A STUDY TO UNDERSTAND THE IMPACT OF AI TOOLS ON THE YOUTH OF DELHI NCR WITH EMPHASIS ON CHATGPT & VIRTUAL REALITY

Ms Aprajita Singhal
MAJMC Student
Amity School of Communication
Amity University, Uttar Pradesh

Dr. Ashima Singh
Assistant Professor - Grade III
Amity School of Communication
Amity University, Uttar Pradesh

Abstract: This study investigates the effects of artificial intelligence (AI) tools, particularly ChatGPT and Virtual Reality (VR), on the youth population in the Delhi National Capital Region (NCR). With a quantitative approach, the research aims to explore whether these AI tools are serving as beneficial assets or detrimental forces for the youth. By analyzing data gathered through surveys, the study seeks to provide insights into the prevalence, purpose & impact of using AI tools, such as ChatGPT and VR, among young individuals in this region. The findings of this study are expected to contribute to a better understanding of the role of AI technologies in the lives of youth, informing policymakers, educators, and technology developers about potential implications and areas for improvement in fostering positive outcomes for the younger generation.

Keywords: AI tools, ChatGPT, Virtual Reality, AI Technology & Youth

Aim:

The aim of this study is to comprehensively understand the impact of AI tools, focusing on ChatGPT and Virtual Reality, on the youth population in Delhi National Capital Region (NCR).

Objective:

- To determine the frequency and prevalence of use of AI technologies among young people in Delhi NCR, such as ChatGPT and virtual reality.

- To investigate how young people's social interactions, and entertainment tastes are thought to be affected by ChatGPT and virtual reality.

- To investigate the possible educational and skill-building opportunities that young people in Delhi NCR may have access to through ChatGPT and virtual reality.

- To understand whether ChatGPT & Virtual reality turns out to be a boon or bane for the youth

Research Questions:

- What is the current frequency and prevalence of AI technology usage, specifically ChatGPT and virtual reality, among young people in Delhi NCR?

- What is the purpose of using ChatGPT& Virtual Reality among the Youth?

- What is the impact of Virtual Reality & ChatGPT on the lives of youngsters?

Introduction:

Artificial Intelligence refers to the development of computer systems that can perform tasks typically requiring human intelligence, such as learning, reasoning, problem-solving, perception, and natural language understanding. AI systems encompass a wide array of techniques and methodologies, including machine learning, deep learning, neural networks, natural language processing, computer vision, and robotics (Russell, S. J., & Norvig, 2021).

The impact of AI technology spans across virtually every sector of society, driving efficiencies, enhancing productivity, and unlocking new opportunities for innovation. From personalized recommendation systems and virtual assistants to autonomous vehicles and predictive analytics, AI-powered solutions are reshaping industries, transforming business models, and reshaping the way we live and work (Marr, B. , 2020).

VR is a technology that uses computer-generated environments to create immersive sensory experiences. It places users in a digitally simulated world, often using specialized headsets and input devices. The goal is to make users feel as though they are physically present in the virtual environment (AI insights Article).

Virtual reality is considered to have begun in the 1950's but it came to the public's attention in the late 1980's and 1990's. This can be attributed to pioneering computer scientist Jaron Lanier who introduced the world back in 1987 to the term 'virtual reality'. Research into virtual reality continued into the 1990's and that combined with the appearance of films such as The Lawnmower Man helped to raise its profile.

Virtual Reality, often abbreviated as VR, is a computer-generated simulation of an immersive environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors. VR has transcended its initial connotations as a mere entertainment medium and has found applications across education, healthcare, gaming, architecture, and beyond (Oculus, 2023)

At the heart of VR lies the concept of immersion, the sensation of being fully absorbed in a virtual environment. This immersion is achieved through a combination of factors including realistic graphics, spatial audio, responsive haptic feedback, and intuitive user interfaces. By engaging multiple sensory channels, VR has the potential to evoke powerful emotional and cognitive responses in users (Slater et al., 2016)

Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world. It is the key to experiencing, feeling and touching the past, present and the future. It is the medium of creating our own world, our own customized reality. (Mandal, 2013)

ChatGPT, an AI-powered conversational agent developed by OpenAI, represents a milestone in natural language processing. It leverages the Transformer architecture to generate human-like responses to textual inputs, engaging users in meaningful conversations. ChatGPT has garnered attention for its ability to simulate human-like conversations, offering assistance, entertainment, and companionship in various contexts (OpenAI website)

The article on uses of AI enhanced VR which in healthcare can be used for surgical simulations, pain management, and even remote consultations, in education by creating immersive learning experiences. Students can explore historical events, travel to outer space, or dissect virtual organisms, in gaming to create dynamic and unpredictable virtual worlds and in architecture to visualize their creations

in 3D for real-time changes and improvements. (AI insights Article).

Review of Literature:

The study (Alshahrani, A., 2023) highlights the potential benefits of integrating AI chatbots like ChatGPT into education. Such benefits include promoting student engagement, motivation, and self-directed learning through immediate feedback and assistance. The blended learning systems has the potential to be more sustainable, efficient, and accessible for learners through the advancement of AI tools. This personalized approach would further help students navigate complex concepts and improve their learning outcomes.

The authors in (Tiwari et al., 2023) revealed that students have a favorable view of the instructional use of ChatGPT. Factors like usefulness, social presence and legitimacy of the tool, as well as enjoyment and motivation, contribute to a favorable attitude toward using this tool. Some students found the tool useful in education as it enhances the quality of their learning & helps with finishing academic work quickly. On the other hand some students were finding it difficult to use and have doubts about the tool making them skillful.

(Chavez et al., 2020) study's results suggest potential of a major advancement in the mental healthcare segment. The virtual reality meditation was found to have moderate benefit for anxiety but not for physiologic stress. Future research is needed to confirm these results in a larger sample and to investigate the effects. Virtual reality meditation appears feasible to deliver among homeless youth.

The relevance of Virtual Reality in increasing young viewership is emphasised in the studies (Wang, Z., 2023). The study reveals that the use of VR technology in TV programs attracts more young viewers, improves ratings, and increases user satisfaction. It concludes that the application of VR technology is crucial for TV program as it creates a novel program experience, increases audience participation and enhances the social influence of TV.

Another study acknowledges the relevance of AI technology in the education sector through the work of (Essel, H. B. et al., 2024). The study demonstrates that leveraging ChatGPT during didactic assistance in-class activities can positively impact students' critical, creative, and reflective thinking skills. The tests resulted in showing the significance of ChatGPT i developing cognitive skills.

The study of (Dellazizzo, L., et al., 2019) validates how Virtual Reality Technology can be used as a therapeutic tool to facilitate reduction in anger, improvements in conflict resolution, empathy skills and decrease in aggression in schizophrenia patients.

The research of authors (Jensen, L., & Konradsen, F. 2018) showed that VR technology helped in improving cognitive skills related to remembering, understanding spatial and visual information. It also benefited Psychomotor skills related to head movement, such as visual scanning or observational skills and affective skills related to controlling your emotional response.

Another study was done on the use of VR technology the the field of education & learning (Wang, P., et al., 2018). The study investigates the shift in the adoption of VR technologies for construction engineering education and training (CEET) over time, from desktop-based VR, immersive VR, 3D game-based VR, to Building Information Modelling (BIM)-enabled VR. It promotes the integration of VR in education and training programs to improve the training performance.

Methodology:

The research design employs a quantitative approach, collecting numerical data using google forms for conducting the survey. The design will help us understand the prevalence, frequency, the various purposes of the tools for which the youth is interacting with them and ultimately the significance or disadvantage of using them.

The population of the research study is the Youth of Delhi NCR ranging from age group of 15-29 years according to National Youth Policy, 2014. Convenience sampling method was used to easily access potential subjects and collect data for the research.

The survey link is being disseminated through various social media channels targeting youth in Delhi NCR. Participants are encouraged to complete the survey voluntarily, ensuring anonymity and confidentiality of their responses.

Participants are required to respond to the survey questions accurately and honestly. Data collected through Google Forms will be automatically stored in a spreadsheet & Pie charts for Data Analysis.

Data Analysis:

The data was analyzed in the form of pie charts generated by using google forms. All the data was minutely examined and interpreted by the researcher to draw meaningful analysis.

Every figure denotes representation of a question and the responses of the youngsters, which has been thoroughly examined in the form of a pictograph. The questionnaire has been filled by 52 respondents.

The Survey:
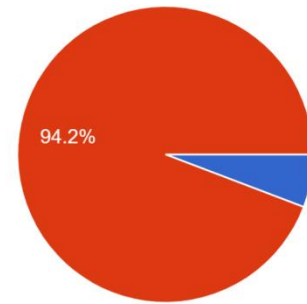

Q1. What is your gender?
52 responses

Figure 1

The above figure shows that most of the respondents were female. There was some participation from males and least from LGBTQ+ individuals.

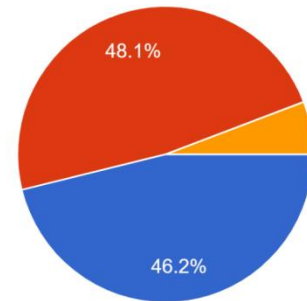Q2. How old are you?
52 responses

Figure 2

The above figure shows that most of the respondents were aged between 21-23 years of age. The second highest age group was between 18-20 years of age and the least number of respondents were from the age group 24-25 years.

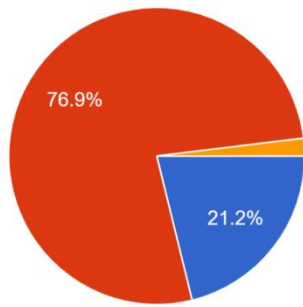Q3 Where do you live?
52 responses

Figure 3

The above figure shows that most of the respondents resided in Noida mounting up to 76.9 %. Around 21.2% of the respondents are from Delhi and there was least representation from Greater Noida.

Q4. Do you use AI tools ?
52 responses

Figure 4
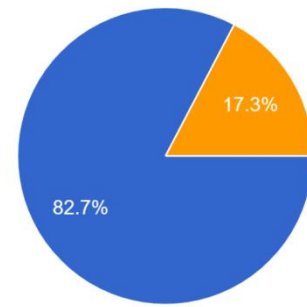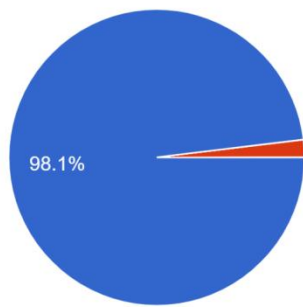
The above figure shows that most of the respondents tend to use AI tools as 98.1% agreed that they use various AI tools. Only 1% of the respondents were reluctant about using AI tools.

Q5 Which AI do you use more extensively?
52 responses

Figure 5

82.7 % of the respondents, which is more than half of the sample size, agreed that they used Chat GPT extensively. There were only 17.3% of respondents who agreed to using both Chat GPT & Virtual Reality for their use.

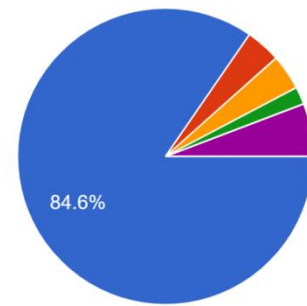Q6. What was your purpose of using ChatGPT?
52 responses

Figure 6

The above figure shows that most of the respondents were using ChatGPT to assist them with their assignments & college work. The second highest purpose of ChatGPT was for Skill Development. AI tool ChatGPT was used least for personal queries and job related work.

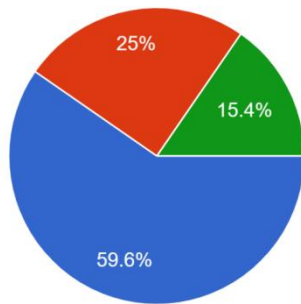Q7. What was your purpose of using Virtual Reality?
52 responses

Figure 7

The above figure denotes that the respondents used Virtual reality for educational purpose, in terms of learning as 59.6% of them have experience ChatGPT for learning needs. Around 25% of the respondents experienced ChatGPT as a gaming experience. Around 15.4% of the respondents have experienced Virtual Reality for entertainment purpose.

Q8. In which sector have you experienced Virtual Reality?
52 responses

Figure 8

Gaming Industry comes on the top as 46.3% of the respondents have experienced Virtual Reality as part of their gaming journey. Response showed that second highest reason for experiencing Virtual Reality was for Educational purpose. Some of the users also agreed that they have experienced Virtual Reality in the healthcare sector.

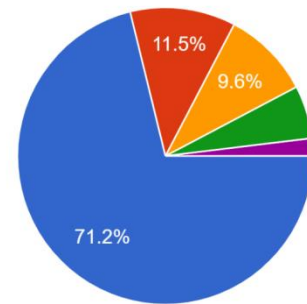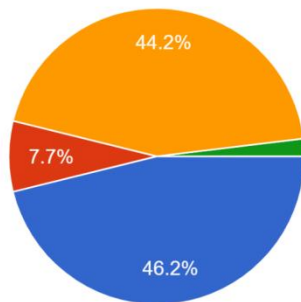Q9. What is your frequency of using ChatGPT in a week?
52 responses

Figure 9

The above figure signifies that most of the respondents used ChatGPT around 1-5 times in a week. Around 11.5% of the respondents use ChatGPT for 6-11 times in a week. There are about 9.6% of respondents who use ChatGPT for 12-15 times in a week. They are few respondents who use the tool more than 16 times in a week.

Q10. What is your frequency of using Virtual Reality in a month
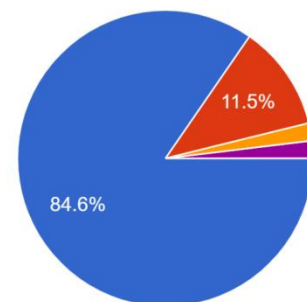52 responses

Figure 10

The above figure denotes that most of the users use Virtual Reality for not more than 5 times in a month. Around 11.5% of the respondents who find themselves using Virtual reality for 6-11 times in a month. There are very few respondents who experience Virtual Reality for more than 12 times in a month.

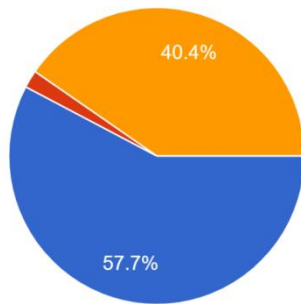Q11. Has ChatGPT been effective in improving your work
52 responses

Figure 11

Most of the respondents, about 57.7% of respondents agreed that ChatGPT has helped them in improving their work & studies positively. About 40% of the respondents believe that ChatGPT helps them to improve their work & studies sometimes only. Very few respondents disagree that it helps to affect them positively.

Q12. Has Virtual Reality been effective in impacting your
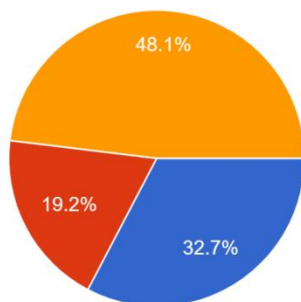52 responses

Figure 12

The above figure shows that most of the respondents believe that Virtual Reality impacts their life positively but sometimes only. Around 32.7% of the respondents found Virtual Reality impacting their lives positively. The figure also shows that 19.2% of the respondents disagreed that Virtual Really had a positive impact on their life.

Underpinning theories:

The Uses and Gratifications Theory is centred on how people actively look for and use media to fulfil their wants and needs. It helps to understand why young people in Delhi NCR are drawn to ChatGPT and virtual reality, as well as the particular satisfactions they get from using these technologies, thereby fulfilling their cognitive, affective, tension free and social interaction needs.

Media Dependency Theory investigates how much people rely on media for social interaction, entertainment, and information. It can aid in comprehending how ChatGPT and virtual reality function as information, amusement, and communication channels for youth in Delhi NCR.

Diffusion of Innovations Theory: This theory looks at how new concepts, items, and technological advancements gradually permeate a society. It can aid in comprehending how young people in Delhi NCR are adopting and disseminating AI tools like ChatGPT and virtual reality, as well as the variables influencing their acceptance and the dynamics of innovation adoption within social networks.

Findings:

- The research survey shows that most of the sample size use AI tools in their day to day lives.
- The study signifies that AI tool ChatGPT is used more frequently & preferably in comparison to Virtual reality.
- ChatGPT was found to be used most by the youth for completing their assignments and college work.
- The research showed that youngsters also experienced skill development by using ChatGPT.
- ChatGPT was least used for personal queries or for job related work since most of the respondents are college students.
- The study also reveals that Virtual Reality was used mostly for educational purpose. A large part of the youth also used Virtual Reality for gaming & entertainment purpose.
- Virtual Reality was least used for Architectural purpose and in therapies.
- The study proves that ChatGPT is having a positive impact on the work & studies of the youth. Virtual Reality is not that effective in impacting the lives of youth positively.

Conclusion:

The study's findings highlight ChatGPT's beneficial effects on young people in Delhi NCR's academic and skill-development domains. Its potential as a useful tool for improving learning experiences is demonstrated by its widespread use and usefulness in educational endeavour. Although virtual reality has its uses, especially in the fields of education and entertainment, its efficacy seems to be more restricted in other areas. In summary, the study underscores the dynamic impact of artificial intelligence (AI) technologies on the lives and experiences of youth, with ChatGPT emerging as a noteworthy supporter in their scholastic pursuits.

Limitation & Future Prospects:

The study took a quantitative approach to carry out the research study, therefore a qualitative approach can be taken for further studies to get an in depth into how the youth of Delhi NCR interact & imbibe the experiences of ChatGPT & Virtual Reality. The study was mostly focused on the female population of Noida & Delhi majorly. The further studies can be focused on male and LGBTQ+ population of Noida & Delhi. The further studies can also explore other age groups and geographical regions in India. The sample size and

research time period were short due to time & resource limitations.

Ethical Considerations:

The research ensured that all the academic ethics are being followed. The subjects were only shared the survey forms after explaining the nitty- gritties of the study. All the contributors will be acknowledged for their efforts and time in the research paper. The study will have no form of plagiarism. The researcher will ensure to maintain utmost professionalism at all times while conducting the research.

References:

- Mandal, S. (2013). Brief introduction of virtual reality & its challenges. *International Journal of Scientific & Engineering Research*, *4*(4), 304-309.
- Alshahrani, A. (2023). The impact of ChatGPT on blended learning: Current trends and future research directions. *International Journal of Data and Network Science*, *7*(4), 2029-2040.
- Tiwari, C. K., Bhat, M. A., Khan, S. T., Subramaniam, R., & Khan, M. A. I. (2023). What drives students toward ChatGPT? An investigation of the factors influencing adoption and usage of ChatGPT. *Interactive Technology and Smart Education*.
- Chavez, L. J., Kelleher, K., Slesnick, N., Holowacz, E., Luthy, E., Moore, L., & Ford, J. (2020). Virtual reality meditation among youth experiencing homelessness: pilot randomized controlled trial of feasibility. JMIR mental health, 7(9), e18244.
- Wang, Z. (2023). Exploring the Feasibility and Effectiveness of Youth-Aging in Reality TV Programs Using Virtual Reality Technology. *Studies in Social Science & Humanities*, *2*(5), 12-19.
- Essel, H. B., Vlachopoulos, D., Essuman, A. B., & Amankwa, J. O. (2024). ChatGPT effects on cognitive skills of undergraduate students: Receiving instant responses from AI-based conversational large language models (LLMs). *Computers and Education: Artificial Intelligence*, *6*, 100198.
- Dellazizzo, L., Potvin, S., Bahig, S., & Dumais, A. (2019). Comprehensive review on virtual reality for the treatment of violence: implications for youth with schizophrenia. *NPJ schizophrenia*, *5*(1), 11.
- Jensen, L., & Konradsen, F. (2018). A review of the use of virtual reality head-mounted displays in education and training. *Education and Information Technologies*, *23*, 1515-1529.
- Wang, P., Wu, P., Wang, J., Chi, H. L., & Wang, X. (2018). A critical review of the use of virtual reality in construction engineering education and training. *International journal of environmental research and public health*, *15*(6), 1204.
- Russell, S. J., & Norvig, P. (2021). Artificial Intelligence: A Modern Approach (4th ed.). Pearson.
- Domingos, P. (2018). The Master Algorithm: How the Quest for the Ultimate Learning Machine Will Remake Our World. Basic Books.
- Marr, B. (2020). Artificial Intelligence in Practice: How 50 Successful Companies Used AI and Machine Learning to Solve Problems. John Wiley & Sons.
- Floridi, L. (2020). The Routledge Handbook of Philosophy of Information (2nd ed.). Routledge.
- Oculus. (2023). Introduction to Virtual Reality. Retrieved from https://www.oculus.com/introduction-to-virtual-reality/
- Slater, M., & Sanchez-Vives, M. V. (2016). Enhancing Our Lives with Immersive Virtual Reality. Frontiers in Robotics and AI, 3, 74.
- OpenAI. (2022). ChatGPT: OpenAI's Conversational Agent. Retrieved from https://openai.com/chatgpt