them in their memory and recall them when being asked for in examinations. In today's digital learning world, we must think about these journeys in every role, and categorize content so it can be used for all these purposes.__________Settings and sectors of digital learning:Various forms of electronic media can be a feature of preschool life. To provide relevant answers, the AI needs to understand not just the literal meaning of the words, but also the context from which the question originates to help disambiguate what's not understood.Once the AI understands the question, it can then dive back into the course material to find an answer. We need to know in what ways it is altering our conception of learning, and how in conjunction with television, it undermines the old idea of school.There is an assumption that technology is inherently interesting so it must be helpful in education; based on research by Daniel Willingham, that is not always the case. One study found that spacing was more effective than cramming for 90% of participants. When a number of students work together on the same topic, they face problems while they study together using the regular learning methods. Internet is therefore portrayed as allowing education to take place on an any time, any place, any pace basis. For those students, online degree programs may be the best or only way to get a college education. These people represent a considerable weakness in an online program because they can inhibit its success. Blended learning can be the best of both worlds. You can succeed in an online class, but it may take more self-discipline, a greater commitment to staying motivated and better study habits than a traditional course would require.____Attributes that students should have or need to develop for successful online learning:You have to have a sense of self. In some cases, they tout student growth that their own studies admit is not statistically significant. Stanford's Education Program for Gifted Youth is descended from those early experiments.Online education originated from the University of Illinois in 1960. These activities not only help students get a thorough understanding of the subject but in the process, students also learn several other essential life skills. The best part of any science class is going to the labs to conduct the experiments that were taught in the classroom. Users can also recommend that those search results be included on the listing at NeoK12. By 2014, 99% of institutions had adopted an LMS. Weakening federal requirements for regular and substantive interaction between students and faculty in online courses would likely decrease educational quality, further erode employer confidence in the value of online credentials, increase barriers to postsecondary success, and expand opportunities for some institutions to exploit vulnerable students and federal student aid programs.Authors review of the evidence demonstrates that:Online education is the fastest-growing segment of higher education and its growth is overrepresented in the for-profit sector.A wide range of audiences and stakeholders—including faculty and academic leaders, employers and the general public—are skeptical about the quality and value of online education, which they view as inferior to face-to-face education.Students in online education, and in particular underprepared and disadvantaged students, underperform and on average, experience poor outcomes. Digital learning comes in many forms, and all should be considered as tools and strategies for meeting educational goals. The One Laptop Per Child Foundation attempted to use a constructivist approach in its project. With open learning, individuals take responsibility for what they learn, how they learn, where they learn, how quickly they learn, who helps them and when they have their learning assessed. (2012) regarded digital learning as the learning mode most rapidly developed in past years as well as the learning mainstream in the future. Probably this is what keeps this form of traditional learning still so much in demand, as students can communicate with others or ask questions personally to the lecturer. Eyes are sturdy but what matters the most is when the blinking rate goes down or if the exposure to a screen is at a close distance. Digital literacy may become the new buzzword in education as parents and educators alike work to help students prepare for a world that is increasingly online. Training materials can be easily updated, developed, or modified, and training can be done regardless of time or place. In fact, you should expect some bumps. Digital Learning can also become confusing as there are just too many options and facets to consider in the process of delivering the digitization of learning._Pedagogies that incorporate digital learning:Pedagogy is study of teaching methods. Other teachers are in schools that have prioritized the use of technology. The evolving nature of technology may unsettle teachers, who may experience themselves as perpetual novices. Learning using technology implies that the technology is being used as one method amongst many others, whilst learning through technology suggests that the technology is the sole conduit through which the student receives instruction and communicates with his instructor. Architects building new schools even exclude them from building plans. As the teacher, you can view student progress through the lesson. The American Academy of Pediatrics discourages media use, except video chatting, by children younger than 18 to 24 months. Such systems, besides facilitating online learning, tracking learning progress, providing digital learning tools, manage communication, and maybe selling content, may be used to provide different communication features._An LMS is the engine that powers eLearning and consists of two parts. Teachers have to be willing to adapt their curricula from face to face lectures to online lectures.-LMS can often come across as impersonal and lacking in the dialogue opportunities provided by in-person training.-Having a learning module presented in only one style can make it difficult to accommodate different learning styles.______Learning content management system:A learning content management system (LCMS) is software for author content (courses, reusable content objects). He then uploads it to the web, and adds daily supplementary videos, notes, comments, and feedback from students over a period of time. In these instances, the question of "is it better than face-to-face?" is nonsensical, because the student doesn't have a face-to-face option._In the online environment, learners have a certain measure of anonymity resulting in level playing field for everyone. Though some forms of digital simulations have been broadly accepted as educational technologies for many years, it is only recently that excitement about digital games as educational objects has come to the forefront, and this has returned simulations to the limelight as well. With a flipped classroom approach, teachers are aiming to provide more knowledge to students by encouraging them to ask questions, perform individual or group activities etc. Students have a variety of digital tools at their disposal to learn about the basics of any topic or subject covered in textbook, which helps them use the classroom and the expertise of their teacher to dig deeper into the subject matter. edX is a collaboration between Harvard, MIT, and Berkeley that is now forming partnerships around the globe. The divide within countries (such as the digital divide in the United States) may refer to inequalities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories._The following figure shows the online education trinity, the three necessary conditions for successful imparting of online education. Digital information can be accessed online and/or offline and it can be engaged with in a variety of situations (onsite, or offsite, in-person or remotely). A traditional classroom setting requires physical presence and communication skills but an online environment requires tech savviness. Even in recent years, videoconferencing has risen in popularity to reach over 20,000 students across the United States and Canada in 2008–2009. Teacher training aims for effective integration of classroom technology. Once a student has completed the quiz, the results show in a grade book (which can be exported as a CSV file). The flight simulator, such as 'Microsoft Flightsimulator 2000' is a well-known example of a simulation that enable pilots to train crash scenario's. Additionally, technology can boost critical thinking skills by engaging students in active problem solving and decision making. According to a 2014 survey of K-20 educators conducted by the Center for Digital Education, 64 percent of respondents said they had adopted e-textbooks in some fashion. [This]… behavior is characterized by more time spent on browsing and scanning, keyword spotting, one-time reading, non-linear reading, and reading more selectively, while less time is spent on in-depth reading, and concentrated reading.Dutch scholar Joost Kircz points out that these are still early days for digital reading, and new and better formats will continue to emerge. Institutions must consider course standards, curriculum development and support, course content, and course pacing in developing distance learning programs.____________Challenges to Digital Learning:Education Dive's 2015 State of Education Technology survey polled more than 150 education leaders and teachers to learn how technology is being used in school districts across the country and what challenges to access they face. Chen and Jones (2007) outlined other advantages of blended learning such as deep understanding of topics by using web-based resources as well as active participation of students in class. School districts are providing both types of options, and they are often both managed at a district level by one district office. They no longer have to fear missing out on topics and chapters. While digital benefits may seem obvious (for instance, reviewable lectures, after-hours learning, new visualizations), they are counterbalanced with problems including technological distractions and accessibility / socioeconomic concerns.In general, students in an online format performed modestly better than those in the traditional format but difference in student learning outcomes was larger in the studies where online elements were blended with face-to-face instruction, and these blended conditions often included additional learning time and instructional elements not received by students in pure online learning. And the best part? Digital learning eliminates that common struggle. Web conferencing software enables students and instructors to communicate with each other via webcam, microphone, and real-time chatting in a group setting. However, today's workers are increasingly asked to work in teams, drawing on different sets of expertise, and collaborating to solve problems. However, as blended has historically been the most prevalent, there is a greater variety of models of delivery to which this term has been associated. Digital Learning Day promotes the effective use of modern-day tools to improve the learning experience in K-12 public schools. Therefore, it requires self-discipline and focus. Teaching and learning become a smoother experience in digital learning as it includes animations, gamification, simulation and audio-visual effects._Distance learning, also called distance education is a form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication. That would become an insightful and comprehensive process. The sociologist Lev Vygotsky also emphasized the importance of social interaction in learning. The e-learning market worldwide was forecast to surpass 243 billion U.S. dollars by 2022 before covid-19 struck._Blended learning is a pedagogy that blends digital and live classroom components, a combination of online and face-to-face instruction. Within corporations, online training resources have been created for software programs, safety procedures, mission and values orientation, and numerous other uses. The effective usage of online learning has been highly questioned during the last decade of technological advancements. Recent studies have been able to largely confirm the effectiveness of online learning. Studies of earlier generations of distance and online learning courses have concluded that they are usually as effective as classroom-based instruction. Due to these connotations, virtual may be viewed as a less desirable option for those students who want to experience an authentic, 'real', higher education experience._The term digital is an umbrella term that is increasing in use in the higher education sector. It is inextricably linked to the storage of data but has developed as a term to mean involving or relating to the use of computer technology, exemplified by the use of the terms digital skills or digital literacy. Hence there is a need for supplementary material in native languages. "Students worldwide appear to perform best on tests when they report a low-to-moderate use of school computers," Helen Lee Bouygues, president of the Paris-based Reboot Foundation, argues in a report. Opt-out consent can be used in most cases. Arman Ali, executive director of National Centre for Promotion of Employment for Disabled People (NCPEDP), said there is a huge digital divide that exists in India from the perspective of students with disabilities in particular students with visual impairment. These tools also allow students to train and experiment in a safe and controlled environment, avoiding the possibility of damage to themselves and expensive equipment. While retaining the empirical framework of behaviorism, cognitive psychology theories look beyond behavior to explain brain-based learning by considering how human memory works to promote learning. There are many encumbrances in conducting virtual meetings like internet connectivity issues, network pitfalls, lack of internet access for students and teachers, especially those residing in rural areas, shortness of awareness, which need to be addressed with the efflux of time. Funded by the U.S. Department of Education, a team of researchers at Stanford Research Institute International conducted a systematic search of the literature from 1996 to 2008 and identified more than a thousand empirical studies of online learning (Means et al., 2010). It is based on the simple fact that in 18 years of reviewing K-12 online and blended learning, researchers have found no examples of successful and scalable digital learning programs that did not use teachers. This is done through the formation of effective groups, where each individual student has to take into account the strengths and weaknesses of each other student. It may also authenticate users, service/distribute data, and provide notifications. However, breakdowns can occur at any point along the system, for example, the server which hosts the program could crash and cut all participants off from the class; a participant may access the class through a networked computer which could go down; individual PCs can have numerous problems which could limit students' access; finally, the Internet connection could fail, or the institution hosting the connection could become bogged down with users and either slow down, or fail all together. All data that a computer processes must be encoded digitally as a series of zeroes and ones. The opposite of digital is analogue. This creates a learning habit that yields higher quality of performance. The point is to make learning easier and engaging, not to make it more "distant".-2. They argue that E-learning has many advantages that include flexibility of access from different locations, ease of access to other materials from other sources that including non-educational ones. And some researchers have observed that working your way through a print volume leaves spatial impressions that stick in your mind (for instance, the lingering memory of where a certain passage or diagram appeared in a book).Alexander and Singer have done their own studies of the digital versus print question. Digital classroom is same as virtual classroom. Implications of this study are that courses that can combine the strengths of online learning and traditional learning are more effective than courses that use mainly one format and it is possible that as digital and online technologies improve and mature they will become more effective in helping students learn.One unexpected finding from the Zhao et al. Educational technology creates, uses, and manages technological processes and educational resources to help improve user academic performance. "The core question," Alexander said in an interview, is "when is a reader best served by a particular medium. And they must be active in order to be able to learn._The democratization of information is one of the wonders of modern times. As a result students enjoy using computers and like coming to classes where computers are being used. Once eschewed and even banned by schools, smartphones today are becoming another tool for instruction, with 73 percent of teens having access to smartphones, according to the Pew Research Center.Apps such as polleverywhere.com enable teachers to assess students' level of knowledge before a test through a simple "text your answer" interface, while Remind101 and other reminder apps can automatically send out reminders to students' smartphones when an assignment or project deadline looms, for example.Online learning also has taken its place among in-classroom digital technologies, with teachers utilizing various services and sites to provide more personalized instruction that complements in-classroom learning. Students should be encouraged and empowered to use digital media for communication and collaboration as well as for learning and knowledge exchange in an appropriate way to become competent and proficient members of a knowledge society.-3. There are lots of time-saving ways to add frequent and meaningful feedback through using both written and multimedia strategies.Majority of communication from student-to-instructor and student-to-student involves non-verbal asynchronous correspondence:In online learning, the vast majority of communication from student-to-instructor and student-to-student involves non-verbal asynchronous correspondence largely in the form of email, instant messages, video and audio messages, discussion forums and reflections. A survey (Allen & Seaman, 2013) of more than 2,800 colleges and universities reported the following:-More than 6.7 million students in higher education were taking at least one online course during the Fall 2011 term, an increase of 570,000 students over the previous year;-32% of higher education students now take at least one course online; -The number of public institutions offering complete online programs increased from 48.9% in 2002 to 70.6% in 2012;-77% of academic leaders rate the learning outcomes in online education as the same or superior to those in face-to-face classrooms (Allen & Seaman, 2013)._Digital Education Survey 2016:Digital Education Survey takes a peek into today's evolving classrooms and explores what happens after the school bell rings. The teacher or the program developer determines, dominates and is responsible for the teaching-learning process in many ways. Users report liking the supportive feedback obtained by having others comment on posted photos. Because they are asynchronous and often occur over longer periods of time (even days), discussions in the online environment may offer more opportunity for students to think about, research and even draft their discussion posts and responses. E-books can be read on dedicated e-reader devices, but also on any computer device that features a controllable viewing screen, including desktop computers, laptops, tablets and smartphones.______________Types of digital learning materials:Drill and practice programs are the most well known digital learning materials. The closures also compound educational inequities: economically advantaged families tend to have higher levels of education and more resources to fill learning gaps and provide enrichment activities to children who cannot attend school._Online learning has become the new normal as every academic institution has switched over to virtual classrooms by making substantial use of platforms like Webex, Zoom, Google Meet, Skype, and other applications. As it describes the physical position of the person who will be participating in the activities, it avoids any potential misunderstanding (regarding where students and staff will be located) that may arise when talking about face-to-face delivery. The third dimension is the school digital gap: the capacities and capabilities of each school to provide individualized, or suitably levelled and sequenced, digital learning for students; to promote and monitor engagement with these materials; and provide to feedback that helps maximize learning outcomes. Students overwhelming preferred to read digitally.-2. Yet today these promises are far from fully realized. Dropbox has a number of features that can allow teachers to share specific folders with their students, and they can access them from their computers. Digital classroom refers to online classes with virtual set up possible through virtual classroom software. One initiative that explores it are MOOCs aka massive open online courses delivered over the web to potentially thousands of students at a time. They won't have the ability to respond, and Remind will never disclose the phone numbers of either person involved (this includes the teacher as well as the student).One of the hardest parts of teaching is grading, and Socrative is a great way to simplify the process. This approach helps in creating an interactive classroom where students learn by solving problems in class with their peers and teacher around them. As no external person or institution interferes, this learning could be called autonomous. The material that comprises a website will be protected by copyright and various pieces of content may be owned by different people. Much attention is also paid to the "early adopters"—those districts, schools, and teachers who are making the most ingenious and effective uses of the new tools at their disposal.But a significant body of research has also made clear that most teachers have been slow to transform the ways they teach, despite the influx of new technology into their classrooms. Aging populations working longer in environments that are being reshaped by technologies will require regular retraining or life-long learning. Save web screenshots. This is the true value in harnessing education technologies moving towards the 21st Century Competencies in teaching with innovative pedagogies. Consider for example "learning style"; many students in developing countries are used to traditional class room teaching where teachers spoon-feed students during lectures whereas e-learning models are usually based on proactive learning where students are expected to search, manipulate, and analyse study material individually and in groups. Their search identified 48 studies which synthesized empirical research of the impact of digital tools and resources on the attainment of school age learners (5-18 year old). For instance, you don't want to break up text in an awkward way with a photo.Focus on making your message clear and enhancing it with your visuals. The vast disparity in schools' capabilities makes it easy to see why this is the most relevant digital gap for ensuring that students can keep learning during the pandemic._Covid-19 has already exposed our weak digital system which needs tremendous reinforcement so that the future of our students continues effectively on its merry way. By self-monitoring their time and pacing, students are able to spend more time on unfamiliar or difficult content (Aslanian & Clinefelter, 2012).Immediate Feedback:Online learners generally have greater access to instructors via email and are able to have questions answered by their peers in a timely fashion on discussion boards. In the Clark County school district in Nevada, for example, the online learning program serving students at home and in schools is closely tied to efforts to support district schools in their move to digital content and devices. This can be achieved with after-school programs or even technologically-integrated curricula, for example: Virtual reality integrated courses (VRIC) can be developed for any course in order to give them such stimulation. 3D printing integrated courses (3dPIC) can also give youths the stimulation they need in their educational journey. Université de Montréal's Projet SEUR in collaboration with Collège Mont-Royal and La Variable are heavily developing this field.Although a large proportion of for-profit higher education institutions now offer online classes, only about half of private, non-profit schools do so. Connectivism sees knowledge as a network and learning as a process of pattern recognition.______E-Learning theories:Good pedagogical practice has a theory of learning at its core. By arousing positive emotions such as excitement and joy, you can engage learners and help ensure that their new knowledge sticks. For example, what types of technology do my students possess? Throughout all of this, the tutor/teacher/lecturer fulfils the role of moderator or e-moderator, acting as a facilitator of student learning.Some criticism is now beginning to emerge. These apps, however, are by no means limited to student-use; in fact, there is a good chance that instructors of all levels will find these to be equally useful teaching and learning tools as they are enlightening and entertaining.For Recording/Collecting:Office LensNotabilityDragon MicrophoneSoundNoteFor Management:Uni CalculatoriStudiezSimpleMindSelfControlStudyBlueGoConqrMy Study LifeTimetableEasyBibGoogle DrivePinterestCourseraGoogle DuoMonzoSecurity:Knowledge Building:TED TalksBehanceDuolingoDictionary.comExam Vocabulary Builder______________Section-17Teachers' perspective in digital learning:_A survey of 660 teachers conducted by Evergreen found the following:Teachers' use of technology ranges from simple to complex.Nearly all respondents (97%) said they are using computers in their teaching. How much time is she devoting to the course? It will offer each participant a comprehensive array of learning opportunities, which centers on how pedagogy leads the choice of relevant use of ubiquitous digital tools, apps, platforms, portals, digital classrooms, and unified collaborative learning solutions. It is not a course delivered via a DVD or CD-ROM, video tape, pen drive or over a television channel. The costs of going digital include software, hardware, installation, network infrastructure, supporting equipment, internet access, maintenance, operational costs, upgrade and replacement costs, curriculum development, support staff, and professional training._The "flipped" classroom refers to classes that are structured almost exclusively around a reversal of expectations for lectures and homework. For example, instructors may need a systematic curriculum to facilitate access, use, and monitoring of the digital dashboard interface as a routine part of their courses._______Digital learning platform:Digital learning platforms have significantly changed the face of education. Thus, the reverse learning model encourages teamwork and collaboration, leading to an engaging learning experience.Students can Revisit the Classes that were Missed:Students sometimes tend to miss out on a few lectures, either because they are unwell, or they find it too dull and boring to attend. Costs are therefore estimated as moderate._Myth: There is no real cost savings by adopting digital learning.Fact: Digital learning programs provide the opportunity to reduce the total cost per beneficiary over time. The new ODL system growing fast because of the development of Internet-based information technologies, and in particular the World Wide Web. Games also usually come with a sense of progression, which can help keep students motivated and consistent while trying to improve.Blended Learning:Blended Learning offers the best of both worlds by merging digital learning with traditional classroom learning. This factor was originally identified by Ertmer (1999) yet, given its significance to teacher practice and centrality in epistemic identity (Claxton, 2008; Cranton & King, 2003), it has not been explored in the literature to the same extent as other intrinsic influences. Thus, to resolve the shortcomings of the traditional education system, the world is moving towards digital education which addresses all the issues and challenges of traditional education. All curriculum and teaching are delivered via a digital platform and face-to-face meetings are scheduled or made available if necessary.It is important to note that even blended learning models can be blended together and many implementations use some, many, or even all of these as dimensions of larger blended learning strategy. However, certain "incidental" learning elements are generally acquired through in-person learning environments and have had little success in being replicated in purely online environments. Reaching the main objective of a quick transition to online learning, our privacy may be compromised especially when large e-learning software suppliers offer temporary free subscription plans.Problem 11. Flexible learning on the go and by all internet enabled devices.-4. Instruction is at the Augmentation level when the use of technology benefits a commonly performed task, such as, having students submit their work within an online dropbox instead of having to turn papers in to their teacher in the classroom. Among those institutions with more well-defined reasons for embracing distance education, the rationales vary, but they often fall into one of four broad categories:Most states need to expand access to education in order to meet the education and training needs of state residents and companies and to educate under-served populations. Objects can consist of digitized content like print or photographs, as well as originally produced digital content like word processor files or social media posts. This type of learning has been the standard in traditional classrooms for thousands of years, but it's not ideal in e-learning environments. This model establishes a foundation of knowledge (outside of class) and then uses instructional time in the classroom to expand upon that foundation. As such, the cost of maintaining a digital library can be much lower than that of a traditional library. Analyzing each student individually through their data and making changes to the materials according to this data leads to better learning outcomes for all students.Differentiated learning:In any general education classroom, there are students with various learning styles. E-learning courses automatically take away the time constraints on how quickly or slowly material is presented because learners get to decide how much they take in at one time. Considering the enormous growth of mobile devices, a lack of Internet connection, poor connection quality, and restricted access to electricity will become problems of the past.Mobile learning might not work very well for certain types of content you want to share. The students can have access to resources from anywhere they are so there is no transportation cost also. Others have suggested that print textbooks are less distracting and easier to read (Millar & Schrier, 2015).Electronic textbooks, on the other hand, have the potential to be very interactive and engaging. Unfortunately, they do not all perform at the same level. Basic forms of e-textbooks are simply digitized versions of traditional textbooks that may or may not have interactive tools and features included (Choppin, Carson, Borys, Cerosaletti, & Gillis, 2014). These are not as engaging as textbooks with more multimedia options. For example, Dobler (2015) listed features of an enhanced e-textbook to include customization tools, links to various media such as videos, podcasts, live hyperlinks, and other resources. An illustrative discussion and example can be found in the 1980s deployment of constructivist cognitive learning in computer literacy, which involved programming as an instrument of learning. So, as it turns out: an attentive teacher, providing timely comments in the classroom, is still our best technology in this space.Students are a key asset of massive online open courses. It's wise to narrow down your list of must-have features and then take full advantage of free demos and trials. Many companies claim that their products have "dramatic" and "proven" results. The Personalized Learning experience is targeted towards individuals who would benefit from an individual learning path. These features add to the interactivity of simulations, and helps users stay engaged in exercises. The culture gap.People coming from different parts of the world learn and interact in different ways. The students who were graduating this year are stressed about their future and this precarious situation is also taking a toll on their mental health._While temporary school closures as a result of health and other crises are not new unfortunately, the global scale and speed of the current educational disruption is unparalleled and, if prolonged, could threaten the right to education. So while computers can sometimes help children grasp certain concepts, their overuse is highly worrisome. This is a generation that has never known a world without Google, the internet or even smartphones. Books, journals, magazines and papers are useful, but individuals possess the viewpoint that

they can gain access to a large amount of information on the internet. Although there is not much data to support the contention that digital tools are always better, they generally had a positive impact on learning, and never had a negative impact. The findings were published in a report prepared by two former JNU teachers' association (JNUTA) presidents, Ayesha Kidwai and Atul Sood."More than 70% of teachers do not think online education successfully replicates the offline in-person classroom in terms of students' needs and attainments or creates the conditions for a particularly smooth or fair exercise for the instructor," the report said.According to data submitted by the varsity to MHRD in April 2020, only 35.6% male students and 29.7% female students participated in online education and the rest did not due to a lack of access to the internet, stable bandwidth and requisite devices, the report states. The maintenance cost of the institute also adds up. They spend more than $3 billion per year on digital content. As the individuals get enrolled into formal schooling, they learn how to make use of the internet to improve their knowledge and understanding. DIKSHA is one of a unique app that requires students and teachers to SCAN the QR code available in the book in order to access the prescribed learning material. When people have visual feedback of their progress and achievements, motivation effortlessly rises. Students can access study material in the form of Video lectures, reading material, self-assessment tests, online discussions and doubt sessions. Today, almost every child has their own gadget. With digital transformation, there is no more need to stop by the library to collect so many heavy books, that most of the time were already taken by someone else. Parents are not informed or, if informed, have little choice. He said implementation of e-education requires a more comprehensive approach and very carefully orchestrated planning for the children with disabilities, not a "band-aid solution". Literally anything. The divide between differing countries or regions of the world is referred to as the global digital divide, examining this technological gap between developing and developed countries on an international scale. Research has found that this is a big missing piece for most digital learning programs, with 67% of interviewed program directors reporting that they do not measure the effectiveness of their net-based programs. Both teachers and students meet for physical classroom training and also online through the use of interactive chat and virtual classrooms. In some studies, students in the online or hybrid format performed better, but in others, they performed worse, and for some, there were no significant differences between the two groups. If the teacher or school is relying on a flipped classroom or other instructional models that require significant work at home, then students must have a supportive learning environment at home.A small number of teachers have moved quickly along their blended learning journey and are now running into the constraints of school or district policies. Educators add papers to their profile library and check submitted works against the Internet or other files in the library. It allows them to study whenever and wherever they want.Mobile apps are another example of digital learning material. You could even say that technology is the star of e-learning programs, whereas in blended learning it's really only one of the mediums that helps facilitate the learning experience. Laurillard (2002) reminded us that "for the learning process to be fully supported, students should receive meaningful intrinsic feedback on their actions that relate to the nature of the task goal." Too often in formal education the feedback is far removed from the task and ends up being extrinsic and focused on impact to course grade, not the learning or performance of the student. For example, they must be able to use a variety of search engines and be comfortable navigating on the World Wide Web, as well as be familiar with Newsgroups, File Transfer Protocol (FTP) procedures and email. Online education is rapidly increasing, and online doctoral programs have even developed at leading research universities.Although massive open online courses (MOOCs) may have limitations that preclude them from fully replacing college education, such programs have significantly expanded. This is a limitation of online programs that rely on Internet access. And let's not forget about the burst of free and open content and tools, through which schools can guarantee equal access to learning resources while saving money. When children are exposed before the age of seven, important developmental tasks may be delayed, and bad learning habits might develop. Beck suggests that learning objects have the following key characteristics:-Learning objects are a new way of thinking about learning content. Very simple computer-teacher interfaces may be ignored or quickly abandoned after the novelty of the technology fades (Moeller and Reitzes, 2011). This basic core requirement allows a school to rise from the traditional delivery methods and set path on digital teaching and learning through digitally translated content by either teacher or available e-published content.Typically, this Digital Classroom has the following:LCD Projector and basic multimedia equipment (speakers)Teacher computer installed in furniture consoleProfessional Development on productivity toolse-Content available from Eduspec or partner publishers_Digital School Solution (DSS) 2.0Digital School Solution (DSS) 2.0 allowed digital interaction with more systems, e-content, hardware, software, guardian and public stakeholders. While there are students who wouldn't enjoy doing science experiments, there is perhaps no child who doesn't like playing with friends._Students with Disabilities struggling with E-Learning:NGOs working with people with disabilities have expressed concern over the issues faced by students in online-education. It gives access to high quality education to remote populations or emerging markets. As such, the network should provide high availability, high bandwidth and redundancy to deliver seamless and continuous teaching and learning from all locations inside the four walls of the school, and handle the traffic needs of users connecting from outside the school. Virtual often does not denote convenience, instead suggesting that the level of engagement required compared to a physical experience will be similar but different. Consequently, in order to make the best efficiency in learning, Kuo (2011) proposed the model of motivation affecting effectiveness by understanding students' learning motivation to explain the relationship between motivation and effectiveness. In truth, from a technological standpoint, games are simulations although many educators still distinguish between them. With the click of a key we can find answers to just about any question. 2013), while many still point to the benefits of face-to-face learning (Saghafian & O'Neill 2018, Bandara & Wijekularathna 2018). Bullying, trolling, stalking, threatening, and insulting behavior have all increased dramatically with the rise of the internet. Not only are there motivational speakers on Ted, there are also topical videos, often less than ten minutes each that are full of important information.One of the most exciting developments in the tech world is the number of people who are learning to write code. It's striking how new these technologies and practices are. Whereas eBooks are created on an online software and is digitally published and distributed. This means teachers face the challenge of keeping students on task. Nearly 90% of teachers felt technology has created a distracted generation with short attention spans.-2. (2004) and Means et al. Low bandwidth and weak internet can affect how quickly you can connect and participate in class.Online learning requires motivation to complete tasks, stay engaged, and make progress. Not only are many of the students excited about the game, but they often choose to play it and have improved their mathematical skills.A manager of an aircraft repair shop receives reports of errors made by workers. Distance learning—that is, providing education to students who are separated by distance and in which the pedagogical material is planned and prepared by educational institutions—is a topic of regular interest in the popular and business press. From a technological standpoint, games are simulations although many educators still distinguish between them. Still, to the extent that online homework provides data to the teacher to better understand the level of each student's understanding, the flipped classroom approach can be valuable.Differences exist in the ways technology is used between subject areas and students. In other words, there are better learning outcomes in the traditional format for activities that have to be done simultaneously and better outcomes in the mediated distance format for activities that can be done at various times. It also applies if the personal information will not be accessible to or viewed by others, as stored data in a system.Follow these steps when using online tools:any use of online tools that include personal information must first be agreed to by the school principal or leadership team. Are you optimistic or skeptical about Online Learning? It's not surprising most of them feel isolated, scared by the pandemic, parents' job loss, and friends' disconnection.Problem 13. The cyber-safety and cyberbullying sections within the Bully Stoppers online toolkit have been developed to support school communities to understand the behaviours and processes that will help them to act in a safe and responsible manner when using digital technologies.Respond to online incidents:The Emergency and Security Management Unit (ESMU) operates a twenty-four hour, seven days per week emergency and security communication and coordination center. E-Learning may be taken as the latest form of distance learning mediated by state-of-art technologies like Internet and World-Wide-Web. When this process is generalized or automated, it then dives into the realm of Adaptive Learning.In recent years, a group of organizations including the Bill & Melinda Gates Foundation, the Michael and Susan Dell Foundation, and EDUCAUSE have crafted a definition of "personalized learning" that rests on four pillars:-Each student should have a "learner profile" that documents his or her strengths, weaknesses, preferences, and goals;-Each student should pursue an individualized learning path that encourages him or her to set and manage personal academic goals;-Students should follow a "competency-based progression" that focuses on their ability to demonstrate mastery of a topic, rather than seat time; and,-Students' learning environments should be flexible and structured in ways that support their individual goals._____Micro and macro learning:As content grows in volume, it is falling into two categories: micro-learning and macro-learning.Microlearning is a training methodology taking training to micro level by chopping down information to small digestible learning nuggets. Digital learning providers will have to monitor these patterns and probably adapt their environment per target audience. Some have been in use for longer than today's entering college freshmen have been alive.To keep pace with a rapidly changing pedagogical landscape — and fully prepare students for the digital world — institutions must continue to change, grow, and adapt. Students can browse the list of available topics or simply answer the question "What would you like to learn about?", then when they answer that question they are led to a list of available courses on that topic. Despite this growth, 73 percent of the students in the world are not aware of massive open online courses (MOOC). Digital allows us to blend learning experiences using partially online and partially in-person modes to design an experience. Students are able to whiteboard and screencast when given rights by the instructor, who sets permission levels for text notes, microphone rights and mouse control.A virtual classroom provides an opportunity for students to receive direct instruction from a qualified teacher in an interactive environment. In the Digital Learning Assignment, the students are reviewing a variety of multimedia content so that they can learn from multiple resources and points of view. While we used to call these "courses," in the context of digital learning they are simply "macro" in size, and they should be designed for use in special ways. The children become more aware of the age-appropriateness of products and more sensitive to acceptance by their friends. The technology can be adaptive, augmentative, personalized and/or virtual. Digitization refers to the process of translating a piece of information such as a book, journal articles, sound recordings, pictures, audio tapes or videos recordings, etc. But in e-learning, everything is digital. It was "not as concrete" as advocates claimed, it privileged "one form of reasoning over all others," and it was difficult to apply the thinking activity to non-LOGO-based activities. By the late 1980s, LOGO and other similar programming languages had lost their novelty and dominance and were gradually de-emphasized amid criticisms._____The well-known educational theorist John Dewey argued that learning occurs in collaboration with knowledgeable others. Similarly, psychologist Jean Piaget noted that in order for learning to occur, the content must be meaningful to the student. Therefore, a new and modern way of education is required to handle such transformation arising as a result of creation of huge amount of information in a systematic manner. They are also reusable, and removing the necessity for equipment can reduce the cost of a course or program. We must avoid over-stimulation due to technology especially in children._Cheating has always existed, yet technology has made it even easier in some ways. This has potential to avoid overwhelming or boring students who need to move at their own pace.Digital learning provides better opportunities for feedback. At the Substitution level, teachers merely replace the traditional methods of instruction with digital tools, so instead of reading a printed textbook, the students are printing out their own pages from an online textbook. Children become more interested in competition, they learn to play in groups and they start developing a sense of logic and reasoning. Macro-learning, on the other hand, is something we do when we want to truly learn a whole new domain. Create an atmosphere which makes every student want to study with interactive courseware.Teaching Strategy: It is important that the teacher understands when to stop the lecture because research has proved that the attention span for a K-12 student is their age plus two or three minutes. The phrase mobile learning is most often used to describe the technology — the mobile devices and apps used in the classroom; however it may also be used to describe the support of always-on learning with mobile technology._From surveys and interviews with mature learners using mobile devices, researchers have amassed a considerable amount of detail of learner experiences; some general findings and reflections are worth sharing here:Collectively there are countless ways to use a personal mobile device to support learning.This may seem self-evident, yet there is an important point here. What's more, these digital portfolios will serve as platforms for collaboration and feedback from members of their communities. The opportunity to customize learning for each student makes education more productive: special needs are more quickly diagnosed and progress is accelerated.Digital learning platforms are literally breaking the geographical and cultural boundaries, allowing teachers to bring the knowledge beyond the classroom, potentially to a worldwide audience. They also may allow students greater flexibility and exemption from state testing. Continued improvement of online curricula and instruction can strengthen the quality of these courses and hence the educational opportunities for the most in-need populations.Online courses offer the promise of access regardless of where students live or what time they can participate, potentially redefining educational opportunities for those least well-served in traditional classrooms. They believe that face-to-face learning provides live interaction with the instructor, beside that face-to-face learning helps students to get organized with their studies._____A digital learning strategy may include any of or a combination of any of the following:adaptive learningbadging and gamificationblended learningclassroom technologiese-textbookslearning analyticslearning objectsmobile learning e.g. Mobile Phones, Laptops, Computers, iPads.personalized learningonline learning (or e-learning)open educational resources (OERs)technology-enhanced teaching and learningvirtual realityaugmented realityThrough the use of mobile technologies, digital learning can be used whilst travelling as mobile technologies gives us this advantage._____Digital Learning is the process of using digital tools and technology to create a better learning experience for students. If the students already knew much of the material, the extraneous information would not have imposed an onerous cognitive load and learning would therefore be unaffected._____Neuroscience to optimize Digital Learning:What is spacing?There is no such thing as memorizing. But the author or publisher licensed the content so that any member of the public may access it and possibly re-use or re-format it. Blended learning advocates disparage the "factory model" of learning because it applies one mode to all teachers and students. Time is not a factor in for example a simulation about 'The influence of the number of foxes on the population of rabbits', because the learner may iteratively manipulate the variables, by going back to a default option and start the process with other values.Simulations are sometimes perceived as archetypes for the power computer technology may bring to education and are therefore often associated with constructivist orientations. Digital classrooms use online educational apps and websites to spark creativity and critical thinking. The materials are predetermined by the teachers and don't adapt to the student's preferences. This includes vendors like Coursera, Udacity, EdX, Udemy and libraries of content like BigThink, Lynda.com, SkillSoft, General Assembly, Pluralsight, CrossKnowledge and hundreds of others._Where does micro and macro learning apply?Early in a role, we need "macro learning" to get started: understanding the job, the domain, the people, the systems. Another survey by the University of Hyderabad revealed that only 50 per cent of students have laptops and only a quarter of students have adequate internet connectivity. Apart from this, students can access the website in both Hindi and English language.DIKSHA:The Ministry of HRD has launched National Digital Infrastructure for Teachers (DIKSHA) portal to equip teachers from 1st class to 12th class into the world of e-learning. These systems also contain authoring tools that allow pieces of entire courses (including Web-based teaching materials) to be published online.Web based learning is often called online learning or e-learning because it includes online course content. 37% felt that they get distracted when someone else receives a text during class.-4. Feedback is also provided by means of suggesting and supporting different calculating strategies. Learners get ongoing notifications and updates on their courses, which they check anywhere and anytime. When everything is running smoothly, technology is intended to be low profile and is used as a tool in the learning process. In order to implement this function in a proper manner, it is vital to effectively communicate with the employees and motivate them towards the right direction. As the hindrances to the use of virtual learning are numerous yet it is the most effective tool available when the world is under a strict lockdown with Covid-19._Some studies have shown that digital learning helps in the retention of data, is cost-effective, and a majority of the students learn much faster online as they can grasp the intricacies of their subjects through visual arts, computer graphics, re-reading and going back options, at their own tempo. Learning Management Systems also offer a non-linear presentation of content and curricular goals, giving students the choice of pace and order of information learned. In fact, after answering comprehension questions, 69% said they believed they had performed better after reading on a computer. The students performed equally well in describing the main idea of the passages no matter the medium, but when asked to list additional key points and recall further details, the print readers had the edge.Curiously, the students themselves were unaware of this advantage. In digital learning, the learners dominate the teaching and learning process whereas the role of the teacher is reduced to that of a facilitator. From this perspective, learning is understood as the ability to connect to specialized information nodes and sources as and when required. However, solutions of that sort still underline the fact that online teaching cannot satisfy all educational needs and goals. There are many free and paid educational website and apps that are directly targeting the educational needs of preschool children. Rather, AI can help facilitate the learning process with the help of subject-matter experts. Furthermore, online learning engagement provides an interactive setting for communication among teachers and students in the classroom and may facilitate cooperative activities even beyond the classrooms (Yuen, 2010).The above discussion has identified the major benefit of applying blended instruction to overcome the shortcomings of online instruction and exploit various instructional process and delivery strategies in order to increase learners' satisfaction as well as boosting the learning outcomes.Disadvantages of blended learning:Unless successfully planned and executed, blended learning could have disadvantages in technical aspects since it has a strong dependence on the technical resources or tools with which the blended learning experience is delivered. "It's an illusion." If students become aware of this illusion, they can make better choices. Not every student has a computer or fast-streaming internet at home. Some studies conclude that students achieve marginally better learning and feel slightly more supported with online and distance learning (Atchley et al. When this happens, they may fall behind. But some instructional strategies are practiced more than others. One group of students was allowed to surf the web during class, and the other kept their laptop closed. It is not easy for the teacher also to check these papers. One study found that spacing is more effective than cramming for 90% of participants.-5. Also, the result is obtained in a short while, in some cases, it is obtained just after the test finishes.More Retention:In the case of regular learning, learning is done by means of conversation between the instructor and the students. Allowing access to learning opportunities especially for allowing disabled children to have access to learning opportunities, giving bilingual children the opportunity to communicate and learn in more than one language, bringing in more information about STEM subjects, and bringing in images of diversity that may be lacking in the child's immediate environment.E-learning is utilized by public K–12 schools in the United States as well as private schools. It is critical to ensure that open educational resources meet standards of quality, integrity, and accuracy—as with any other educational resource—and that they are accessible to students with disabilities._Studies published before 1998 do not find significant difference between online education and traditional education while studies published after 1998 generally find significant differences in favour of online education. This can make juggling school, work, and personal responsibilities a challenge. They are able to move faster through areas of the course they feel comfortable with, but slower through those that they need a little more time on.Learning style:The content can be built to cater to multiple learning styles. Still, Ridge Valley has no intention of dispensing with textbooks. In either case, it is not possible for the teacher to conduct the same lecture again for a couple of students. Coordinating is concerned with managing and ensuring that jobs are carried out in accordance to the time. Inability to access to physical training equipment is no longer a problem as simulated equipment is always accessible.Simulation based technical training is cost-effective in the long-run, but the initial cost of creating them can be expensive. For this author, one of the medium's key characteristics is the "coming together" of serious learning and interactive entertainment. It can allow you to send reminders to your students via text message, but they are only one-way. Authors even do some interesting cross analysis that reveals deeper insights into the current state of digital learning. This happens in many ways, including:-Social information, where learners link their knowledge with knowledge that other learners share.-Metacognitive generation, where knowledge builds on itself.-Insight generation, where learners suddenly have an "Aha!" moment.Giving learners the opportunity to start generating information after 20 minutes of learning can improve memory. A recent study showed that by switching to digital learning corporations saved on average 50%-70% of their training costs (Gutierrez, 2012), and these savings are by no means restricted exclusively to the corporate sphere. The curriculum needs to be constantly upgrading the platforms as and when technologies change. Projections show the e-learning market worldwide is forecast to surpass 243 billion U.S. dollars by 2022. The manager believes that the workers need a deeper understanding (mental model) of the device mechanisms and purchases an intelligent tutoring system that offers individualized instruction and virtual reality simulations; it also explains device mechanisms and common misconceptions. As a result of two-way communication between the student and the computer, determinations can be made as to whether the student achieved their learning goals on a satisfactory level. However, tools like Turnitin can help combat plagiarism. They then used a rigorous methodology to trim studies with weak methodology or ones that did not provide adequate information and arrived at some rather interesting findings. Using the power of the cloud, teachers can extend the learning environment beyond the four walls of the classroom for students who can't make it to school. The term came into popularity to emphasize the idea that geographical distance is not a barrier to learning. It requires a timetable to be organized. Most grade 3-8 students—of which there are about 20 million in the United States—take between two and four state-mandated tests each year, the report noted. Netiquette is also vital to ensure that you are able to communicate and build relationships with others in a productive manner without face-to-face interaction. E- learning and Virtual Universities may provide the desired solution. The World Wide Web, for example, can be a communications medium that at once liberates the learner whilst simultaneously bonding him to others, establishing communities of learning.Online, virtual or digital learning?The term online works well as an umbrella term as it is in common use beyond higher education sector; it focuses on the connectivity of the learning, teaching and support delivery methods that may be employed by a provider. The study explored the devices, digital content, and professional development (PD) strategies being utilized. It makes it easier to post assignments, messages, polls, quizzes, calendars, and other classroom resources, and they can access them online.It gives you the ability to create electronic whiteboards with lessons and tutorials that you can share with your students. The synergy that exists in the student-centered Virtual Classroom is one of the most unique and vital traits that the online learning format possesses.Within an online asynchronous discussion structure, the learner may reflect on comments from others before responding or moving on to the next item. They feel more responsible regarding their exams, towards every deadline that comes their way and commit to regular attendance.However, this kind of college lifestyle does not suit the mindset of some other students. The platform contains the ability to embed almost any multimedia into a post, allowing endless possibilities for assessment. This connotation has led some providers to use the term remote learning in its place to, in their opinion, better describe the physical location of a student and not carry any suggestion as to how students will be communicating with staff. Google Chromebooks account for over half of the devices in US classrooms. Students can read and re-read or watch and re-watch again and again, as many times as they need until they feel confident that they understand the content.Instructors role is focused on facilitating student efforts to think critically, apply and make sense of new knowledge:In both settings, the role of the instructor is to teach. According to the same study, "56 percent of teachers of the lowest-income students say that a lack of resources among students to access digital technologies is a 'major challenge' to incorporating more digital tools into their teaching; 21 percent of teachers of the highest-income students report that problem."For low-income students, using technology in the classroom can create an additional hurdle to learning if they are not already familiar with using technology at home. Kepner, Jr Computers in the classroom p.7). In addition, Health systems have implemented mHealth programs to facilitate emergency medical responses, point-of-care support, health promotion and data collection. Much like today's musical artists who often sample other music to re-mix, re-envision, and re-create new songs and sounds, practitioners today are taking different elements of digital learning, with varied backgrounds and sources, for use in their own schools, programs, and classrooms.Understanding the layers and their relationships in the universe of suppliers and users, illustrated in figure below, is critical for comprehending the digital learning landscape._____Section-3Educational technology:_Educational technology (commonly abbreviated as Edutech, EduTech, or EdTech) is the combined use of computer hardware, software, and educational theory and practice to facilitate learning. Students don't have to search for learning; digital learning can come directly to them._Learning using technology is not the same as learning through technology. This fact eventually leads to a seamless, successful mobile learning user experience.Engaging learners towards the establishment of online learning communities is more effective using mobile devices. As Mayer and Johnson (2010) acknowledge, this is a very broad-brush definition, as it can apply just as easily to digital games as it can to traditional ones, such as chess. One of the most common criticisms of Russell's work is that the majority of the original studies have poor methodology: they often lack control groups, random assignment, experimental controls for confounding variables, and little to no discussion of attrition. Children's interaction with technology varies at different life stages, due to their changing interests, characters, humor and contexts. Modern electronic educational technology is an important part of society today. Some of the best enterprise-level LMSs are:Adobe Captivate PrimeDocebo LMSLooopTalentLMSiSpring LearnNorthpasseFront_Social media also provides widely useful avenues for e-learning. Higgins et al (2012) provide a summary of research findings from studies with experimental and quasi-experimental designs, which have been combined in meta-analyses to assess the impact of digital learning in schools. Universities benefit by adding students without having to construct classrooms and housing, and students reap the advantages of being able to work where and when they choose. From school choice — public, private, charter, virtual — to the options available for how a student learns, education can be tailor-made to suit each individual. Games are difficult to define and may be best described by some characteristics such as: rules, points, winning and losing, coping with pressure, skill & luck and so on. In other words, we learn the content of digital learning material using digital tools. We've seen more investment in classroom technologies, with students now equipped with school-issued iPads and access to e-textbooks. Blending learning allows students to accelerate their individual learning process while maintaining a classroom "group" typesetting. (Mayer, 2001, p.113)The opposing viewpoint claims interest plays a key role in allocating limited cognitive resources, making it essential for learning (Schank, 1979). The duration of the class is fixed. "If you look in the context of semi-urban and rural areas. A survey by IIT Kanpur revealed that 9.3 per cent of its 2,789 students were not able to download material sent by the institute or study online. A computer does what you want it to do'' It's a wonderful way to expand the reach of education to more employees. A computer does what you want it to do'. They think that in order to take a real course or a real exam, you need to be physically present in a certain place like a classroom and have a teacher or trainer to guide you at all times._Teachers, students, parents and policymakers might assume that students' familiarity and preference for technology translates into better learning outcomes. Online asynchronous education gives students control over their learning experience, and allows for flexibility of study schedules for non-traditional students; however, this places a greater responsibility on the student. Teachers can require students to submit their papers and Turnitin will determine how much of the paper is similar to current or past submissions. The transformative representation of digital technologies in teaching and learning, namely, facilitation of student-centered, constructivist pedagogies, can conflict with a teacher's pedagogical beliefs (Ertmer & Ottenbreit-Leftwich, 2010). Common variations include e-learning or online learning, used when the Internet is the medium; virtual learning, which usually refers to courses taken outside a classroom by primary- or secondary-school pupils (and also typically using the Internet); correspondence education, the long-standing method in which individual instruction is conducted by mail; and open learning, the system common in Europe for learning through the "open" university._E-learning (eLearning) or online learning is defined as a pedagogy of digital learning whereby content is delivered exclusively through digital means using internet and without a live teacher physically present. The function of controlling mainly implies that individuals should make use of other resources, which includes, financial, tools, machinery and other materials in a proper manner._____Digital technologies can support learners in meeting a wide range of goals in different contexts, for example:A first-grade teacher concludes that her students are disengaged when working on drill and practice of mathematical operations using digital workbooks. We are not used to it. Its meaning is inextricably linked to communication styles and previously allowed a clear distinction to be made between communication in which individuals could see each other (such as a tutorial) and when they could not (such as a phone conversation). Leakage of important data can, in no way, be countenanced and as such ameliorating these obstacles without further ado will surely aid in strengthening the use of virtual learning. US-based Zoom was called unsafe by the Ministry of Home Affairs, Government of India, in April 2020, when an advisory was issued regarding the use of such platforms. Maximizing the positives while minimizing the deficits depends largely on how schools approach the digital challenge. The typical problem with e-learning programs is that they're too separate from the participants' reality. Flexible scheduling is great for online students, but they often need it because they have responsibilities outside of school, such as work and family. In addition to the multitude of courses available, teachers can create their own courses within the system.Each course has popular Web 2.0 tools available, such as blogs, wikis, forums, chat, and drop boxes. A number of other terms (distributed learning, e-learning, m-learning, online learning, virtual classroom etc.) are used roughly synonymously with distance education.Distance learning can also use interactive radio instruction (IRI), interactive audio instruction (IAI), online virtual worlds, digital games, webinars, and webcasts, all of which are referred to as e-Learning._Socrates and Plato had an issue with scalability of education. With blended learning, the emphasis is on active learning, independent and collaborative assessments, and learning beyond the classroom walls.Tools for Blended Learning:Edmodo:Edmodo is one tool you could employ in a blended learning model. The Internet and a proliferation of Internet access devices have given students the ability to learn anytime.Place: Learning is no longer restricted within the walls of a classroom. In each case the learner, however understood, is changed in some way through the experience of interaction in the educational setting, with aspects of the world, or with selected ideas. Digital game-based learning (DGBL) is a competitive activity in which students are set educational goals intended to promote knowledge acquisition. They need a transportation cost. Being convenient, flexible and accessible to all the disabled students, eLearning is the most appealing way of encouraging and persuading such students to develop and polish their skills._Thanks to virtual classes and an increased screen time, a rising number of parents are complaining about their kids suffering eye strain/fatigue as well as dryness and irritation. There are simply too many interconnected parts that play into success or failure, and teachers are responsible for only some of them._Teachers' digital learning recommendations:Recognize that blended teaching represents a significant change in instruction, not just the layering of technology onto existing practices. If consent is withdrawn, the school must remove the content/resource or access immediately._Digital copyright:Material on the internet is protected by copyright. Children tend to be more attentive. It's easy to create diagrams, commentaries, animations, and other instructions, and you can even record audio for narrative purposes. As George Siemens (2004) puts it, learning can therefore be conceived in terms of the "capacity to know more" via the Internet rather than relating to the individual accumulation of prior knowledge in terms of "what is currently known."Fourthly, the Internet is seen to have dramatically personalized the ways in which people learn—thereby making education a far more individually determined process than was previously the case. Students, faculty, academic leaders, and the public—attribute lower value to online than to classroom degrees._The biggest drawback of traditional teaching methods is that there is often a lot of information presented in a short period which makes it harder to retain or pay attention to for students. When individuals are working on articles, reports, research papers or research projects, then technology plays an imperative part. And the results are no growth in student's intellectuality because students only get bored with lectures. Nearly 90 per cent of students in sub-Saharan Africa do not have household computers while 82 per cent are unable to get online. The essential difference between the two lies in the organization of information: linear or branched sequences in tutorials and randomly sequences in multimedia programs. Computer Science and Information Technology have had a major influence on Cognitive Science theory. They must be mentors and gurus, not someone standing in a classroom and lecturing as students take notes." He explains this further: "Suppose a gifted math teacher is talking to students, and digitally recording the whole session. This reduces the work of the teacher. Technical topics with detailed images may not be legible on a small screen, for example. Namely, all of the student work can be organized online, and they can access the required information and complete the Assignment asynchronously. Together, the AGES Model enables people to learn quickly, and retain that information for the long haul. Teachers who prefer teacher-centric pedagogies find the student-centric rationale for digital learning difficult to accept (Mama & Hennessy, 2013). Moreover, multimedia programs usually have a large amount of the information codified in a non-text way, such as pictures, animations and video. Furthermore, they have a need for acceptance and success, there is a shift from a main influence of parents and school to a bigger influence from friends. The term whiteboard is also used metaphorically to refer to virtual whiteboards in which computer software applications simulate whiteboards by allowing writing or drawing. Some studies show positive outcomes while other studies show no significant difference between the use of technology and traditional instruction; and some studies show negative outcomes._____Misleading research on effectiveness of online learning:School closures in all 50 states in America have sent educators and parents alike scrambling to find online learning resources to keep kids busy and productive at home. In a mobile learning environment, the same course is available on various devices ranging from PCs, laptops, tablets and smartphones.Learners prefer methods that are as unobtrusive to their daily routine as possible. We gain a clearer idea of what DGBL is all about from the research conducted by Prensky (2001). In addition to experiential knowledge drawn from educational practice, educational technology is based on theoretical knowledge that emerges from various disciplines such as communication, education, psychology, sociology, artificial intelligence, and computer science, among others. These principles are best viewed as guidelines for the design or selection of a learning technology, rather than as universal rules that apply to all multimedia and populations, because implementing them may require trade-offs among competing objectives.People learn better when extraneous words, pictures, and sounds are excluded rather than included.People learn better when cues that highlight the organization of the essential material are added. There is strong evidence to show that we learn better from printed books than digital versions.-1. Over-stimulation due to technology may begin too young. The cognitive perspective has been upheld mainly in psychology and in cognitive science research, while the social perspective has been the dominant approach in the learning sciences for roughly 30 years now._Digital Technology in Management:In the present existence, there has been extensive usage of digital technologies in business, management and administrative functions. Connectivity and the Internet of Things (IoT), artificial intelligence (AI) machine learning and algorithms, virtual and augmented reality (VR/ AR) are some of the innovative, disruptive technologies, which continue to change how we live, communicate, commute, deliver healthcare, enjoy entertainment, farm, work and more.Schools are moving away from BYOD, or bring your own device, and students no longer have to go to the technology lab for access to a computer or laptop. Below are some valuable apps for (university) students to make the most of their educational experience. While online learning can take care of the theoretical part, it misses out on an important component of learning i.e., practical learning. Yien et al. Luckily, technology made other options available to them.What is Online Learning?Online learning is known as the education that takes place over the Internet. Technology, in and of itself, does not necessarily result in fundamental improvements to educational practice. The online environment offers unprecedented opportunities for people who would otherwise have limited access to education, as well as a new paradigm for educators in which dynamic courses of the highest quality can be developed. Which means teachers now encourage students to do their 'homework' in school and do the reading and studying part at home. However, even though the actual minutes may be less, the course itself will typically span over a longer period. It is useful to distinguish between three forms of online credentials: Test-based credentials, online badges, and online certificates.___Myth: There is no real way to validate if learning has taken place in digital learning.Fact: The LMS capabilities that are often core to digital learning programs greatly facilitate the collection and management of learner skill-level data, giving the program a more holistic picture of each learner's capabilities at any given point in time. Picciano (2006), for instance, declared that there are two significant elements in defining blended learning and those are online and face-to-face instructions. This continuum is evident in data about technology use among young people, despite the generalization that young people know how to use technology and learn to do so more easily because they are "digital natives" who have grown up with digital technologies (Warschauer and Matuchniak, 2010). At the Modification level, there is a significant change between what happens in the traditional face-to-face classroom and the digital age learning ecosystem. Another application in public health is the development of mHealth (use of mobile telecommunication and multimedia into global public health). The teachers, administrators, librarians, and parents are all stuck in old ways of learning. In addition to storing content, digital libraries provide means for organizing, searching, and retrieving the content contained in the collection.Digital libraries can vary immensely in size and scope, and can be maintained by individuals or organizations. It is a type of learning that is supported by digital technology or by instructional practice that makes effective use of digital technology. Faculties who teach distance education courses need organizational and administrative support from the institution. Newer technologies such as computers and video conferencing are not necessarily better (or worse) for teaching or learning than older technologies . Teachers often find that when they trust students with a higher level of control, students respond positively.Online content allows students to choose from different information sources, giving students increased voice and choice. Aside name and date of birth, this information can include the child's browsing history, search terms, location data, contact lists, as well as behavioral information. Some educationalists are now beginning to advance ideas of fluid intelligence and connectivism—reflecting the belief that learning via the Internet is contingent on the ability to access and use distributed information on a just-in-time basis. We are used to it. This feeling of isolation can often demotivate individuals as they feel they don't have the support and reassurance that the physical presence of a trainer provides.Excessive screen time:It can often seem that students are constantly in front of a device — cell phones, tablets, computers, and gaming devices are prevalent in their lives. The focus needs to be on the learner's interaction with technology—not the technology itself. It's the first time they don't have parents and teachers actively checking in. Bennett and Maniar believe that one of the disadvantages of E-learning for both sides (learner and instructor) is that there is no immediate feedback. If the differences between government versus privately run schools and universities are observed, then more students have access to computer and internet under private institutions. Academic institutions are now realizing the advantages of digital education in anomalous situations like the present one in hand. Encourage spacing. Some online institutions connect students with instructors via web conference technology to form a digital classroom.National private schools are also available online. This excellent learning methodology comes along with convenience, greater flexibility, and greater accessibility. That means E-learning is the use of network technologies to create, foster, deliver and facilitate learning, anytime and anywhere for empowering the individual learner so that the teacher/ trainer/tutor is no longer the gatekeeper of knowledge, while the role of teachers is likely viewed as facilitators of knowledge process. Other areas of the transportation industry have also begun to adopt simulators for technical staff training.Figure below shows Pilot using flight simulator:_Medical students and professionals use simulation tools to practice surgeries, crisis interventions, and administer prescriptions. The role of the teacher changes, but the importance of the teacher is unchanged. The idea of combining AR/VR/MR is highly anticipated. Often presidents, trustees, faculty and students feel that they are being swept along by a tidal wave of public expectations for distance learning, and none of them wants to be left behind. While you don't have to be a computer wiz, you should have a positive attitude and an open mind about learning new things and interacting with others in the digital world.Discussions in the online environment may offer more opportunity for students to think about, research and even draft their discussion posts and responses:Rich and complex student-driven class discussions may be facilitated in both environments, but with distinctly different advantages and disadvantages. You don't have to deal with commuting and heavy traffic, and you can study from the comfort of your home if you want to. The education world does not universally agree on what each term means. Because online learning is more flexible than classroom-based learning, students can work through material at their own pace. Taken as a whole, there is robust evidence to suggest online learning is generally at least as effective as the traditional format. After all, a digital curriculum is built upon the system that includes interactive online lessons and assessments. Interactive whiteboards allow learners and instructors to write on the touch screen. Experiential learning is the process of learning through experience, and is more specifically defined as "learning through reflection on doing". Online learning often prioritizes polished, accessible content over maximized student engagement (Nilson et. Classrooms have been fully equipped with permanent multimedia projectors and computers and the facilitator needs to access the e-learning system through the Intranet. A full 75 percent of those participating in the survey said the move to digital content was important to their education institution.A number of schools also are taking advantage of the fact that more students carry smartphones. That brings us to the most distinctive educational feature of games, their quality to arose high motivation amongst learners. Keeping an accurate schedule in a day planner and checking it frequently can make sure students don't miss assignments or deadlines. The rate at which digital tools and resources are adopted must not exceed the rate at which teachers and students can learn the new tools and successfully use them. They maintain that the competitive industrialized information and learning society needs a new type of learning which calls for active learners who are able to initiate, plan, implement, control and evaluate and also apply their learning themselves. Professionally it is called "Knowledge Transfer".PowerPoint Presentations (PPT) make one of the major learning mediums in management institutes where teachers share most of the topics via presentations. Wilkes University online adjunct professor and independent educational technologist Kathy Schrock concludes virtual reality has the potential to increase visual literacy, technology literacy, and attention to audience. These twenty-first century skills can be attained through the incorporation and engagement with technology. Customization of learning course can potentially increase the effectiveness of education as a whole; after all, every student's needs will be considered and addressed in an appropriate manner.Career advancement and hobbies:Studying online gives you more flexibility. This misunderstanding leads advocates for the increased use of technology in education to underestimate the amount of time required to adopt technology successfully. Therefore computers are good thing to have in schools. Digital opens new possibilities for learning experiences. The average college student reported such use 11 times daily. From those global students who have interacted with MOOC and CBE, about 11 percent earned a competency-based badge, and about 19 percent said they would use competency-based digital badge on their resume._Perception of online education:-77% of educators believe that online learning is just as good as traditional learning, if not better.-Nearly 70% of all students claim online instruction to be as good as or better than in a traditional classroom setting.-26% of online students claim to learn better online than in a classroom._According to a recent survey, there are a number of notable statistics that show the digital learning revolution is in full swing:52 percent of high school students are taking tests online53 percent of 6-12th graders want to use their own mobile devices for school work57 percent of middle-schoolers say online classes provide them more control over their learning3 out of 5 flipped classroom teachers believe online learning increases student confidence and motivation77 percent of parents consider the effective use of technology as vital to their child's future60 percent of district leaders report positive outcomes from digital content implementation._Online learners' score on standardized tests:-The average score of classroom learners: 50th percentile-The average score of online learners: 59th percentile-There is a 5:1 ratio by which learners differ. These logs can be especially valuable when digital learning takes place outside of a traditional classroom, where it would be difficult or impossible for an instructor to monitor learners as they engage with their learning activities—for example, when completing after class homework or when participating in asynchronous online courses.Action logs consist of records of all the actions that the learners execute within a learning environment. For education and training to the masses on gigantic scale, for economic survival and to meet the ever-changing requirements of the society and also to meet the individual's special requirements and tastes, the conventional system of education based on brick-and-mortar schools, colleges and universities is not enough.-2. The content may be a MOOC, a series of small videos (i.e. Lynda.com, Udemy, etc.), or an instructor-led program that includes simulations, group discussions, and exercises. Blended instruction is reportedly more effective than purely face-to-face or purely online classes._Mobile learning (m

human activity, but that also represents a powerful force in reshaping that activity and its meaning. In U.S. higher education alone, more than 5.6 million university students were enrolled in at least one online course in the autumn of 2009, up from 1.6 million in 2002._An increasing number of universities provide distance learning opportunities. Some, such as cloud computing, are more well-known and already have become established in education. Discussion forums via email, videoconferencing, and live lectures (video streaming) are all possible through the web. Textbook learning often results in temporary memorization. The teacher introduces a program that targets the same operations in the context of a game. Students usually respond to those topics within the broader conversation that most clearly speak to their individual concerns. The National School Boards Association found that 96% of students with online access have used social networking technologies, and more than 50% talk online about schoolwork. People who need more time to grasp a concept can take it. High exposure levels stimulate brain cell alteration and release neurotransmitters, which causes the strengthening of some neural pathways and weakening of others. Students are required to actively participate in their education. Most existing professional development mechanisms are insufficient, because 1) they do not allow for enough time, and 2) they are removed from the classroom and school year, often taking place during summer breaks. Martin & Herrero (2012) also found out the significant differences between learning mode and learning outcome, but the effect of learning mode on learning outcome became insignificant after using multimedia assisted teaching materials._____Factors that influence effectiveness of E-learning:A qualitative view of the factors, which the researchers classify as either promoting or prohibiting e-Learning effectiveness across a spectrum of definitions, methodologies and e-Learning media, provides valuable additions to e-Learning design and research. Many educators would consider learners to benefit from the socially rich environments that the Internet can support. As online education has become the dominant form of distance education, new theories are emerging that combine elements of constructivism and technology.Connectivism is a theoretical framework for understanding learning in a digital age. They are asked to reflect on that information to develop an opinion and to create a product that defends their opinions based on evidence. However, with the proliferation of videoconferencing, face-to-face communication can now take place when individuals are physically close or remote, given that individuals can see each other even if they are at a distance.In-person delivery of education and training programs is a term that is not as widely used as face-to-face but is being employed by providers to outline how students will be expected to engage with teaching and learning activities. It is flexible, allowing students access to education anywhere, anytime. This will allow students to access digitally mastered materials beyond the walls of the classroom or intranet campus to complement the way they learn bestTo provide flexible learning environment (flexible learning spaces) to allow teachers to conduct lesson experimentations with the use of education technologies. Technology has created a distracted generation with short attention spans, hindered writing and face-to-face communication, and hurt critical thinking and homework ability._Too much information coming too rapidly can overwhelm thinking. As online learning grows, more and more aspects of “gamification,” the use of game mechanics and virtual achievements in non-game contexts to engage users, are being added to the virtual environment to increase task engagement and decrease attrition (Deterding, Dixon, Khaled, & Nacke, 2011; Huotari & Hamari, 2012; Kapp, 2012).Even though there are positive findings for the effectiveness of online learning, it is still unclear that this generally holds true across studies. These theoretical perspectives are grouped into three main theoretical schools or philosophical frameworks: behaviorism, cognitivism and constructivism.Behaviorism:This theoretical framework was developed in the early 20th century based on animal learning experiments by Ivan Pavlov, Edward Thorndike, Edward C. Coursera and EdX have successfully trained hundreds of thousands of people in Africa. For example, the key to successful incorporation of podcasts was not the audio itself, but how teachers incorporated them into lessons. On the other hand, students might find their class boring when compared to the exciting world of tablets, gaming consoles, etc. Vendors of Micro-Learning solutions include YouTube, and vendors like Grovo, Axonify, Qstream, Pathgather, and Edcast.Macro-learning, on the other hand, is something we do when we want to truly learn a whole new domain. This is differentiated learning.Adaptive Learning:Adaptive learning is a new and innovative type of e-learning, which makes it possible to adapt and redesign learning materials for each individual learner. Knowledge is the ability to assess and then integrate information into a meaningful whole. A virtual classroom provides an opportunity for students to receive direct instruction from a qualified teacher in an interactive environment._Printed textbook information is static, the books are heavy, they’re costly, and they quickly become outdated. When integrating digital technologies, intrinsic influences on teacher practice are dominant and more challenging (Blackwell, Lauricella, Wartella, Robb, & Schomburg, 2013; Hsu & Kuan, 2013; Vanderlinde & van Braak, 2010). Besides the advantages gained when learners take responsibility for their own improvement and advancement, experiential learning is expected to increase and deepen understanding of a subject, and to increase self-efficacy and motivation. As usage types become more complex, towards formative assessments, differentiated instruction, and using a data dashboard, usage levels decrease.The Evergreen survey found that the teachers most likely to report successful changes in their teaching practices are those who report 1) being more experienced with technology, and 2) having higher levels of support from their school._Digital learning requires effective teachers in order to be successful:This statement is not an opinion. Gaps in educational attainment across socioeconomic groups are even larger in online than in traditional coursework.Online education has failed to improve affordability, frequently costs more, and does not produce a positive return on investment.Regular and substantive student-instructor interactivity is a key determinant of quality in online education; it leads to improved student satisfaction, learning, and outcomes.Online students desire greater student-instructor interaction and the online education community is also calling for a stronger focus on such interactivity to address a widely recognized shortcoming of current online offerings._____70% JNU teachers feel online education cannot replicate classroom learning: 2020:Out of 576 teachers in the varsity, this report states that 310 faculty members were involved in online education, according to the administration. Building a good LMS is possible only under the guidance and with the help of a learning consultant with the teaching experience. They mostly have physiological, love and safety needs and they prefer parallel play (Markopoulos & Bekker, 2003). If students are signed in to their YouTube account, they can track their progress through the lesson. Hands are raised, questions asked and answered, presentations given, etc., etc. This involves analyzing, comparing, contrasting information and then testing its practical application by creating something from scratch. Web-based teaching materials are a subset of computer-based training (CBT) or electronic learning (eLearning) used to leverage the World Wide Web for the delivery to instructional materials. Since behaviorism consists of the view of teaching people how to do something with rewards and punishments, it is related to training people. Virtual school enables students to log into synchronous learning or asynchronous learning courses anywhere there is an internet connection.E-learning is increasingly being utilized by students who may not want to go to traditional brick and mortar schools due to severe allergies or other medical issues, fear of school violence and school bullying and students whose parents would like to homeschool but do not feel qualified. Online schools create a haven for students to receive a quality education while almost completely avoiding these common problems. Bringing together the wisdom and expertise of more than seventy thought leaders in the field, the result is an exciting vision for the next generation digital learning environment (referred to by the winning acronym NGDLE).The difference between LMS and NGDLE:The LMS is “one size fits all,” a single central application with multiple features and uses. Nowadays, almost all the students have smartphones with an internet connection. This may be unlikely given the range of learning and teaching styles, the potential ways technology can be implemented and the ways in which educational technology itself is changing. There is simply no way for the teacher to interact with every single student. Remedial and tutorial use of technology can be particularly practical for the lower attainment of pupils. This shows that e-learning follows a greener approach.More Social Interaction and Collaboration:The traditional education model allows students to interact with each other in and outside of school. Other applications of AI in education include personalizing learning, evaluating the quality of curriculum and content, and facilitating one-on-one tutoring with the use of Intelligent Tutoring Systems. LMS leverage is that it delivers learning content and tools straight to learners, and it can also reach marginalized groups through special settings. In online courses, instructors aren’t on the stage. Learning objects are much smaller units of learning, typically ranging from 2 minutes to 15 minutes.-Are self-contained – each learning object can be taken independently-Are reusable – a single learning object may be used in multiple contexts for multiple purposes-Can be aggregated – learning objects can be grouped into larger collections of content, including traditional course structures-Are tagged with metadata – every learning object has descriptive information allowing it to be easily found by a search_Digital Media Object:Digital Media Objects (DMOs)are similar to digital learning objects. The difference lies in the original definition of media and the fact that it is not confined to a learning usage. When the media take on more effective, more explicit, or different or alternative meanings and usages or become augmented to something more than their original functionality, the media becomes a media object. For years architects and artists have used perspective and animation to add a third dimension to the flat world of paper or screen. In a study that compares learning outcomes for students who self-selected into the online format for a macroeconomics course, researchers found that after correcting for sample selection bias, test scores for the online format students were four points higher than for the traditional format (Harmon & Lambrinos, 2006). They can also build models that closely match real-world situations, apply various tests and variables on this situation, and gain insight into the real world.Manufacturing plants include simulation tools to plan, design, and train automated process and manufacturing systems such as PLC (Programmable Logic Controller). Parents and districts can also set up internet blocks to help keep students from visiting other sites when they are supposed to be working.Cheating:Cheating has always existed, yet technology has made it even easier in some ways. These include e-textbooks, e-workbooks, educational videos, e-tests, etc. (2011) indicated that the words academic performance, learning outcome, academic achievement, or learning achievement expressed the same ideas, i.e. students’ academic learning outcome, or the persistent result through learning history. Students are motivated by content that matches their interests, and are more likely to keep moving through content that pushes them “just enough” according to their abilities. In this regard, it resembles traditional classroom teaching methods despite the participants being located remotely. Experiential learning, a hallmark of the kind of learning that is embedded in games and simulations, is assumed to be the ideal learning method for self-directed learning. Virtual classrooms can never replace physical ones but we have to accept the reality as the pandemic is here to stay for a long time in the absence of effective vaccine. Today’s pervasive online environment poses exciting possibilities, ones that necessitate students are properly educated on cyber safety and individual responsibility.21st century classrooms are SMARTboards instead of chalkboards and pods of SMARTdesks instead of individual seating. This is often expressed in terms of reducing constraints of place, space, time, and geography, with individuals able to access high-quality learning opportunities and educational provision regardless of local circumstances. Technologies have enabled people to learn and share information across the World Wide Web and among themselves in ways that were not possible before the digital age. They hear from technology companies the concept of “try, fail, improve”, but they feel that they are being watched and evaluated constantly and have little or no room to experiment and “fail forward.” Along these lines, teachers may resent being told how to improve their practice by technology consultants who have little or no experience in a classroom.Some of the teachers feel that they are innovating, but that other teachers and other parts of the educational system are not.For teachers to be successful with technology they must be supported by their schools and districts. is so widespread that 4 billion people in the world use the Internet, 5 billion people possess a mobile phone of which more than half have smart capabilities allowing internet experience at anywhere-anytime, and more than 3 billion people have access to social media almost all through mobile devices (90%). In other cases, electronic textbooks have enabled teachers to replace the heavy books used before. A standout success story was a psychology class at American University where supplemental podcasts enabled students to score significantly higher on exams than students who only had access to traditional lectures. they are just different . Hence, a traditional learning style may be detrimental to success in e-learning._____E-learning platforms:There are a variety of e-learning platforms, both synchronous and asynchronous, that users can implement in educational, business or independent environments. The same number of physical books would weigh about two tons. They say, ‘TV does what it wants to do. Digital Education can be defined as the use of a combination of technology, digital content and instruction in the education system to make it more effective and efficient than the traditional education system.Digital education means digital learning. Following the multimedia, participants completed a retention and transfer test that covered only the material common to both treatments. Copyright laws are increasingly hard to enforce, as the music and movie industries have discovered to their cost. While we try to do all of this, a lot gets lost in translation on the online platform.”_____Section-20Transformation of education by digital learning:_Ways in which Digital Learning is Reshaping Education:Technology has had far-reaching impact on the field of education. Bits are the fundamental units of information in a computer system. They may be distracted by non-academic websites, games, or videos. By far, math teachers use more online resources, followed by English Language Arts (ELA). For those providers who do not have a campus, or for those who have delivery sites outside of a main campus, onsite delivery is more appropriate. According to Moos and Marroquin (2010), motivation corresponds to the set of physiological processes that influence the direction, vigor and persistence of behaviors. How can we ensure students are doing what they’ve been assigned? However, in schools, students do not use their gadgets without supervision. Augmented and virtual reality technology can put students “into” an environment, enabling them to experience what’s going on without actually being there.Machine Learning: Today, the technology is being used in multiple industries, including financial services and healthcare. Similarly, educators can connect with each other to share ideas, activities, and teaching techniques like never before.For now, traditional educational methods still have a place within modern education. Thus, in light of the Internet’s capacity to allow these activities to take place on a vast and almost instantaneous scale, the educational implications of the Internet are understandably often described in grand terms. In the online environment, the facilitator and student collaborate to create a dynamic learning experience. Hull, and B.F. Skinner. Interactive elements encourage active learning habits and reinforces knowledge acquired through reading and lectures to provide a complete educational package.Imagine you’re at the gym. Stakeholders are more likely to be supportive of digital learning programs if they feel they have had a say in the planning and development of those programs. The focus should be on acquiring higher order skills like problem solving and critical thinking.Curriculum Characteristics:In order to change the teacher’s and student’s role the curriculum also needs to be revised. There is strong evidence for the heterogeneous outcomes of the effects of online learning, and in particular, a number of student characteristics such as sex, race/ethnicity, and ability, can moderate the learning outcomes. After taking into account various factors that could affect student achievement, including household income, teacher training on the use of computers in education, and (for the international students) the size of the nation’s economy, she identified several disturbing trends.“Across most countries, a low to moderate use of school technology was generally associated with better performance, relative to students reporting no computer use at all,” Bouygues writes. “Dig Deeper” provides additional resources for exploration.Each lesson can be modified by clicking on the “Flip this Lesson” button. They transfer assignments online sitting at home, after which an alert is sent to teachers, who can access each child’s account and share their feedback. Even though proper use has shown to increase student performances, being distracted would be detrimental. One helpful strategy for the online instructor is to provide tutorials on how to use an emerging technology tool that is required to create an assignment. Because of the competing priorities of work, home, and school, adult learners desire a high degree of flexibility. One commonly known staple of web-based training is the use of PowerPoint presentations. In an already information-saturated world, this change in outlook has encouraged students to go back to the drawing board, analyse and examine information, and innovate with outcomes of their learning.Digital equity in education means that all students can have access to learning resources in an easier and less expensive way than the traditional one. Additionally, digital learning can lead to 25%-60% improved content retention relative to traditional classroom learning (Evans, 2013). The survey’s results paint a picture of education in flux. Teachers need to be professionally trained to adopt this new approach. There is ample evidence that ITSs are highly effective in helping students learn._Recent works have also focused on developing AI-enhanced learning tools that supports human teachers in coordinating classroom activities. Edmodo can offer a more streamlined approach to this part of classroom management. By using technologies that help engage users in the classroom, teachers are finding increased comprehension and retention among students. An individual semester of blended learning may emphasize classroom time in the beginning, then gradually increase the amount of work that students do online or during independent study. The report, produced in association with the National Research Center for Distance Education and Technological Advancements (DETA), is the result of an environmental scan of published research reviewing how emerging learning technologies are being applied in the field and exploring their potential impact of student success.Researchers defined digital learning innovations as “technologies or ideas that improve access, equity and learning.” The scan incorporated peer-reviewed journals, popular news and media coverage and other articles and documents, as well as an analysis of initiatives that have earned OLC Digital Learning Innovation Awards.The top trends identified by the scan were:Adaptive learning;Open educational resources;Gamification and game-based learning;Massive open online courses,LMS and interoperability;Mobility and mobile devices; andDesign (the structuring of the learning environment and interactions).Secondary trends (those that did not permeate the entire data set but were identified as themes for at least one data source) were:Blended learning;Dashboards;Virtual reality; andArtificial intelligence.With a better understanding of the technology and trends driving teaching, research and learning, institutions and faculty can prioritize the inclusion of these new innovations in current plans._____Top Digital Transformation Trends in Education:Educators from all grade-levels are coming to realize the benefits of technology in the classroom. That means teachers face the challenge of keeping students on task. Eliademy is a free cloud-based Course Management System that provides blended learning opportunities as well as platforms for distance learning courses._5 top-rated free LMS software systems for online teaching:ProductAverage overall rating (out of 5)Google Classroom4.62TalentLMS4.54iTunes U4.52Thinkific4.52Schoology4.43_Advantages of LMS:There are six major advantages of LMS: interoperability, accessibility, reusability, durability, maintenance ability and adaptability, which in themselves constitute the concept of LMS.Other advantages include:-An LMS supports content in various formats: text, video, audio, etc.-One can access materials anytime, from everywhere, teachers can modify the content, and students can see the updated material.-The evaluation of students is easier and fair, based on student attendance and online quizzes.-Students and teachers can re-use the material every time they need.-Students can learn collaboratively by setting up a School website with the LMS software and helps “Keeps organizations up-to-date with compliance regulations.Disadvantages of LMS:-Implementing LMS requires a well-built technology infrastructure. has made document sharing and digital learning really easy. Paper books are easier on the eyes since there’s no eye strain that comes with an electronic device or e-reader. They have begun to take pleasure in learning and there has also been a decline in the rate of absenteeism. Another survey conducted by LocalCircles among 25,000 respondents found that only 57 per cent students had the required hardware — computer, router, and printer — at home to attend online classes.Ashley NP, who teaches English at DU’s St Stephen’s College, highlights that there is substantial learning that is lost when education goes online. Despite that, data gathered by GSMA intelligence indicates that there are now more mobile devices than there are people in the world. Another major influence on the field of Cognitive Science is Noam Chomsky. Blended teachers explain that this type of mindset is also necessary for new teachers as well as for students.Understand that technology should not be isolating, but instead it should allow teachers to focus on relationships with students. (2012) identified various extrinsic influences, which they describe as first-order barriers. Depending on permission settings, this visual learning can be interactive and participatory, including writing and manipulating images on the interactive whiteboard._Interactive smart boards are replacing traditional blackboards:_____Digital Dashboard:A digital dashboard is an electronic tracking tool used to build an interactive, visual representation of data from multiple sources to allow a learner to monitor his own progress through the learning environment. Teachers might remix a content source for their students, while students might use remixing to build and demonstrate skills, or while becoming participants in sustaining culture (Ladson-Billings, 2014).Educators strive to help a wide variety of individuals develop skills, attitudes, and behaviors that we believe hold value. With offline learning, participants are required to travel to the training location, typically a lecture hall, college or classroom or provided with CD/pen drive. How many institutions have a fully functional computer lab? Such portfolios can be used for not only keeping learning records, but also building digital profiles, analyzing learning data, and as a tool for managing learning communities.According to Edutopia:Students will increasingly use digital portfolios to demonstrate their skills and knowledge as they apply for college and jobs. For instance, in arrangement and co-ordination of meetings, project work, dissemination of information and so forth, the function of organizing is considered imperative. With origins in a math experiment during WWII, simulation technologies now have widespread applications in various industries ranging from healthcare to manufacturing to entertainment. Oye, et al., defined E-learning as a unifying term used to describe the fields of online learning, web-based training and technology delivered instructions. The extended treatment included additional interesting information about the formation of black holes, galaxy collisions and the observation of dark matter. Their findings revealed that “students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction”. The intangible, digital nature of e-learning means that bad time-management could lead to failure.Problem 7. LMS imperfectionsNot understanding the psychology of teaching and learning and not understanding how teachers and students really work during LMS creation is one of the cornerstone problems of the industry. Data privacyFrom the very beginning of school shutdown in covid-19 pandemic, teachers and students have been connected using multiple digital tools without paying due attention to the amount and nature of the personal data they collect. This result supported the findings of Akkoyunlu and Soylu (2006) which indicated high demands for face-to-face interaction in on line learning.According to Owston et al. Thus, if the digital gap in education were to increase while schools are closed, learning inequality and learning poverty would also inevitably increase. A few districts are taking this approach, embedding instructional coaches in schools and working with teachers throughout the day during breaks and planning periods. Online learning existed in its archaic form, and the words social and media had no relation. Tindall-Ford and colleagues (1997) found that the modality principle is strongest when the material is complex and the pace is fast and not under the learner’s control.People learn better from words and pictures than from words alone.People learn better from graphics and narration than from the combination of graphics, narration, and on-screen text. The end goal is that a student should be able to respond to a question or comprehend a topic correctly.Frequent Feedback: There has to be a process where students can receive helpful feedback. The DLE should be customizable to the learner’s needs, adaptable to their academic focus, and responsive to their individual learning style.Analytics, Advising, and Learning AssessmentThe NGDLE should include robust tools to acquire, assess, and analyze valuable data on learning approaches and outcomes. Furthermore, these learning improvement and cost saving gains are expected to increase as new tools and software for online learning are being developed and tested continually.In a large political science course, using mixed methods, researchers found that students using PeerWise—a recently created online pedagogical tool that enables students to write, share, answer, discuss and rate multiple choice questions with little to no input from the instructor—had better learning outcomes and improved perceptions of learning as well as motivation to learn (Feeley & Parris, 2012). Showing up to class goes a long way to successful completion. However, these same researchers have also found that with eBooks that are carefully designed to support reading rather than distract with features that are simply entertainment, the children’s comprehension of a story was at a similar level._____Factors to consider when adopting Digital Textbooks:School districts across the world will play an important role in deciding whether to adapt their curriculum to include digital textbooks. They also found that the “right” mixture of human and technology, i.e., hybrid or blended learning, was particularly effective. Use the school newsletter or other parent communication tools.Seek advice from the Digital Learning Unit if the tool is departmentally brokered.Schools must undertake a full privacy impact assessment (PIA) to identify and consider the privacy impacts of school-wide online services they have chosen to implement. MIT, Stanford and Princeton University offer classes to a global audience, but not for college credit. The way teachers impart education today and the way students learn have both undergone a paradigm shift, slowly but surely paving way for digital learning to take over traditional formal education. The author compiled over 350 studies on distance and online education dating back from 1928 that suggested that there is no significant difference in the learning outcomes for the traditional face-to-face format versus mediated instruction. Such a clock is capable of indicating every possible time of the day. Examples are hands-on subjects such as public speaking, surgery, dental hygiene, and sports where physical movement and practice contribute to the achievement of the learning objectives. Collaborative e-learning expands on the idea that knowledge is best developed inside a group of individuals where they can interact and learn from each other. In a 2018 public service announcement, the FBI warned that widespread collection of student information by educational technologies, including web browsing history, academic progress, medical information, and biometrics, created the potential for privacy and safety threats if such data was compromised or exploited. It is a collaborative approach that opens educational content creation to a wider group including the students themselves. A VLE typically combines functions such as discussion boards, chat rooms, online assessment, tracking of students’ use of the web, and course administration. That’s where 70% of long-term professional development happens. In most cases, efforts involve the use of various digital platforms featuring educational content, and a variety of educational technology (EdTech) solutions to keep communication and learning spaces as open and stimulating as possible. (2010), have used more rigorous selection criteria.In a meta-analysis in higher education, Bernard et al. Sometimes it is delivered live, where you can “electronically” raise your hand and interact in real time and sometimes it is a lecture that has been prerecorded. MOOCs generally have the same professors and the same study material you’d get if you were attending the university in-person.Online learning may be more engaging than classroom learning:Researchers have begun diving into how efficient online learning is compared to classroom education. Moreover, digital teaching platforms would provide interactive functions like chat room and discussion for more two-way communication between learners and instructors and among learners (Hockly, 2012).Reduction of teaching costs: The teaching material contents utilized in a digital teaching platform were kept as digital files that the completed teaching materials could be repeatedly utilized. According to Winner, the recurring patterns in everyday life tend to become an unconscious process that we learn to take for granted.Winner writes,By far, the greatest latitude of choice exists the very first time a particular instrument, system, or technique is introduced. It is the function of instituting relationships between the individuals in various parts of the organization and they are all motivated towards the achievement of organizational objectives. Thanks to this “digital abstraction” of content, educators can solve the struggle to create a variety of effective learning materials that have to satisfy a broad range of needs for different competencies, difficulty levels, roles and departments. Students are not required to be together at the same time. This is particularly true among middle school and high school students. In today’s world, digital technology is widely in use in society and work life. Owners of personal technologies do not normally receive training in their use; instead, they learn informally from friends, work colleagues and family. They should be invited to envision how their roles might evolve, and how they might engage in professional learning opportunities with district leaders and with each other.Teachers aren’t the only ones who will experience the changes that come with digital learning. In other words, they reflect on how they learn as well as what they learn.You need to be able to manage your time wisely. However, despite the explosive growth of online education, this potential has not been realized. Considering that children’s organs are still in the developing stage, especially their eyes and the retina, it is pertinent to limit their screen time to avoid damage. As an alternative for solving the lack of education in many areas, Massive Open Online Course (MOOC) is providing the learning materials openly and free. The latest “intelligent” tutoring systems, for example, not only assess students’ current weaknesses, but also diagnose why students make the specific errors. The Internet has made online learning possible, and many researchers and educators are interested in online learning to enhance and improve student learning outcomes while combating the reduction in resources, particularly in higher education. The network is a vital element in delivering the digital learning experience. Or maybe the schedule of lectures does not comply with their part-time job and makes their attendance in the class impossible. Educational technology is not restricted to high technology but is anything that enhances classroom learning in the utilization of blended, face to face, or online learning. Incorporating it as part of their educational experience can only help to enhance that and make it more fun. The structure of distance learning gives adults the greatest possible control over the time, place and pace of education; however, it is not without problems. Interactive videos, live video sessions, written notes, simulations, discussion boards, and contests/challenges are some of the methods. The Susskinds believe that where a machine can do any one of these tasks better and more cheaply than the average human, automation of that bit of the job is inevitable. Augmented, virtual, and mixed reality are examples of transformative technology that enhance teacher instruction while simultaneously creating immersive lessons that are fun and engaging for the student. The closures also compound educational inequities: economically advantaged families tend to have higher levels of education and more resources to fill learning gaps and provide enrichment activities to children who cannot attend school. This finding suggests that the positive effects associated with blended learning should not be attributed to the media, per se.”The number of studies was small, so the results include many studies from post-secondary and other educational institutions, so generalizing to K-12 education should be done with caution.This study is important in part because with the growth of 1:1 computing initiatives, low-cost home Internet access, and bring-your-own-device programs, the line between classroom-based technology and online learning is blurring. To ensure always-on connectivity today and provide the path for advanced technologies down the road, school districts and higher education institutions should look for a network service provider that can provide a secure, high-performance network that can be adjusted according to bandwidth needs. It is about interactions, broadening of ideas, free-flowing open discussions, debates, and mentoring of each student. Some digital resources, such as online content, can be provided by the school or the teacher. Does my school support online learning as detailed in an Acceptable Use Policy (AUP) or Responsible Use Policy (RUP)?Once these basic questions are answered, you are ready to begin planning for digital learning.Blended Learning (vide infra):Blended learning, also known as hybrid learning, is a combination of face-to-face and online instruction. However with time this facility should be available for students at the ordinary level like in the western countries._____What should not be taught Online:In the excitement and enthusiasm for online programs that has been generated recently, it is important to recognize that some subjects should not be taught online because the electronic medium in its current state of development does not permit the best method on instruction. Khan academy provides an easy path for students to jump in and begin learning about any subject that they choose. The learners have to take over responsibilities for their own learning. Below is the pedagogical landscape according to one survey results.Which instructional strategy is considered most effective? Adolescents can handle problems that are abstract and complex. This boosts the communicational skills teamworking abilities of the students. The second step is to understand these effects in the particular instance enough to understand what follows if the same action is taken in similar situations. What is the infrastructure available? Many researchers are focused on helping educators improve their practices by comparing different instructional strategies and methods, rather than trying to determine if one school model is “better” than another. At that point we may need another “macro learning” intervention to go back up the learning curve, or if we fail we may actually get bored and leave. Reducing children’s screen time is key. Due to these connotations, online may be viewed as a less desirable option for those students who want a greater degree of social interaction or to physically engage with teaching, learning and support activities. Often, far more information than necessary is collected, uploaded and stored indefinitely. Blackboard can be used for K-12 education, Higher Education, Business, and Government collaboration. Students select what they want to learn from a variety of choices including:HTML.PHP.SQL.Jquery.More.For each concept that students wish to master, they go through a variety of online tutorials, take tests, and ultimately complete each course. The researchers concluded that the combination of time spent, curriculum, and pedagogy in the online format produced the observed difference in learning outcomes, but there was no evidence that online learning is superior as a medium for learning, which is consistent with prior literature (Bernard et al., 2004; Clark, 1994). This finding demonstrates that use of open educational resources and purchased resources is not either/or, but that in some cases teachers are using both free and purchased materials.About 60% of respondents said they regularly use formative assessments (61%) and/or differentiated instruction (58%).Half (49%) use a learning management system such as Blackboard or Canvas.41% use a student data dashboard, which may be part of a learning management system, student information system, skills software, or other technology platform.These numbers represent a continuum of use of technology, with greater numbers of teachers using technology in relatively simple ways, and slightly smaller numbers using technology in more complex ways. The advent of digital learning and its steady incorporation in educational setups is reshaping the future of education in an unprecedented manner. This phenomenon has been referred to as Long Tail Learning. Advocates of social learning claim that one of the best ways to learn something is to teach it to others. Social networks have been used to foster online learning communities around subjects as diverse as test preparation and language education. The individuals are able to share ideas and perspectives with each other to carry out their tasks and functions. Looking forward, it will soon be possible to send every student home with customized playlists of learning experiences that target their learning level, tap their interests and are in a modality likely to encourage persistence and performance. Mobile Learning can be distracting if your users get constantly interrupted with text messages and notifications. Now, however, researchers are starting to turn their attention to the effects on learning of a new medium: digital games. Changes in instruction and use of technology can also promote a higher level of learning among students with different types of intelligence.Whether upgrading “un-trained” teachers’ existing skills, providing teachers with enrichment or continuing education opportunities or helping teachers gain advanced degrees or certification, nations across the globe are increasingly turning to distance education as a convenient, flexible and multimodal avenue for teacher education.Distance Education for Teacher Training focuses on the following areas:-Modes of distance education—types of distance-based delivery systems and their strengths and weaknesses from print to digital gaming to online learning to mobile technologies-Models of distance education for teacher training programs—actual examples of various programs from each continent-Methods or best practices necessary to develop a high-quality distance education program_____Extrinsic and intrinsic influences on the integration of digital technologies in teacher practice:Figure above provides a visual representation of influences on the integration of digital technologies in teacher practice._Extrinsic Influences:Ertmer et al. In a survey conducted by The Learning House, 44% of online students reported improvements in their employment standing, for example by obtaining a full-time job within 12 months of graduation, and 45% reported a salary increase. To consolidate progress and to ensure scale and sustainability, education institutions need to review their organizational strategies, in order to enhance their capacity for innovation and to exploit the full potential of digital technologies and content.Several frameworks and self-assessment tools are in use in a number of European countries, but no attempt has hitherto been made to develop a pan-European approach to organizational digital capacity. The lack of in-person communication can become problematic for students who are struggling to understand course material.The Importance of Staying MotivatedFor some students, the convenience of online courses can encourage poor study habits. This hypothesis was first established in a study by Koedinger and Nathan. Consider the fact that an instructor may present the same info several times in one day and this can easily lead to forgetting certain information during one or more sessions. The practice of learning at home (e.g. reading the textbook) and reserving activities for class time has been used for generations, and the recent concept of “flipping the classroom” is often overhyped.

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