



Technological Disruption in Education and Employment

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Abstract

The rise of technology has completely transformed different aspects of life. One area that has changed is education and employment. Educational technology has come a long way over the decades. From traditional blackboards and textbooks to interactive online courses and virtual laboratories, the evolution of technology in education has been significant. This research paper deep dives into the concept of disruption within these domains and seeks to explore its impact, challenges, and possible solutions. By examining the relationship between technology, education, and employment the aim is to gain an understanding of this phenomenon.

INTRODUCTION

Since its inception, mankind has been adapting to new teaching methodologies for innovative learning. The concept and strategy of teaching keep on changing. We are the residents of a digital era where research and development in a plethora of technologies are taking place. When new technologies develop, people belonging to a wide array of industries and services try to disrupt them in the best possible manner. In the education sector too, tech-savvy teachers try to embrace these innovations. Many of these resources are changing the age-old conventional understanding of education.

Research Methodology

In this research, the data was collected with the help of a Google Form. The questionnaire was shared with college students in which they were made to share their responses on how they use technology for learning.

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Results and Discussion

Technological Disruption in Education

The incorporation of technology in education has had an impact on teaching methods, learning environments, and student outcomes. The emergence of platforms, e-learning opportunities, and digital resources has expanded classrooms into virtual spaces. This shift has improved accessibility to education, facilitated personalized learning experiences, and provided students with an amount of information beyond what textbooks offer.

However, technological disruption in education also brings forth challenges. An increased reliance on technology may potentially hinder interaction skills and impede the development of critical thinking abilities. To address these challenges effectively, it is crucial to ensure access to technology for all individuals while also promoting skill development. Finding a balance between offline learning is essential to maximize the benefits while mitigating drawbacks. By adopting this approach, we can ensure that we harness the advantages of advancements in education while mitigating any negative consequences.

Online Learning and Its Benefits

Online learning has revolutionized education by offering flexibility and accessibility. The COVID-19 pandemic accelerated the adoption of online learning worldwide and pushed both students and educators to adapt quickly to the changing times. According to the findings received in the questionnaire, 83 % of the students believe that Online Learning is beneficial and 54 % of the students study for at least 1 hour, using an Electronic gadget. In a world torn apart by the COVID-19 pandemic, online education proved to be a healthy reminder to continue the teaching-learning process. They are the precursors of a new age where learning takes place in the comfort of our living rooms. We are the stalwarts that have the potential to use technology constructively for learning. Online Education has helped augment learners' knowledge retention by enabling student-centered learning. Educational institutions are discovering the importance of online cooperation. Students learn in different ways at different paces. With the onset of the global pandemic, several tools like Padlet, Poplet, Google Classroom, and Canva have been popularised which enable innovative learning strategies.

Its benefits include

- **Accessibility:** Online courses can be accessed from anywhere. This makes education more inclusive for those who may have geographic or physical limitations.
- **Flexibility:** Students can learn at their own pace. This allows for a personalized learning experience.
- **Cost-Efficiency:** Online courses are often more affordable than traditional in-person education. This eliminates the need and physical materials for commuting.
- **Diverse Learning Resources:** Online platforms offer a wide range of multimedia resources which include videos, interactive virtual field trips.

Do you think Online Learning is beneficial ?

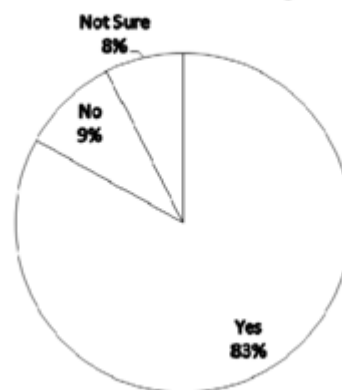


Figure 1: 83 % of the students find Online Learning to be Beneficial

How many hours do you study with the help of Electronic Gadgets ?

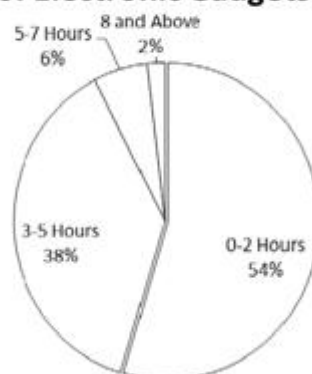


Figure 2: Amount of time spent studying with the help of an Electronic Gadget

Artificial Intelligence and Machine Learning in Education

75 % of the students believe that Artificial Intelligence and Machine Learning can make learning easy. By incorporating artificial intelligence into e-learning software, the program can track the student's progress. Students will not have to spend extra time on concepts they can understand quickly. When a student needs help, the software will provide extra lessons until he or she has a grasp of the topic. With a competency-based approach, students will learn at their own pace and attain mastery of the subject.

AI and machine learning have immense potential in education. They can personalize learning for students' strengths and students. Adaptive learning platforms can analyze weaknesses, tailoring lessons to their needs. It can automate administrative tasks where chatbots and virtual assistants can handle administrative inquiries and free up educators' time. Automated grading systems can provide immediate feedback to students and help them track their progress.

Do you think Artificial Intelligence and Machine Learning will make learning easy ?

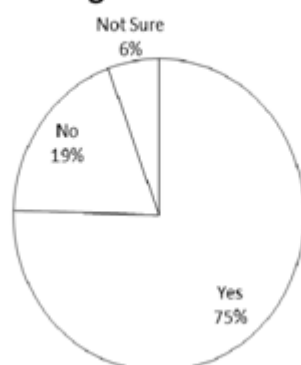


Figure 3: Views about the Role of Artificial Intelligence and Machine Learning

Virtual Reality (VR) and Augmented Reality (AR)

VR and AR technologies are just beginning to pave their way into education. Virtual reality can transport students to historical events, far-off places, or complex scientific environments and enhance understanding and retention. Augmented reality can overlay digital information onto the real world and make it valuable for tasks like medical training or architectural design.

These technologies will be critical in providing lessons and training scenarios for students and employees. Virtual reality will give an immersive experience of different places in the world or moments in history in the classroom. As a safety training tool, a VR headset will allow an employee to

experience an emergency without danger. People who love technology will get used to it very easily. New disruptive technology in education gives a broad range of possibilities. Before an organization tries to implement an e-learning solution, it will have a plan in place.

The Role of EdTech Companies

Education technology companies have played a pivotal role in driving technological disruption in education. Companies like Coursera, Udemy, and Khan Academy have made high-quality education accessible to millions. These platforms offer a wide array of courses, certifications, and micro-credentials and allow learners to acquire skills and knowledge that are directly applicable to employment opportunities.

E-learning services will continue to grow in popularity and importance as more of the world seeks online options for education. Online learning platforms like Coursera, Udemy, and White Hat Junior can help students learn different skills like Digital Marketing, Graphic Designing, Movie Editing, and the list keeps on going.

The Gig Economy and Freelancing

The gig economy, characterized by short-term contracts and freelance work, has seen remarkable growth. EdTech platforms not only provide education but also opportunities for employment through freelancing platforms like Upwork, Freelancer, and Fiverr. This trend allows individuals to leverage their newly acquired skills for income generation.

Who says that teachers only have the right to educate students? Many online learning platforms allow students to mentor others. This not only provides them with experience but also with supplementary income which helps them understand the importance of money.

EdTech Platforms

Several applications and websites are benefitting students in a big way. Examples include- Grammarly, Studocu, PrintOnWeb, and CVDragon. Artificial intelligence is behind Duolingo's mission to make language education accessible and free to everyone. Byju's tries to keep students at the center of innovation and create powerful learning experiences by leveraging the latest technologies such as AI, Computer Vision Capabilities, gamification, and more.

Gone are those days when we required proofreaders to check and correct written content. Grammarly has made things easier which proofreads content by making use of Artificial Intelligence. Nowadays, we can easily get our documents printed, with a single click of a single button. Print on Web provides an online print service where users can upload their documents on the portal and get them delivered to their doorstep within 4-5 days. We no longer have to look for different books for references to meet our academic needs. Websites like StuDocu, Course Hero, Kahoot, Quizlet, Quizizz, McGraw-Hill Connect, Brainscape, Mentimeter, and Studypool allow students to upload their notes and get paid for those notes. On one hand, it motivates students to study well and on the other, it helps those who aren't able to manage things one night before the exam.

Students tend to have long sitting hours. This affects their physical and mental health negatively. To deal with this problem apps like StepSet Go can be used to track their physical activity. Based on the number of steps walked, the user gets coins, which can be used to redeem gifts.

How do you check grammatical errors and plagiarism in an article written by you ?

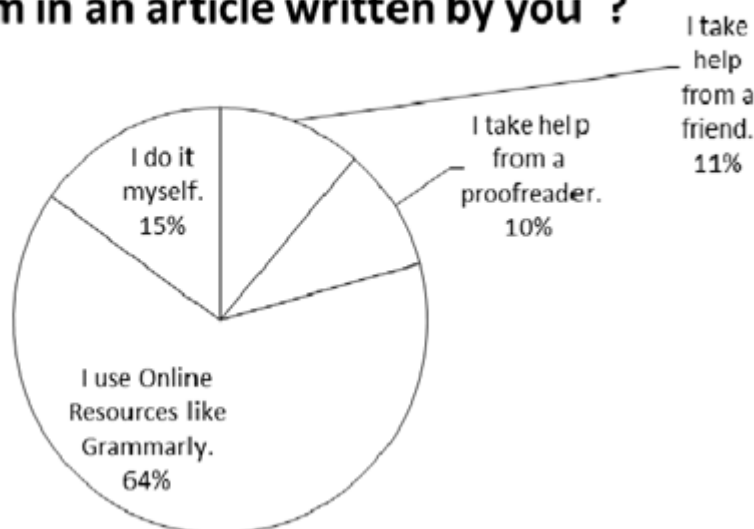


Figure 4: Ways used to check for grammatical errors and plagiarism.

As a student, you must be exposed to long hours of studying. Do you use any mobile app to track your physical activity ?



Figure 5: Use of mobile apps to track Physical Activity

The Need for Digital Literacy

With the increasing reliance on technology in education and employment, digital literacy is becoming a critical skill. Students and workers need to be proficient in using digital tools, navigating online platforms, and understanding data privacy and security issues.

While the integration of technology into education and employment offers numerous advantages, some challenges need to be addressed:

- **Digital Divide:** Not all students have equal access to technology. This creates disparities in the level of productivity.
- **Privacy Concern:** The collection and use of data technology raise privacy and security concerns in educational.
- **Quality Assurance:** Maintaining the quality of online education and ensuring the credibility of digital credentials is a significant challenge.
- **Screen Time and Health:** Prolonged screen time can have adverse effects on physical and mental health. This necessitates strategies for balance.

Future Directions

The future of education and employment is likely to be increasingly intertwined with technology. Continuous innovation in AI, VR, AR, and online Learning platforms will shape the educational landscape. However, it will be essential to address the challenges and ensure that these technologies remain accessible and beneficial to all.

Conclusion

Technological disruption in education and employment is a dynamic and evolving process. It offers opportunities for enhanced learning experiences and employment options but also poses challenges that must be addressed. As we navigate this digital era, the key lies in leveraging technology wisely to create a more inclusive, flexible, and effective educational ecosystem that prepares individuals for the jobs of the future. Embracing the new normal and adapting to technological advancements will be essential for individuals and institutions alike.

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