Review Article

Artificial Intelligence in Higher Education - A Changed Classroom Experience

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Abstract

The use of technology and artificial intelligence is pacing its speed day by day. Every segment of the society is becoming more common to artificial intelligence and its applications; hence, the higher education sector is no more immune to it. Various attempts to fit the use of artificial intelligence and its applications into the existing syllabus or the teaching methods are likely to be unsuccessful and will result into loss of sub major opportunity and resources that would have helped to raise the standard of higher education. The student graduating currently will have to prepare themselves for the futuristic view of work place and its changing transition the teachers and professors will also find a change in their jobs.

Keywords: AI; Critical Thinking; Higher Education; Curriculum Design; WWW

Introduction

The use of technology and artificial intelligence is pacing its speed day by day. Every segment of the society is becoming more common to artificial intelligence and its applications hence, the higher education sector is no more immune to it. AI and its applications are used for research, transportation, communication, social media, online search, online advertisement, Marketing, Finance and many more areas. Furthermore, AI applications are being used as AI personal assistants in home like: Alexa, Siri, Google Lens. It is furthermore expected that increasing use of AI technology will result into massive employment change. A new combination of current jobs diminishing and creation of new type of jobs will be formed if technology continued the replacement of humans. The students graduating today will have to prepare themselves for these technological work place and teachers will also experience change in their jobs.

For educational institutional, AI is used for two different categories of work. On one hand, it is primarily used for recruitment and selection, interviewing admission, answering to common queries, determining financial aids, etc. It is further used in data collection and management of the education institution. The second categories, evolves around how artificial intelligence helps in education "How AI has changed the classroom experience?" So, in this research paper we will study how artificial intelligence has change the classroom experience.

So far, the most successful classroom technology like clickers and power point succeeded due to their capability and ability to conform best to traditional practices. Classroom technologies that require artificial intelligence will be rowdy as it will require simultaneous change in both what is being taught and how it is being taught to guide student for their carriers. AI will further create new challenges as well as new opportunity for the faculty members. Repeated attempts to fit artificial intelligence into the current syllabus in curriculum or teaching rolls will likely be unsuccessful and will result in waste of resource and major opportunity to move higher education at a higher pace to a new level or direction.

Bracing students for an AI infused world

The most vital skills required to excel in the AI infused world are the four C's: critical thinking, collaboration, communication and creativity [6].

Though these four C's have been emphasized by the professors and experts from many years but these skills have undergone changes in their competency. The changes are as follows:

Communication

Communication will start with the urge to speak, read and write but communication technology has escalated, meetings are held similar as online as held face-to-face, presentation is as important as text and slight show presentation will be given through programs like power points but it requires active learning. AI combines with new technology and media to develop effective communications strategies.

Critical thinking

Critical thinking now does not depend upon the ability to manipulate facts and ideas and organize then in once head as everyone has a supplemental memory known as smart phone. Currently, smart phone is being used as a device for quickly looking up but with introduction of AI agents such as Alexa, Google nest and Siri, these personal assistants will prove more useful. These AI agents can co-relate data by sifting through it that are human brain cannot do. It can further translate publication into the various foreign languages that would not be possible for a human to do in such a short span of time, for example google translate.

Collaboration

AI agents not only respond to direct questions but also participate in team building and collaboration [5]. The future human makeup of team will be much more diverse both culturally and ethnically. Students became ineffective at navigating these new highly integrated groups due to lack of ability to co-relate people from different background.

The future team include AI powered personal assistance who are increasingly working effectively with humans must improve themselves at leveraging their technology supported computerized helpers. The project management institute in their recent survey found that about 81% of the surveyed project management responded that the organizations are being effected and impacted by AI technology. Furthermore, these managers reported that 23% of their projects are being supported and managed by artificial intelligence and it is being expected arise of 37% by next three years.

Creativity

The fourth C i.e. creativity is best taught and practice by using acts or exercises that don't have predetermined answer and are open-ended. Excellent examples of this type of work can be found from real-world cases. Virtual reality is another approach that can be used. Simulation result in numerous advantages. Through AI agents and technology, students can perform on projects that are too expensive or dangerous to do in real life. For example, Music industry managed a concert in the virtual world known as second life [3], through this management of the concert, students experience working with performers, event advertisement, program planning and staging it without bearing the expenses for a physical location.

One another most vital skill that was missed in four C's is flexibility. If the theories given by the Gardner are correct, then, the future job or even the companies that appear to be stable one day can vanish next day. New jobs might have been generated but they might in new locations and require difference skills. A modern employee must be aware of the overall employment trend rather than being aware changes in their own workplace.

Information literacy has emerged as most important as ever before but it has toughened the teaching then ever before. As said by a colleague "We need more bad books in the library so that students can differ between good and bad information" [2]. But the internet gives this opportunity to public at easy pace as it includes the worse of all information and the best of all information too. The paradigm shift from paper copies to electronic for storage purposes has changed the trend. The information provided by the internet is described with three F's: - Fluid, it means that the information can be re-written multiple times at any movement of time; Fungible, which mean that it is more valuable than ever before; Fragmented, It means that the information is dispersed in different formats across the globe. As users became more addicted to the Alexa's friendly voice, they forget that the information provided by Alexa is not more accurate than World Wide Web (WWW) as users can also access the same information using WWW.

Conclusion

The usage of AI became critical in current academic scenarios and educators must prepare students to survive in this dynamic educational environment. The old pedagogy for education will not be successful as AI require changes in both what is being taught and how is it is being taught. Though the earlier discussions reveal that AI will wholly or partially replaces human but this replacement of humans by the technology have unintended consequences. Teaching assistance play a vital role in financing students who peruse advanced science work and research in other fields if these assistances failed to provide this financial support, then there would be certain decrease in the supply of number of scientists with professionally advanced degrees at a point of time when these individuals are critical to maintain technical progress.

It is important for us to be aware how technology impact the educators or professors and enframe their both work and personal life. The cautionary example of medical profession being computerized is to be kept in mind. A study by Sinsky., *et al.* [7] reveals that the physician spent about half of their work time on computer while being in examination room that results in unhappy physicians and unsatisfactory services to the patients. Thus, this research paper reveals that if AI units want to improve and make it positive contribution to the education, then, they must increase the time for direct interaction of teacher and students rather than decreasing it. For many people the interactions with their teachers play a significant role in a students life though AI can substitute but if we lose the human one to one interaction, the education will became an intellectual desert.

Bibliography

1. Boden M A. "The creative mind (2nd ed., p. 1)". London, England: Routledge (2004).

2. Cohn G. "AI Art at Christies's sells for $432,500". New York Times (2018).

3. Greenberg J., *et al.* "The SUNY Oneonta second life music project". *Journal of Educational Technology Systems* 37.3 (2009): 251-258.

4. McKenzie L. "Pushing the boundaries of learning with AI". Inside Higher Education (2018).

5. Meador M. "The future of work: Humans and machines" (2019).

6. Narai YN. "21 Lessons for the 21st century (p. 265)". New York, NY: Random House (2018).

7. Sinsky C., *et al.* "Allocation of physician time in ambulatory practice: A time and motion study in 4 specialties". *Annals of Internal Medicine* 165.11 (2016): 753-760.

8. Sparks S D. "Teachers shape students' motivation. Where do they learn how to do it?" (2019).