A Study on Impact of Virtual Intelligence among the Students of Higher Education with Special Reference to Chennai City

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Abstract  
In the current scenario, the words Artificial Intelligence and Virtual Intelligence are the familiar ones among students of all ages. This study analyzes the usage of virtual intelligence during the pandemic period. The students of higher education mostly adopted the present way of teaching by using technology. A Positive approach to virtual Intelligence is exhibited in this study. 142 samples were collected by using a convenient sampling method through the well-framed questionnaire for the data analysis.  
Keywords: Artificial intelligence, Virtual intelligence, Higher education, Students, Teaching, Technology

Introduction  
Artificial intelligence (AI) applications in education are on the rise and have received much attention in the last couple of years. AI and adaptive learning technologies are prominently featured as the latest developments in educational technology with the succor of virtual intelligence (VI). Artificial Intelligence is the key to Virtual Intelligence. Nowadays, Virtual Intelligence is used in many industries for wider purposes. This study focuses on the usage and impact of Virtual Intelligence in the field of education. Education is the pillar of human life. Education gives the knowledge to the people who support them for their survival. In the current scenario, students expect more advancement in teaching. Virtual Intelligence enables teaching in an innovative and interesting ways. The Virtual world takes the students to feel the modern technology embedded with the ancient method of teaching.

Networking systems gives more advantages to the world. Websites also give more information to the students. During the COVID-19 situations, the network connects the students with their instructor/teachers/Faculties. Social media plays a vital role in the students.
WhatsApp and telegrams were the most used application for educational purposes. These two apps help a lot to the students and teachers. Their interaction via these apps makes the students feel they were connected with their faculties. They can raise their doubts through these apps.

As soon as the message is received by the teacher, they enable them to understand the students are on track.

Review of Literature
Erin & Barbara (2017); In this study they developed a summary of critical success factors in virtual work based on a compilation of theoretical and empirical findings from multiple streams of virtual work research, differentiating between those that are relatively fixed for the individual worker and those that can be influenced or changed through training and individual development.

Tassos & Antonis (2011); The Author, in their approach, studies the present real-world, authentic tasks that enable context and content-dependent knowledge construction. The Creators has also provided multiple representations of reality by representing the natural complexity of the world. They also show us the findings that collaboration and social negotiation are not only limited to the participants of an Educational Virtual Environment but exist between participants and avatars, offering a new dimension to computer-assisted learning.

Micheal & Ruth (2010); The Word slinger discusses the issues arising from combining artificial intelligence and artificial life techniques with those of virtual environments to produce just such intelligent virtual environments. In their viewpoint, they also include environments providing knowledge to direct or assist the user rather than relying entirely on the user’s knowledge and skills, those in which the user is represented by a partially autonomous avatar, those containing intelligent agents separate from the user, and many others from both sides of the area.

Tassos & Vassilis (2004); The Wordsmith considers the measurement of presence in educational virtual environments (VEs) since presence is correlated with higher levels of cognitive performance and emotional development, factors that contribute to knowledge construction.

Tony, et al., (2020); The Pen-pushers talk about AI or any technology applied to education; its application can be at different levels, and in particular case of higher education, proposals have been directed towards at least two levels: strategic or institutional applications; and direct teaching and learning.

Olaf, et al., (2019) The Originators in their study, declares about Artificial Intelligence is to proceed based on the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it. The authors specify that an attempt will be made to make machines use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves.

Research Gap
Artificial Intelligence gives the technology usage to the students. Virtual Intelligence shows the better outcome of it.

Objectives of the Study
• To study the utilization and ramifications of Virtual Intelligence in the field of education.
• To link the influence of Artificial Intelligence with Virtual Intelligence in the field of Higher Education.

Methodology for Study
• Sample Size - 142 (160 questionnaires were distributed among 142 found suitable).
• Samples were selected through convenient sampling method.
• Statistical Tool used - Percentage Analysis.
• Samples were collected through questionnaires.

About Chennai City
Chennai is the third-best education hub in the country with, 63 institutions listed among India’s 1000 Most Trusted. Chennai is the home to many Education Institutions and Research Centers. Chennai is the Topmost Hubs for many Educational Institutions. Most of the people in Chennai are educated and usage of Internet service is at the top-notch in Chennai city compared to other cities in Tamil Nadu. Not only is Chennai the Top Hub for
institutions and the Internet, but also the people of Chennai receive the fastest and more accelerated Internet service among the State.

**Efficient Usage of Virtual Intelligence**

**Personalize Education:** With the help of Artificial Intelligence, assists in finding out what a student does and does not know, building a personalized study schedule for each learner considering the knowledge gaps. In such a way, AI tailors studies according to student’s specific needs, increasing their efficiency.

**Produce Smart Content:** Digital learning interfaces with contriving options; digital textbooks, study guides, and much more can be generated with the help of AI embedding virtual intelligence. Bolstered Virtual Intelligence and Artificial Intelligence can make new ways of perceiving information, such as visualization, simulation, web-based study environments. Besides, AI helps generate and update the content of the lessons, keeping the information up to date and shift-gears for different learning curves.

**Contribute to Task Automation:** A simplified grading system, assessing and replying to students could be optimized by the teacher using VI.

**Do Tutoring:** Continuously evolving personal study programs take into account student’s gaps to fill during individual lessons. Personal guiding and support for the students outside of the classroom help learners keep up with the course. AI is a great time-saver for the teachers, as they do not need to spend extra time explaining challenging topics to students. With AI-powered virtual personal assistants, students can avoid being embarrassed by asking for extra help in front of their friends.

**Artificial Intelligence vs. Virtual Intelligence**

**Closed vs. Open Systems**

Artificial intelligence is a closed system that is a learning mechanism that improves with repetition. Virtual intelligence is also a closed system, but it is based on imitating and not the reality of things.

Virtual intelligence is best used for gaming purposes and innovative purposes, whereas AI systems are consummate to bring out the functions at record rates.

**Damage Control**

Virtual intelligence may serve as a creative vehicle, but the technology does not fare well for proactiveness. The Virtual Intelligence system cannot make improvements to its network without developing all of its components. Factors when calculated and recalculation can emerge and positive alterations can be implemented.

Artificial intelligence is much different. The system does not require completion of all processes before determining what needs to be changed but can correct problems as they become issues. Artificial intelligence, then, serves as a more efficient way of operation since it does not require a system to blunder before the problem is corrected.

**Self-Awareness**

Virtual intelligence is a system that only cartoons the behavior of humans. This type of technology can neither form nor carry out abstract thinking and, therefore, never move past the emulation stage.

Artificial intelligence, on the other side, is a sophisticated machine designed to make critical decisions and judgments. The average Artificial Intelligence system may start out repeating itself with no possibility of creativity. However, still, the system can be fully-fledged over time and become more human in visualizing mentally than any VI technology system.

**Threats in Virtual Intelligence**

- Implementation times are lengthy depending on what you are trying to implement.
- Assimilation challenges and lack of understanding of the state-of-the-art systems.
- Appropriateness and interoperability with other systems and platforms.

**Representation of Data**

| Table 1: Gender |
|-----------------|
| Gender | No. of Students | % |
| Male | 82 | 58 |
| Female | 60 | 42 |
| Total | 142 | 100 |

This table related to the Gender Classification of the students who participated in the study reveals that 58 % are male students.
Table 2: Sector-wise Classification

| Sector      | No. of Students | %  |
|-------------|-----------------|----|
| Urban       | 50              | 35 |
| Semi-Urban  | 47              | 33 |
| Rural       | 45              | 32 |
| Total       | 142             | 100|

The Data reveals that the majority of the respondents (35%) participated and reveals their opinion of the study are from Urban Area.

Table 3: Course Opted

| Course       | No. of Students | %  |
|--------------|-----------------|----|
| Arts/Science | 74              | 52 |
| Engineering  | 37              | 26 |
| Diploma      | 31              | 22 |
| Total        | 142             | 100|

This table discloses that most of the students (52%) are from the Arts & Science Stream.

Table 4: Monthly Income of the Family

| Monthly Income | No. of Students | % |
|---------------|-----------------|---|
| Below 15000   | 64              | 45 |
| 15000-25000   | 42              | 30 |
| Above 25000   | 36              | 25 |
| Total         | 142             | 100|

The Data reveals that most of the respondent’s (45%) monthly income is falling under the category of below Rs.15000.

Table 5: Device Used

| Device Name  | No. of Students | %  |
|--------------|-----------------|----|
| Laptop       | 42              | 30 |
| Mobile       | 68              | 48 |
| Tablet       | 32              | 22 |
| Total        | 142             | 100|

The data interprets that the majority (48%) of students use mobile phones for attending classes.

Table 6: Network Connection

| Network Connection | No. of Students | % |
|--------------------|-----------------|---|
| Broad Band         | 33              | 23 |
| Wifi               | 34              | 24 |
| Mobile Data        | 75              | 53 |
| Total              | 142             | 100|

The statistics show that most (53%) of the students use mobile data for their network connection.

Table 7: Data Pack

| Data Pack | No. of Students | % |
|-----------|-----------------|---|
| Daily     | 30              | 21 |
| Monthly   | 85              | 60 |
| Quarterly | 27              | 19 |
| Total     | 142             | 100|

The specifics reveal that majority (60%) of the students use monthly data packs.

Table 8: Possession of Device

| Relationship | No. of Students | % |
|--------------|-----------------|---|
| Own          | 82              | 58 |
| Family       | 38              | 27 |
| Friends      | 22              | 15 |
| Total        | 142             | 100|

Most (58%) of the students possess their devices for their higher education.

Table 9: Notes Wrapped up

| Notes through   | No. of Students | % |
|-----------------|-----------------|---|
| Social Media    | 30              | 21 |
| Specified Apps  | 78              | 55 |
| Email           | 34              | 24 |
| Total           | 142             | 100|

These figures bring to light that for the students, the notes are wrapped through specified apps (55%).

Table 10: Classes are Handled Through

| Handled through | No. of Students | % |
|-----------------|-----------------|---|
| Apps            | 98              | 69 |
| Videos          | 24              | 17 |
| Video Conferencing | 20          | 14 |
| Total           | 142             | 100|

This dossier reflects that the utmost (69%) of the classes are handled by using apps.

Limitations

- Interested students only can go deep into the concept, and the chances of distractions are more.
- Recently trending apps have a huge disadvantage of a time limit in handling the session, and there is a threat of losing continuity in the session due to this demerit.
- Without Internet-facility, learning is not at all possible.
Scope for Future Study

• To make pedagogical implications of AI for teaching and learning in Higher Education and research on the effectiveness of AI applications for teaching and learning in Higher Education.
• The impact of AI on the assessment of learning and the potential of AI technologies to enhance teaching and learning in Higher Education can be formulated. The important point is to review the impact of AI on the role of human teachers in Higher Education.
• The consequences of AI on the management and administration of teaching and learning in Higher Education can be viewed critically. The cost benefits of using AI teaching and learning in Higher Education can be evaluated.

Wrapping Up

The above study about the impact of Virtual Intelligence on students of Higher Education shows that the Technical Know-how has played a vital role in the student’s education system with the help of virtual intelligence. It has been specified that Virtual Intelligence is more effective than Artificial Intelligence. This study also speaks about the various aspects that students face for gaining their higher education. We conclude that Virtual Intelligence gets enhances with the help of Artificial Intelligence.

References

“15 Pros and 6 Cons of Artificial Intelligence in the Classroom.” Live Tiles, 2017.
Bates, Tony, et al. “Can Artificial Intelligence transform Higher Education?” International Journal of Educational Technology in Higher Education, vol. 17, 2020.
Bates, Tony, et al. “Can Artificial Intelligence transform Higher Education?” International Journal of Educational Technology in Higher Education, vol. 17, 2020.

“Chennai.” Wikipedia, https://en.wikipedia.org/wiki/Chennai
“How is AI Used in Education - Real World Examples of Today and a Peek into the Future.” Bernard Marr & Co.
Luck, Micheal, and Ruth Aylett. “Applying Artificial Intelligence to Virtual Reality: Intelligent Virtual Environments.” Applied Artificial Intelligence, vol. 14, no. 1, 2010, pp. 3-32.
Makarius, Erin E., and Barbara Z. Larson. “Changing the Perspective of Virtual Work: Building Virtual Intelligence at the Individual Level.” Academic of Management Perspectives, vol. 31, no. 2, 2017.
Mikropoulos, Tassos A., and Antonis Natsis. “Educational Virtual Environments: A Ten-Year Review of Empirical Research (1999-2009).” Computer & Education, vol. 56, no. 3, 2011, pp. 769-780.
Mikropoulos, Tassos A., and Vassilis Strouboulis. “Factors that Influence Presence in Educational Virtual Environments.” Cyber Psychology & Behavior, vol. 7, no. 5, 2004, pp. 582-591.
Popenici, Stefan A.D., and Sharon Kerr. “Exploring the Impact of Artificial Intelligence on Teaching and Learning in Higher Education.” Research and Practice in Technology Enhanced Learning, vol. 12, 2017.
Thomas, Mike. “6 Dangerous Risks of Artificial Intelligence.” Builtin, 2019.
“What are the Disadvantages of AI?” Pro School, https://www.proschoolonline.com/blog/what-are-the-disadvantages-of-ai
Zawacki-Richter, Olaf, et al. “Systematic Review of Research on Artificial Intelligence Applications in Higher Education – Where are the Educators?” International Journal of Educational Technology in Higher Education, vol. 16, 2019.

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