Research Article

REMOTE EDUCATION IN THE TIMES OF COVID-19 AND THE FUTURE OF E-LEARNING

Linguistics

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Abstract

Digitalization, globalization, and online learning have revolutionized the educational scenario. It was not long ago when remote learning, which essentially means learning without being physically present in the boundaries of an educational institution, was condemned and deemed "ineffective". However, the spread of the deadly COVID–19 virus has forced students and teachers to adopt remote learning, causing unprecedented changes in the learning process. Based on the recent switch to remote learning, it is safe to say that not only remote education ensures better reach and lifelong learning, but it is also learner–oriented, flexible, convenient, economical, and saves a lot of time and resources. The need of the hour is to make remote learning available to everyone, by broadcasting lessons on television, radio, social media, YouTube, distributing informative books, and attention–grabbing pamphlets. Keeping in mind the benefits and freedom that come with remote education, we can presume that remote education is here to stay. The present paper will analyze the educational scenario during COVID–19, and will also discuss the future of E–learning as a brighter prospect for students around the world. It will attempt to provide insights into the various aspects of remote learning through the analysis of the results of an online survey, which was conducted on seventeen students from different countries all over the globe. The participants shared their views and experiences regarding the remote learning experiences during Covid–19.

Introduction to Remote Education

The spread of COVID–19 has caused an unprecedented change in the educational scenario; "affecting the lives of more than 1.5 billion students and their families" (*What have we learnt*, 2020, p.11). It has forced the students and teachers from around the globe to learn and teach remotely. From its humble beginningas an often overlooked means of education to the current situation where it has become the primary means of education, remote learning has proved to be an efficient learning tool that provides life-long learning opportunities to almost everyone. Remote education has proved to be a suitable and economical substitute for the classroom learning experience. Simply put, remote education refers to learning anywhere, anytime, without a time or place constraint. In the present context, distance education can be defined as "a method where the teacher and student, separated by space and/or time, use technology to communicate"(Moller et al. 2012:7). Simonson et al. argue that the primary purpose of remote education is; "to provide a valuable learning experience to students who might not otherwise have access to learning" (2015:189).

It is a boon for the educational communities who are unable to meet in an educational institute in person. One survey participant suggested that it can also be used in case of bad weather and rainy days. Distance learning courses are not a new concept, with their origin dating back centuries. "However, as recently as a few years ago, distance education was generally regarded as a stepchild to the dominant classroom model or as an oxymoron regulated to an unsavory image of

questionable correspondence or for-profit schools" (Moller et al. 2012:1). Distance learning has traditionally been used to teach the working class, rural population, prisoners, hospitalized people, and anyone who is unable to attend any educational institute in person. "Distance education has made learning accessible to many hundreds of thousands of people who otherwise would have been denied an educational opportunity" (Moller et al. 2012:2).

Analysis of the Effectiveness of Remote Education

Most educationists argue that remote learning can never replace in person education; as Henrietta Fore, the Executive Director of UNICEF puts it; "School is so much more than a place of learning. For many children it is a lifeline to safety, health services, and nutrition. . . the devastating fallout caused by COVID-19 will be felt for decades to come. . . " (*Futures of 370 million children in jeopardy as school closures deprive them of school meals – UNICEF and WFP* 2020).In some cases, especially in underdeveloped countries, the shift to distance education has proved to be a fiasco, because teachers, as well as learners, were not well-prepared for the sudden shift to remote learning. Moghli&Shuayb aptly stated; "Covid-19 exposes the weak infrastructure of education systems" (2020:1). Moghli&Shuayb conducted a survey on teachers, students, and parents mostly from Lebanon and Jordan. They found out that:

> *Teachers, students, and parents all agreed that the quality of teaching and learning deteriorated during the distance education period imposed by the lockdown. Well adapted school-designed distance learning programs did have a positive impact on students' perception regarding the quality of education they were receiving, but this was largely attributed to those attending private schools. (2020:1)*

Remote learning also took a toll on the emotional and social development of young learners; they were unable to interact and play with their friends. "Some schools almost moved the whole school programme online so they were in zoom classes for over 6 hours which had a huge impact on their learning capacity, physical, mental and emotional wellbeing" (Moghli&Shuayb 2020:20). Some educationists believe that distance education programs offer too much freedom to students, more than students can handle. Most of the distance learning programs depend on the learner. Content is provided through various channels but ultimately the learners are completely in charge of their own learning. Jenkins argues; "This does not mean that ODL is simply a matter of self-instruction. Unfortunately, it is often assumed that it is. Learning support is neglected. The result is poor performance, leading to renewed mistrust of the methods" (2005:14). High-quality distance education programs provide ample opportunities for interaction between the instructor and learners. The role of teachers is irreplaceable, even in distance learning programs. In Open and distance learning (ODL) programs; "Teachers facilitate learning, organize group interaction, evaluate achievement, and provide feedback. In some subjects and contextsthey may be responsible for delivering practical components of the curriculum or for supervising practical work" (Jenkins 2005:14).

The best thing about Open and distance learning (ODL) programs is that students learn from the educational content prepared and created by the top instructors, which might not have been possible otherwise. For instance, in India, Swayam, an e-learning platform offers lessons from the instructors of the most prestigious universities. "This team approach—material developed by the best teachers, class teachers supporting learning—can result in better quality" (Jenkins 2005:14). Distance education is not as suitable for young children as it is for older learners, because "independent learning requires good motivation. School-age pupils may not be highly motivated, in part because they are young, in part because they are often not learning from personal choice" (Jenkins 2005:15). Younger learners need a level of support and guidance that is difficult to receive from distance learning programs. Jenkins offers a solution:

> *One effective strategy is to use special learning centres. In Britain, such centres, … are places where individuals can learn independently of a wide choice of ODL courses … Centres offer a quiet place to study, access to equipment and other resources, and a high level of personal support and guidance from a learning facilitator. (2005:15)*

One of the main reasons why distance education doesn't work as well for young learners is the poor quality of study materials. To learn remotely, children need engaging learning materials along with constant support from the teachers but most underdeveloped countries are unable to invest adequate funds in distance learning programs. "The result has been poor quality, indicated for example disappointingly low graduation rates" (Jenkins 2005:15-16).

In other cases, where investment has been adequate, the results have been satisfactory as well. In Mexico, for example, there are no traditional secondary schools in some rural areas. Instead, children attend special learning centres and learn through a television-based distance learning system called Telesecundaria. Established in 1968, it now has over 14,000 centres. (Jenkins 2005:16)

Distance learning works wonders for self-motivated learners. Distance learners mostly possess; "an increased commitment to learning. For the most part, these learners are self-starters and appear to be highly motivated" (Simonson et al. 2015:188).
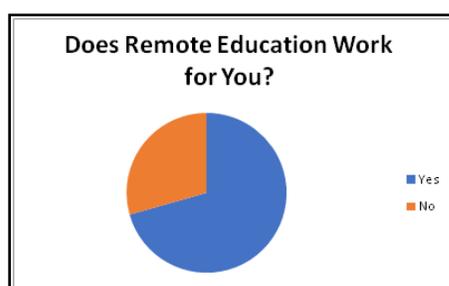

Fig.1 Participants' response to the survey question; 'Do you think remote learning works for you?'

Views of Participants Regarding the Advantages of Remote Learning

Most students pointed out that remote learning saves time and resources spent on transportation, offers the learners the opportunity to learn from the comfort of their homes without any distractions, as a participant puts it; "I can sit and study in a more personalised study environment. In school, I have to adapt to whatever physical arrangements made available". Another participant said that submitting assignments and answer sheets has become easier. They also said that as remote learning is location independent, they can multitask, work at a part-time or even full-time job. The participants voiced their appreciation of remote learning as it is' more convenient', offers 'easy access to a broad variety of courses' and has more interesting educational content in comparison to classroom learning.

Remote Learning has proved to be a Game-changer for the Displaced Population

"UNHCR estimates that global forced displacement has surpassed 80 million at mid-2020" (*Refugee Data Finder*) "Even before COVID-19 refugee children were twice as likely to be out of school than other children and despite improvements in refugee enrolment rates, only 63% of refugees are in enrolled in primary school and 24% in secondary education" (*Covid-19 what you need to know about refugees' education* 2020). Refugees are the most prone to be left out during the shift to remote learning during Covid-19, as they do not have the required devices, connectivity, or even a stable learning environment. To ensure education for refugee children, novel ways were adopted such as "radio broadcasting in Dadaab refugee complex, open-air classrooms in the Democratic Republic of the Congo (DRC), and classrooms on wheels in Bolivia" (*Five ways education continued for refugees during COVID-19*, 2020). Still, a lot of refugees are still unable to attend any formal or informal education. "The situation in these (refugee) camps encapsulated the very conditions for which open or distance learning was often advocated" (Brophy 2005:64). But distance learning has not been used as much as it should be in refugee education. Brophy points out the main reasons behind this: "transitory nature of life in camps, the problem of choosing education for settlement or return, choosing the curriculum and textbook, and the lack of certification and external examinations" (2015:65-66).

Negligence of Special Education

Even before the pandemic, the condition of special education was troubling. "Children with disabilities are significantly less likely than their peers to attend primary school; one out of two children with disabilities is out of school. In some countries, the enrolment rate of children with disabilities in primary school is less than 1%" (*Ensuring an inclusive return to school for children with disabilities* 2020:1). People with disabilities have been worst hit by Covid-19. Accessibility has been a major issue for disabled learners. Education was mainly imparted through mobile devices, tablets, laptops, computers and; "the use of computers is predicated on the ability to read what is on a monitor and type on a keyboard, watch video presentations, listen to audio

presentations, or participate in synchronous sessions that involve both audio and video" (Palloff& Pratt 2013:82). Most disabled learners are unable to do so. "Assistive technologies exist, such as screen readers and voice-activated software, that are designed to help people with disabilities of varying kinds to use technology and access the Internet" (Palloff& Pratt 2013:82). But these facilities are not available to a lot of disabled students, especially in developing countries. "Of children with mental and behavioral health needs, 80% rely on school-based services" (Masonbrink& Hurley 2020:2). While learning from home, the disabled students may feel frustrated and disconnected because of ". . . loss of critical resources. . . including engagement with specialized educators and structured learning environments. Parents of children with high learning needs are unlikely to be equipped with resources to maintain remote learning" (Masonbrink& Hurley 2020:2).

Remote Education in the Times of Covid-19

According to Li and Lalani; "online learning has been shown to increase retention of information, and take less time, meaning the changes coronavirus have caused might be here to stay" (2020). The sudden shift to distance education highlighted the dire need to train teachers in order to enhance their digital skills. Remote learning has proven to be a boon for autonomous students. "Some students have discovered that they enjoy getting to work at their own pace, set their own schedule and be free from the stressful environment of school" *(What Students Are Saying About Remote Learning*, 2020). But it did not work well for some students. *What Students are Saying* further presents the views of students who; "recounted the challenges of distance learning, from struggling to understand assignments and getting easily distracted to not having reliable internet" (2020).

Practical subjects like technology and medicine, music suffered due to lack of equipment at the student's home. "This very issue holds true as well for many of the creative areas such as arts, music and design disciplines as students cannot perform well when working from home" (Marioni at al. 2020:25). Remote learning is suitable for older learners, but it just doesn't work as well for young learners. They need constant parental supervision to attend the classes, complete their homework. As Hobbs and Hawkins put it; "Parents, for their part, are frustrated after more than two months of trying to supervise their children's at-home learning while juggling jobs and other responsibilities" (2020). Remote learning makes learning and teaching a bit tricky and complicated. Hobbs and Hawkins aptly describe the struggles of a Spanish Language teacher; "In the classroom, I can look around and see body language and know when some of my students not fluent in Spanish need me to switch to English. I can't do that online" (2020).

Issues Faced by Students and Teachers in Remote Education

Despite the bright sides of remote learning, remote learning also gives rise to a lot of issues. Assessment is one of them, as quizzes and online exams aren't always as efficient as in-person assessments. "Others worry that remote learning facilitates cheating" (Hobbs & Hawkins, 2020). Tracking student attendance is also a serious concern in remote education. "Many count

students as present if they log in to do work in programs like Google Classroom, an online classroom manager" (Hobbs & Hawkins, 2020). There is no systematic way to assess a student's presence. The worst thing is in some cases students join the online class, but they are completely inattentive and uninterested. Disabled learners were almost completely overlooked during this phase of remote education. In the survey *What Students are Saying,* a dyslexic student describes her inability to learn through remote learning as; "I have had a great deal of trouble keeping up with all of the work that my teachers have been putting onto me. That's mostly because my pace is slower than most of my other classmates" (2020). Especially in the third world countries, there are little to no provisions to operate special education programs remotely. Survey participants pointed out that learning remotely took a toll on their mental and physical health. A survey participant pointed out that due to using electronic devices for long hours; "I got glasses, there was a lot of stress and due to extensive screen time, family time was reduced. Sleep patterns got disturbed". Another survey participant stated that student workload was substantially increased while learning remotely, in her words:

"Assignments, quizzes, etc., piled up fast. It seemed like teachers took it for granted that we were at home and so thought it wouldn't hurt to add more assignments and homework than they would assign were we at campus. My stress levels skyrocketed. I always felt like 24 hours were not enough to complete everything I needed to complete."

The digital divide has deprived the underprivileged students of online classes; "...at least 463 million students around the globe remain cut off from education, mainly due to a lack of remote learning policies or lack of equipment needed for learning at home" *(COVID-19: Are children able to continue learning during school closures?* 2020). Especially the students from rural areas often struggled to learn remotely; "globally, 3 out of 4 students who cannot be reached by remote learning opportunities come from rural areas and/or poor households"*(COVID-19: Are children able to continue learning during school closures?* 2020). Most of the students and teachers underwent a lot of trouble while adopting distance learning means simply because of the lack of digital skills. On the other hand, "school districts and teachers that had previously used forms of online learning made the transition more easily" (Hobbs & Hawkins, 2020).

Poor technical infrastructure exacerbated the problem. In rural and remote areas, students faced connectivity issues, and even when they did get connected to the internet, attending synchronous video conferences was out of the question due to the disappointingly slow internet speed. While teaching remotely, work conditions worsened for teachers, especially those in the private sector. "The majority worked longer hours without adequate financial compensation, most suffered salary cuts, and others were asked to take unpaid leave. Teachers also reported receiving limited professional development, technical or financial support" (Moghli & Shuayb 2020:2).

Popular Tools for Learning Remotely during Covid-19

Outdated distance learning means have been replaced. Technology has revolutionized distance education by taking it to the next level. Unlike the earliest distance learning tools; "technology enables learners to access knowledge beyond the scope of instructors or textbooks" (Shepard, 2012:127), anywhere anytime. The most well-known tools to learn remotely are discussed below.

Synchronous Video Lessons. When most of the educational institutions were being closed to prevent the spread of Covid-19, most educators and learners turned towards video conferencing software, such as Google Meet, Zoom, Skype, and even WhatsApp in some cases. In the survey, synchronous video lessons were voted as the most effective means of remote learning.

Asynchronous Lessons. Asynchronous lessons refer to the lessons which are not going on in real-time, such as pre-recorded video lessons, study materials, audio lessons, etc. They are a boon for students with poor connectivity who may miss out on important parts of the class in a synchronous video conference. They are also quite suitable for students who don't have an internet connection round the clock. Students can even tune in and learn whenever they get a chance to do so.

MOOCs. MOOCs, arguably one of the best remote learning tools, gained immense popularity among learners. What makes MOOCs so captivating is the fact that they offer a combination of video lectures, quizzes, assignments, tests along with forums to ensure peer interaction. Some of the most popular MOOCs are Udemy, Codecademy, edX, Coursera, Skillshare, Udacity, etc. Montebello points out the benefits of MOOCs as it; enabled free education for the masses bringing into perspective the desire of a lot of online users to learn more and which were restrained … mainly due to lack of accessibility, excessive fees or merely inconvenience. (2018: 19) But MOOCs have several drawbacks as well. MOOCs, as Montebello puts it; "uncovered numerous issues that gave useful insights into e-learning in general. Apart from their poor retention rates and grading concerns it is practically impossible for an educator to provide assessment or even personalized feedback to each and every learner…" (2018:19).

Podcasts are becoming increasingly popular as means of education, especially informal education. There are a lot of podcasts on a wide range of topics from language learning, science, technology and so on. Online lessons, radio, TV, printed study materials are some of the most used means to learn remotely. The various means of imparting education remotely had different outcomes.
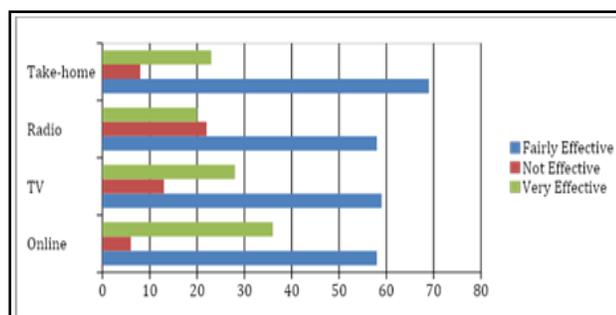
Fig.2 Comparison of the Effectiveness of some Remote Learning Means. Reprinted from *Survey on National Education Responses to COVID-19 School Closures – Round 2 Results* (2020) Retrieved from http://tcg.uis.unesco.org/covid-survey-r2-infographics/

"TV-based remote learning policies had the potential to reach the highest proportion of students (62 percent), which accounts for almost 930 million students worldwide…" (COVID–19: Are children able to continue learning during school closures? 2020).

Suggestions to Improve Remote Education and the Remote Learning Experience
Adequate Arrangements for Disabled Learners

Distance education should be inclusive. *Covid 19 and the Rights of Persons with Disabilities: Guidance* offers practical suggestions to improve the distance learning experiences for the disabled:

1. Ensure access to Internet for remote learning and ensure that software is accessible to persons with disabilities, including through the provision of assistive devices and reasonable accommodation.

2. Provide guidance, training, and support for teachers on inclusive education through remote learning.

3. Establish close coordination with parents and caregivers for the early education of children with disabilities.

4. Provide guidance and distance support for parents and caregivers to assist in setting up equipment and to support the education program of their children with disabilities.

5. Develop accessible and adapted materials for students with disabilities, to support remote learning.

6. Develop accessible educational audio-visual materials to disseminate through different media (e.g., online on demand, televised educational programs, etc) (2020)

Quality Education for Refugees

Education for refugees must be ensured, especially for young girls, who; "were already only half as likely to enroll as their male peers. "UNHCR estimates that 20% of the refugee girls who are in secondary school are at significant risk of never returning to school following the

COVID–19 school closures" (*COVID–19: What you need to know about refugees' education,* 2020). Despite the tireless efforts of the governments, NGOs and well-wishers, a lot of students still do not have access to any educational program. The condition of education among refugees was shocking; "Before COVID–19 refugee children were twice as likely to be out of school than other children and despite improvements in refugee enrolment rates, only 63% of refugees are enrolled in primary school and 24% in secondary education" (*COVID–19: What you need to know about refugees' education,* 2020). Remote location, lack of technical infrastructure, absence of internet connectivity, lack of funds makes it hard to implement distance learning methods in refugee camps. "It is anticipated that there will be major increases in drop out, which means losing this generation if they are left out of education" (*COVID–19: what you need to know about refugees' education* 2020). Radio sets are inexpensive in comparison to mobile devices and computers. Teachers can record podcasts or teach live on the radio, and to ensure interaction with students, they can answer questions, suggestions via calls on specific days.

Developing Learner Communities

In the survey, students complained that they feel isolated while learning remotely. "Students working at a distance yearn for connections with other learners, their faculty, and experts in the field" (Shepard 2012:131). In distance education, interaction is necessary to keep the students engaged. "Students need to have a sense of community within their classes. Instructors can try several strategies such as pair-share discussions, voting on choices, building consensus through small group discussion, or posing questions" (Simonson et al. 2015:198). Group assignments are effective in developing a team spirit and a sense of belongingness among the students. Some shy students may be unwilling to participate in group activities, hence; ". . . a consistency of interactions is required and should be determined by the team during initial collaborative discussions. All members must regularly participate in synchronous or asynchronous discussions, as well as in the critique and development of the work product" (Shepard 2012:133).

Providing Adequate Guidanceand Ensuring Communication between Instructors and Students

When all the educational institutes closed down all of a sudden, and the students started learning remotely, they felt lost as most of them did not have any experience with remote education. Teachers were not trained to teach remotely. This highlighted the need of training teachers in ICT so that they can be able to guide their students. In some distance learning programs, student contact with instructors is minimal or non-existent. Communication between the learners and instructors is crucial. "Knowing the students in the class provides the instructor with a better understanding of how-to best approach instruction to ensure an optimal learning experience for all" (Simonson et al. 2015:189). By interacting with learners, instructors can resolve their issues and offer guidance when needed."An instructor can provide information about e-mail and

phone contact, with suggestions as to appropriateness of making the contact (e.g., "Please don't call between midnight and 5 A.M.")" (Simonson 2015:197).

It might be not possible for MOOC instructors to respond to each query;therefore, they can create a Frequently Asked Question (FAQ) section where they can answer common questions regarding the course and; "in this format the questions and answers are available for the whole class to read" (Simonson 2015:197). Clear dates should be set regarding assignments and examinations. Instructors can; "provide "advance" warning on due dates in calendars or communications with students. Reminding students of an anticipated due date for an assignment might help them with getting the tasks done on time "(Simonson 2015:199).

Simonson et al. (2015) recommend giving 'Interactive Study Guides' (ISGs) to students. They define ISG as; "basically, the interactive study guide is a structured note-taking system that leads the learner through a series of concepts, and that requires some active and interactive involvement by the student" (2015:207). They suggest that these study guides should contain; "set of student notes, graphics, pictures, graphs, charts, clip art, photographs, geometric shapes, activities, problems, and exercises" (2015:207).Such study guides provide a visual and easy to understand outline of the educational content, and makes it easy to review content.

Keeping Record of Lessons

Sometimes students miss out on synchronous video conferences, or they may not have understood some things and want to go through the lecture again for clarity, hence, recording synchronous classes is a must. "Although no interaction is possible, at least the student does not lose out on the content of the class" (Simonson 2015:198). ISGs can act as a guide; "when students are viewing pre-recorded videos or recorded presentations" (Simonson 2015:207)

Assuming Responsibility for Learning

In the present era of learner centered education, learners need to have a sound understanding of the structure and requirements of a course, how it meets their learning goal, how to study and so much more. As Simonson et.al put it; "Quality learning experiences not only depend on the efforts and preparation of the instructor but they are also largely determined by the efforts and preparation of the distant student" (Simonson et al. 2015: 201).

Bridging the Gender Gap

"Women are on average 26% less likely than men to have a smartphone. In South Asia and Africa these proportions stand at 70% and 34%, respectively" (*Bridging the digital gender divide,* 2020:13). Due to the lack of tools to access the web and ICT skills, girls are deprived of remote learning opportunities. Most women in underdeveloped countries are engaged in unpaid domestic work; hence they do not have the time or resources to learn remotely. "Raising

awareness about education opportunities is key for women and girls. Women are less likely than men to participate in massive open online courses (MOOCs), which can often be accessed for free and cover a range of topics" (*Bridging the digital gender divide,* 2020: 14). Distance education can be a boon for women, as it will enable them to learn from home. The governments need to provide financial support and incentives to encourage women to learn remotely. "Enhanced, safer and more affordable access to digital tools is critical, as are policy interventions addressing long-term structural biases" (*Bridging the digital gender divide,* 2020: 13).

Suggestions Offered by the Survey Participants to Improve the Remote Learning Experience

Majority of the participants insisted on improving the technical infrastructure, resolving connectivity issues as well as improving and updating the university websites. To quote a participant's suggestion;

". . . when a student is in the middle of an exam, and they face connection issues, or they get kicked out or the page stops loading the website can automatically save the answers, and when the student gets back to it they can continue doing the exam without having a heart attack".

The participants also pointed out that one-to-one interaction between the teachers and students is a must. In the words of a participant; "I think because of lack of direct interaction among the children, nobody looks forward to attending classes. So perhaps by organising group activities/ projects and extracurricular activities, remote education can be improved". Regarding the issue of interaction, another participant recommended; "provision of breakout rooms (…as available in zoom) should be used for group discussions". Other students suggested training both teachers and students in digital skills, preferring synchronous video conferences, and providing soft copies of the reading material to students at the end of each class and providing more time to attempt online examinations as many students face technical issues. Participants also proposed that independent learning should be encouraged, and students should be more engaged in the learning process. Another participant raised the issue of cyber bullying while learning remotely.

The Future of E–Learning

Bates throws light on the trends in remote learning; "The overall trend is towards more online courses and fewer print-based courses in distance education" (2005:39). After the unexpected success of online education, it's no doubt that in the future, even after the looming threat of the virus spread is over, educational institutes will adopt a blended model of instruction i.e. a combination of online and in-class lessons. For instance, students can attend a lecture and then self-assess via online quizzes and go through the e-study material. Video lessons are the most common mode of distance learning these days. From solving a maths problem to fixing a tire,

everything can be learned from video tutorials. Video lessons can be synchronous (live lessons on Zoom, Google Meet, Skype) or asynchronous (YouTube videos, videos on websites and apps, etc.). We can record and re-watch video lessons as many times as we need to. M-Learning or Mobile learning is gaining popularity owing to the convenience it offers. Pandey defines M-Learning as"... learning that takes place via such wireless devices as mobile phones, personal digital assistants (PDAs), or laptop computers" (2015:203). Unlike bulky computer systems and laptops, mobile devices are cost-effective and portable. Hence, learning on the go is trending these days, resulting in a considerable increase in educational apps like Duolingo, Drops, Vedantu, Unacademy, Brainly, Doubtnut the list goes on and on. Students can easily access these apps and learn free of cost (in most cases). A lot of universities have also launched their own educational apps.

Assessment has been a burning issue in remote learning. Novel methods for assessment, in the form of online quizzes and forums, will be adopted. Emphasis will be on self-assessment so that students can identify their weaknesses and work on them. Micro-learning i.e., bit-sized lessons that can be easily incorporated into the learner's schedules are becoming increasingly popular because of their adaptability. Gamification of learning is a relatively new yet quite effective method of learning. Games can be used to teach concepts as well as a means of self-assessment. It is one of the reasons why ed-tech platforms like Byju's, Duolingo, Game Desk are so popular. The badges of completion offered when a level is completed are a great motivation booster. "The interactive and challenging elements that enable learners turned gamers to master different levels, immerse themselves, and develop strategies are ideal learning settings" (Montebello, 2018:70) Gone are the days when classrooms were full of students with different IQs and were taught in the same manner and according to the same curriculum. Personalized education according to the individual differences of the students and level of understanding of a subject is the way to go these days. A lot of learning platforms allow students to choose a course based on their performance in the placement tests.

Creating virtual labs for practical subjects is an ongoing yet herculean task.Uploading and downloading course material over and over again is tedious and time-consuming. Cloud-based learning is the answer to this issue. It enables the centralization of resources so that they can be easily accessed. Virtual reality is one of the most interesting yet expensive means to offer lessons in an engaging manner. "3-D visualizations can easily be projected within any environment the learner is in. Realistic imagery further enhances the level of immersion and the effectiveness of the e-learning environment" (Montebello, 2018:70). Whether it be to teach anatomy or zoology or to give a tour of places of artistic and historical significance, virtual reality can be used to achieve almost all educational goals, and that too from the comfort of one's home.

"Social media have been on the rise since their inception in the late 90s with an out-standing popularization that shook the world" (Montebello 2018:21). Social Media is no longer considered a time and energy-draining black hole as it has provided students a community where they can interact with like-minded learners and join educational communities. Writing and

interacting on online platforms like blogs and wikis; "enables a two-way knowledge exchange where students can not only obtain information from the Internet but also contribute and upload knowledge to it"(McCarroll & Curran, 2013:3). Junco et. al (2010) conducted research on the results of using Twitter for educational purposes, and proved that; "encouraging the use of Twitter for educationally relevant purposes has a positive effect on grades. The examination of tweet content shows that students were motivated and engaged with each other" (2010:10). Apart from this, as Junco et al. (2010) pointed out, social media software like Twitter, are very effective as:

1. They ensure interaction between instructor and students.

2. Some students are too shy to ask questions in a face-to-face class. Social media is a boon for them as it offers them a low-stress means to communicate and ask questions.

3. Using social media ensures learning apart from fixed class schedules. "Twitter allowed us to extend conversations in ways that would not have been practical during the hour-long class sessions" (Junco et al. 2010:8)

4. Social media helps students in creating meaningful academic as well as personal relationships. "While these connections may have happened eventually in class, they happened quickly over Twitter as traditional classroom discussion boundaries did not exist" (Junco et al. 2010:8). The best thing about these relationships is that they are formed between students from very different backgrounds. (Junco et al. 2010)

Not every student can afford a teacher, and even if they can, teachers can't be available round the clock. This is where bots come in. Pre-programmed bots can answer the queries of students and guide them to some extent. In language learning class, bots can act as language partners too.Conducting research will be much easier because of the digitalization of libraries of almost all the universities. The availability of education and the self-paced nature of education will make changing career paths considerably easier. To curb the void of isolation created by remote learning, psychological support sessions should be incorporated into the educational setup. In some cases, the extreme freedomprovided by distance learning results in procrastination. Therefore, the learning process needs to be monitored by a teacher. Alam and Tiwari suggest; "progress can be monitored by using mobile phone surveys, tracking usage and performance statistics from learning platforms and apps, implementing rapid learning assessments to identify learning gaps" (2020:2).

Massive Open Online Courses (MOOCs) enables learners to learn anywhere, anytime for free. MOOCs, being the ideal learning medium for the current generation's fast-paced lifestyle and need to learn and develop constantly, are growing continuously. Most universities like MIT, Harvard, Cambridge, IITs offer MOOCs. Traditional in-person courses are becoming obsolete. Online degree, certificate, and diploma courses are the new norm. Not only they are economical, but they also save a lot of time and resources spent on commute and accommodation. Most universities have already developed their own Learning Management Systems (LMS) allowing students to learn, assess, and collaborate with the instructors and fellow students. Meshur and

Bala aptly stated; "Internet-based learning modules actively engage students in a manner unique from the traditional class lecture" (2015:14).

Audio lessons and recordings are often underestimated in the move towards e-learning. They can be used to teach literates as well as illiterates, even in underdeveloped countries. Not only they can be used to impart formal education, but also as a means of educating the masses about health issues, civil rights, and so on. As Bates points out; "Millions of people around the world who cannot read or do not have access to television have a radio set" (115). To make sure that learners are present themselves during the remote classes and exams, Biometric authentication is the best method and will be widely used in the future." Such a technique would implicitly recognize a learner without any human intervention and ... gather, process and generate an accurate learner profile" (Montebello 2018: 70).

Future Trends in Remote Learning and E–learning

Change in the Role of Teachers. In the near future, the teacher will have to assume multiple roles, like curriculum designer, instructor, content creator, counselor, and learning facilitator. In the case of most distance learning programs, the teachers will have to guide students through e–study material created by experts.

Learning Anywhere, Anytime. Learning is no longer confined within the boundaries of an educational institution or libraries. Whether one needs to sharpen their language skills, practice calculus or check a fact or two, the internet offers an ocean of information on the click of a button or a touch of the screen.

Learner-centered Education. Earlier, the teachers decided what the students needed to learn and then taught accordingly. Individual differences were often overlooked in this process. With the changing times learner needs have also changed. Nowadays educational courses are designed to suit the needs of particular student communities. As Moller et al. put it; "The main driver for the learning process is shifting from instructor-centered approaches to carefully designed learner experiences with robust interactions between learners and content" (2012: 3).

Autonomous and Independent Learning. With the changing times, the students are changing too. Students are more self-driven and motivated to learn. Nowadays, the learners are in charge of their career. They decide what they want to learn, when they want to learn it, and which teacher to learn from.

Lifelong Learning. In this day and age, learning doesn't end at school or college as; "we have entered a period of dislocation where what schools produce is only part of what is necessary to survive in the world outside" (Paine, 2005: 25) People need to constantly polish their existing

skills to be in line with the ever-changing world. Changing career paths will be convenient as learning new skills is easier than ever.

Education for Everyone. E-learning will not be limited to formal education any more or to any specific age group. Do-it-yourself tutorials (DIY) are already trending as they offer practical knowledge about almost anything one might want to learn, from knitting a sweater to making your own soap. These tutorials are mostly offered via video lessons, blog posts, Q/A forums, and so on. MOOCs also offer educational opportunity to everyone.

Change in the Evaluation System. "The next generation of distance education will be characterized by evaluation practices that value higher-level cognitive processing and real-world problem-solving" (Moller et al. 2012: 13). Unlike the present evaluation system that encourages rote learning, students will be tested on their; "skills in recognizing, recalling, evaluating, critiquing, creating, generating, planning, and producing" (Moller et al. 2012: 13).

Change in the Structure of Educational Institutions. "Institutions will revise their rules and roles to match the requirements of distance learners, faculty, and other stakeholders" (Moller et al. 2012:14). Instead of investing in developing and maintaining a physical structure, institutions will invest in improving their technical infrastructure and hiring experts to create e-content.

Views of the Survey Participants Regarding the Future of E-Learning. Most participants believed that e-learning will grow more popular with technical advancement, as it enables students to learn what they want and that too at their own pace. It will provide educational opportunities to almost everyone, turning the whole world into a global school. To quote a participant; "I think e-learning will be a major part of education since a lot of big courses are being available online already, and it's such a time and resource friendly means of learning". There were some negatives views too, such as; "I don't see any future of e-learning. It can never provide a proper study environment like schools" and"I feel e-learning in a physical interactive setting can do wonders, but remote learning in our homes (as being done in Covid-19 times) will take us nowhere". The participants insisted that the quality of e- learning will not be as good as theEducation provided in educational institutions. To sum up with the words of a participant;

> *"Covid-19 was a game-changer for e-learning and I think people see that. E-learning now has more potential than it has ever had before. I don't think people will stop using it even after Covid-19. Nothing will go back to the way it was before especially e-learning."*

Conclusion

Due to the ongoing economic crisis created by COVID-19, enrolment roles have dropped considerably, causing many universities to shut down. "Due to the COVID-19 crisis, 23.8 million children, adolescents and youth (from pre-primary to tertiary education) globally will be at risk of not returning to care centers, schools or universities in 2020" (*How many students are at risk of not returning to school*, 2020, p. 10). One of the biggest tasks in the upcoming years will be to get the enrolment rates back on track. In the near future, the physical structure of learning institutes will not be needed; the main focus will be on providing skill-based education without the restriction of geographical boundaries, which will result in the availability of education to a wider audience and ultimately life-long learning. Hopefully, there will be provisions for special education too like video lessons in sign language and so on. E-learning focuses on teaching decision-making and critical thinking skills and less on memorizing facts and data, as data is readily available these days. E-learning will also promote consistency and uniformity in education as there will be the same content for all students. "Preventing the learning crisis from becoming a generational catastrophe needs to be a top priority for world leaders and the entire education community" (*Policy brief: Education during Covid-19 and beyond* 2020:19). Despite the numerous issues faced, the sudden transition to remote learning forced by the spread of COVID-19 has opened up a lot of opportunities and room for innovation in learning and teaching. "This will offer a push forward in terms of exploring the potential of flexible learning and more acceptance for online learning to become a more integral part of study plans" (Marioni et al. 2020:26).

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