

**“TO STUDY THE EFFECTIVENESS OF DIGITALISATION IN
TEACHING- LEARNING PRACTICED FOR POST GRADUATE
MANAGEMENT EDUCATION IN PUNE METROPOLIS”**

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By

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OCTOBER - 2023

CERTIFICATE

This is to certify that the thesis entitled “**TO STUDY THE EFFECTIVENESS OF DIGITALISATION IN TEACHING- LEARNING PRACTICED FOR POST GRADUATE MANAGEMENT EDUCATION IN PUNE METROPOLIS**” being submitted herewith for the award of the Degree of Doctor of Philosophy in Management under the faculty of Management, **Tilak Maharashtra Vidyapeeth, Gultekdi, Pune**, is the result of the original research work completed by **Mrs. Bhagyashree Nilesh Deshpande** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this has not formed earlier the basis for the award of any degree or similar title of this or any other university or examining body.

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ABSTRACT

This study investigates the effectiveness of digitalization in teaching-learning practices within the context of post-graduate management education in Pune Metropolis. As technology continues to advance rapidly, the integration of digital tools and platforms in educational settings has become increasingly prevalent. This research aims to assess how digitalization influences the teaching and learning processes, student engagement, and overall learning outcomes in the field of management education. To achieve this, a mixed-methods approach is employed, combining qualitative interviews and surveys conducted with students and faculty members from various management institutes in Pune. The study's findings will offer valuable insights into the advantages, challenges, and potential areas for improvement in harnessing digital tools for teaching and learning in post-graduate management education.

The effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis, considering the perspectives of students, faculty members, and academic leadership. From the faculty perspective, the study employs the Technology Acceptance Model (TAM) to gauge factors such as Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Behavioral Intention to Use (BI), and Actual System Use (Usage) in assessing the effectiveness of digitalization in teaching. Around 188 faculties of Management course were identified from various colleges from Pune Metropolis to understand the teacher's perspective towards teaching learning. Results indicate that teaching experience significantly influences performance expectancy, underlining the importance of experience in shaping attitudes towards technology adoption.

From the student perspective, the study explores various facets of digitalization, including students' preferences for online and traditional learning methods. To understand the student's perspective towards effectiveness of online teaching learning methodology, 348 students pursuing MBA from various management instituted of Pune metropolis were asked to opine on various questions. It was found that while students value digital tools for understanding basic and advanced concepts, obtaining more learning opportunities, and maintaining flexibility, they still acknowledge the importance of traditional classroom teaching, particularly for certain subjects.

From the perspective of academic leadership, insights from Deans and Heads of Departments reveal a generally positive outlook on digitalization. They recognize its potential in enhancing pedagogy, broadening educational reach, and preparing students for the digital workforce. However, administrative challenges, such as budget constraints and technical

support, warrant attention to ensure the successful integration of digitalization in education.

The primary rationale for this study is to assess the impact of digital tools and platforms on teaching methods, student engagement, and learning outcomes in post-graduate management education. By doing so, it seeks to provide valuable insights into the advantages and challenges associated with digitalization. These insights are vital for educators, institutions, and policymakers as they make informed decisions regarding the integration of digital tools into teaching methodologies.

This research addresses the unique characteristics and requirements of post-graduate management education, contributing to the growing body of knowledge on digitalization in education. It aims to identify areas where digitalization excels and where it needs improvement, fostering targeted enhancements for more effective educational practices.

The choice of this research topic is driven by the need to evaluate the digitalization efforts specifically in the management education domain within Pune Metropolis, a region known for its numerous educational institutions, including prestigious business schools. The findings of this study will not only shed light on the digitalization landscape in Pune but also hold broader implications for management education in metropolitan areas.

The statement of the problem delves into the degree of adaptation for digital media in teaching and learning practices for postgraduate management education. It seeks to understand how digitalization has been implemented and its impact on educational quality, with a focus on effectiveness. The study's geographical scope is Pune metropolis, a prominent educational hub in India.

The study underscores the significance of digitalization in education, emphasizing its potential to eliminate geographical barriers, personalize learning experiences, enhance engagement through interactive content, foster collaboration and communication, provide access to a vast array of educational resources, offer immediate feedback, and equip students with essential digital literacy skills. Moreover, digitalization can reduce costs associated with traditional teaching methods, making education more affordable and scalable.

The research delves into the evolution of the education system in India, tracing its journey from the Vedic period to the modern digital era, providing historical context to the current digitalization trends. It also compiles a list of popular digital educational learning tools and compares traditional and digital education systems.

While highlighting the numerous benefits of digitalization, the study also acknowledges the challenges it poses, including the need for robust digital infrastructure, ensuring equitable

access, addressing privacy and security concerns, and promoting responsible technology use.

Data analysis involves various statistical tools, including averages, percentage analysis, ratio analysis, chi-square tests, t-tests, correlation analysis, and regression analysis, to test the study's hypotheses and draw meaningful conclusions.

Despite the study's contributions, it is essential to acknowledge its limitations, including the study's limited generalizability due to its specific focus on Pune Metropolis and the reliance on self-reported data. Additionally, the study may not fully capture the evolving nature of technology and digitalization.

In conclusion, this research aims to enhance our understanding of the effectiveness of digitalization in post-graduate management education in Pune Metropolis. The findings will offer valuable guidance to educational institutions, policymakers, and stakeholders, helping them optimize the integration of digital technologies in management education.

In conclusion this study contributes valuable insights into the impact of digitalization on teaching and learning practices in post-graduate management education. It highlights the role of experience, gender, and age in shaping faculty attitudes towards digitalization, emphasizes the importance of maintaining a balanced approach to teaching methods, and underscores the need for ongoing support and investment in digital education initiatives. Future research in this domain could explore longitudinal trends, conduct comparative analyses across institutions, employ qualitative research methods, measure direct effects on learning outcomes, investigate innovative pedagogical approaches, and delve deeper into student engagement and motivation. These avenues of further study can enrich our understanding of digitalization's role in education and guide its future implementation for improved educational outcomes.

CHAPTER – I – INTRODUCTION

1.1 Digital Technology in Education

The integration of digital technologies in education has become increasingly prevalent in recent years. The rapid advancement of technology has transformed various aspects of society, including the field of education. In the context of post-graduate management education, digitalization has the potential to revolutionize teaching and learning practices. Pune Metropolis, known as the educational hub of India, hosts numerous management institutes that offer post-graduate programs. These institutes strive to provide high-quality education and equip students with the necessary skills and knowledge to succeed in the dynamic business world. Digitalization offers new opportunities to enhance the learning experience and prepare students for the digital age.

The rationale for this study is to evaluate the effectiveness of digitalization in teaching-learning practices specifically in the context of post-graduate management education in Pune Metropolis. By examining the impact of digital tools and platforms on the teaching and learning processes, student engagement, and learning outcomes, this study aims to provide valuable insights into the benefits and challenges associated with digitalization in this field. Understanding the effectiveness of digitalization in management education is crucial for several reasons. Firstly, it can help educators and institutions make informed decisions about integrating digital tools into their teaching methodologies. This study can shed light on the strategies and approaches that yield the best outcomes in terms of student learning and engagement. Secondly, digitalization has the potential to address some of the limitations and constraints of traditional teaching methods. It can offer flexible learning opportunities, enable personalized instruction, and facilitate collaborative learning experiences. Evaluating the effectiveness of digitalization can identify areas where it excels and where it falls short, allowing for targeted improvements and enhancements. Lastly, this study can contribute to the growing body of knowledge on digitalization in education. While there have been studies on digitalization in various educational settings, there is a need for research specifically focused on post-graduate management education. By examining

the unique characteristics and requirements of this field, this study can provide valuable insights that can be applied to other similar programs and institutions.

Overall, the study aims to assess the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis. The findings will inform educators, institutions, and policymakers about the benefits, challenges, and potential areas for improvement in leveraging digital tools and platforms in this specific educational context.

1.2 Significance of digitalization in education

The significance of digitalization in education is multifaceted and has transformative implications for teaching and learning. The integration of digital technologies in education brings numerous benefits and opportunities, some of which are highlighted below: Digitalization eliminates geographical barriers and provides access to educational resources and opportunities to learners regardless of their location. Online courses, virtual classrooms, and digital learning materials make education more accessible to individuals who may have limitations in attending physical classrooms. Digital tools and platforms enable personalized learning experiences tailored to individual student needs and preferences. Adaptive learning technologies can assess students' strengths and weaknesses and provide targeted content and interventions, promoting better understanding and mastery of concepts. Digital resources, such as multimedia presentations, interactive simulations, and educational games, make learning more engaging and interactive. These tools can stimulate student curiosity, increase motivation, and foster active participation in the learning process.

Digital technologies facilitate collaboration and communication among students and educators. Online discussion forums, collaborative document editing, and video conferencing platforms enable students to work together on projects, exchange ideas, and engage in peer learning, regardless of physical proximity. The internet provides a vast array of educational resources, including online libraries, scholarly articles, videos, and open educational resources (OER). Digitalization allows students and educators to access and utilize these resources, expanding the breadth and depth of learning materials available. Digital tools offer immediate feedback and assessment opportunities, allowing students to gauge their understanding and progress. Online quizzes, automated grading systems, and data analytics provide timely feedback to learners, enabling them to identify areas for improvement and take corrective actions.

In an increasingly digitalized society, proficiency in digital tools and platforms is essential for future career success. By integrating digital technologies into education, students acquire digital literacy skills and become familiar with tools and practices commonly used in professional settings.

Digitalization has the potential to reduce costs associated with traditional teaching methods, such as textbooks, printing, and physical infrastructure. Online learning materials and virtual classrooms can be more cost-effective in the end, making education more affordable and scalable. It is important to note that while digitalization offers significant advantages, it also presents challenges and considerations, such as the need for digital infrastructure, ensuring digital equity, addressing privacy and security concerns, and promoting responsible use of technology. In summary, the significance of digitalization in education lies in its ability to enhance access, personalize learning, foster engagement, facilitate collaboration, provide diverse learning resources, offer timely feedback, prepare students for the digital age, and optimize cost-effectiveness. Embracing digital tools and platforms can lead to more effective and inclusive educational experiences, preparing learners for the demands of an increasingly digital world.

1.3 Evolution of Education System in India

Education is the process of learning or acquisition of knowledge, skill, values, moral, beliefs and habits. Education can be defined:

According to swami Vivekananda: “education means that process by which character is formed, strength of mind is increased & intellect is sharpened as result of which one can stand on one’s own feet”.

According to A. P. J. Abdul kalam education means: “education is an endless journey – through knowledge & enlightenment real education enhance the dignity of human begin & increase his or her self-respect & universal brotherhood in its true sense become the sheet anchor for such education.

Education can be studied into two parts pre-independence & post-independence. In pre-independence period, this period can be studied in 4 parts as follows:

- Vedic period – before 600 b.c
- Buddhists period – 600b.c -1200a.d

- Islamic period -1200a.d- 1800a.d
- British period -1800a.d -1947.

1.3.1 Vedic Period (Before 600 B.C.):

During the Vedic Period, education had a significant place in society, and knowledge was highly valued. Education was primarily imparted through an oral tradition, with a strong emphasis on memorization and recitation of sacred texts, particularly the Vedas. Here are some key aspects of the education system during the Vedic Period:

Education in this period was typically conducted in gurukul's, which was a residential school. Students, known as shishyas, lived with their teacher or guru in a close-knit community. The guru was not only an instructor but also a spiritual guide and mentor to the students. The guru played a central role in the education system. They were highly respected and held a position of authority. The students lived with the guru and received education in various subjects, including scripture, philosophy, rituals, language, mathematics, astronomy, and warfare.

Education primarily relied on the oral transmission of knowledge. Students memorized the sacred texts, particularly the Vedas, through rigorous repetition and recitation. The guru ensured the accurate preservation and transmission of knowledge from one generation to another. The main focus of education during the Vedic Period was on the study of the Vedas. The Rigveda, Yajurveda, Samaveda, and Atharvaveda were taught, along with their associated rituals and hymns. Additionally, subjects like grammar (Vyakarana), phonetics (Shiksha), astronomy (Jyotisha), and mathematics were also taught. It also involved practical training in various skills. This included learning the correct pronunciation and intonation of the sacred texts, performing rituals and sacrifices, and acquiring skills related to warfare, administration, and trade.

Assessments were conducted through oral examinations. Students were tested on their knowledge of the texts, their ability to recite them accurately, and their understanding of the underlying philosophical concepts. Education during this period was primarily available to the upper castes, particularly the Brahmins. They were considered the custodians of knowledge and were responsible for its

preservation and dissemination. Education for women and lower castes was limited, and they had fewer opportunities for formal learning.

Thus, education system during the Vedic Period laid the groundwork for the transmission of knowledge, development of philosophical thought, and the establishment of a learned class in ancient Indian society. It emphasized the importance of oral tradition, memorization, and close teacher-student relationships, which continued to influence educational practices in subsequent periods.

1.3.2 Buddhists Period – 600b.C -1200a.D

During the Buddhist period in India (600 B.C. - 1200 A.D.), education played a vital role in Buddhist society. The Buddhist education system focused on the dissemination of Buddhist teachings, monastic education, and the development of intellectual and spiritual knowledge. Monastic education was central to the Buddhist period. Buddhist monasteries, known as viharas, served as centres of learning and intellectual pursuit. Monks and nuns dedicated their lives to studying Buddhist scriptures, philosophy, and meditation practices. They received education within the monastery under the guidance of senior monks.

The primary focus of education was the study of Buddhist scriptures, particularly the Tripitaka (Three Baskets) – the Vinaya Pitaka (code of monastic discipline), Sutta Pitaka (discourses of Buddha), and Abhidhamma Pitaka (philosophical analysis). Monks and nuns memorized and recited these texts, delving into their profound meanings and philosophical nuances. The Buddhist education system placed significant emphasis on philosophical inquiry and meditative practices. Students engaged in discussions and debates on Buddhist doctrines, engaging in analytical reasoning to deepen their understanding. Meditation played a crucial role in cultivating mindfulness, concentration, and insight. Similar to the Vedic period, education in the Buddhist period relied on oral transmission. Students listened to the teachings of their teachers, memorized the scriptures, and recited them accurately. The oral tradition ensured the preservation and continuity of Buddhist knowledge. Education in Buddhist monastic institutions followed a gurukula-like system, where students lived with their teachers and received holistic education. The relationship between the teacher (guru) and student

(shishya) was characterized by reverence, discipline, and a strong bond of mentorship.

Apart from studying the original scriptures, Buddhist scholars composed commentaries and treatises to expound upon and interpret Buddhist doctrines. These scholarly works provided in-depth analysis and clarification of complex concepts, serving as important educational resources. Buddhist education received significant support and patronage from rulers and wealthy benefactors. Kings and nobles sponsored the establishment of educational institutions, monastic libraries, and the translation of Buddhist texts into regional languages. This support helped facilitate the spread of Buddhist education to various regions.

The Buddhist education system varied across different regions, reflecting the cultural and intellectual diversity of ancient India. For example, the Nalanda and Vikramashila universities in present-day Bihar were renowned centers of learning and attracted scholars and students from across the world.

The Buddhist education system of this period aimed to cultivate not only intellectual knowledge but also ethical conduct and spiritual insight. It contributed to the preservation and propagation of Buddhist teachings, the development of Buddhist philosophy, and the overall intellectual growth of Indian society.

1.3.3 Islamic Period -1200A.D- 1800A.D

During the Islamic period in India (1200 A.D. - 1800 A.D.), education underwent significant changes with the introduction of Islamic influences. Islamic rulers established a new educational system that combined Islamic teachings with elements of traditional Indian education. Madrasas, Islamic educational institutions, played a central role in the education system. They were established by rulers, religious institutions, and philanthropists to provide education in Islamic studies, including the Qur'an, Hadith (sayings of the Prophet Muhammad), Islamic law, theology, Arabic language, and Islamic philosophy. The curriculum of Islamic education in madrasas focused on religious subjects. Students primarily studied the Qur'an, memorizing and reciting it with proper pronunciation and understanding. They also studied Islamic law (fiqh), theology (aqeedah), and Hadith literature. Arabic language was given significant importance as it was the language of the Qur'an.

Islamic education had a hierarchical structure. Students progressed through different levels of education, starting from basic literacy and Quranic recitation to advanced studies in Islamic jurisprudence and theology. Promising students could pursue higher levels of scholarship and become Islamic scholars (ulama). Islamic scholars (ulama) were the custodians of knowledge and played a crucial role in the education system. They were highly respected and regarded as authorities on Islamic law and theology. Scholars not only taught in madrasas but also engaged in research, writing, and providing legal and religious guidance to the community.

Islamic rulers and nobles provided patronage and financial support to educational institutions. They endowed madrasas with land, grants, and other resources to ensure their sustainability. Wealthy individuals also made donations to support the functioning of madrasas and the livelihood of scholars. Sufism, the mystical dimension of Islam, had a significant impact on education during the Islamic period. Sufi saints and their disciples established khanqahs (Sufi monasteries) where spiritual teachings and practices were imparted. Sufi masters emphasized spiritual transformation and inner purification alongside the formal education provided in madrasas.

Arabic served as the primary language of instruction in Islamic education, as it was the language of the Qur'an and Islamic scholarship. However, there were regional variations where local languages were also used alongside Arabic. Persian, being the court language of many Islamic rulers, gained prominence and was used for administrative and literary purposes. Islamic education during this period had a profound impact on Indian society, contributing to the spread of Islamic knowledge, language, and culture. It played a crucial role in shaping religious and intellectual discourse, influencing literature, architecture, and the development of Islamic sciences. The madrasa system continued to be an important educational institution even after the Islamic period in India.

1.3.4 British Period -1800A.D -1947.

During the British period in India (1800 A.D. - 1947), the British colonial rulers introduced a new education system that had far-reaching consequences for Indian society. The British aimed to establish an educational framework that served their administrative and economic interests. Here are some key aspects of the education system during the British period: The British emphasized the spread of

Western education and introduced English as the medium of instruction. English-language education was seen as a means to train Indians for administrative and clerical positions in the British colonial administration. The British established educational institutions, such as schools, colleges, and universities, which followed a structured curriculum. These institutions were often segregated based on class, gender, and community, with separate schools for Indians and Europeans and limited access for women and marginalized groups. Lord Macaulay's Minute on Education in 1835 recommended the promotion of English education and the displacement of indigenous languages and traditions. The focus shifted from traditional Indian knowledge systems to a curriculum heavily influenced by Western ideas, literature, and scientific principles. Christian missionary organizations played a significant role in the education system. They established schools and colleges, with the aim of spreading Christianity and converting Indians to Christianity. Missionary schools provided English education and often had a significant influence on local communities.

The education system was divided into three tiers. At the primary level, vernacular schools provided basic education in local languages. Middle-level schools focused on English-language education and preparation for government jobs. Higher education was primarily offered in colleges and universities, which followed British models and offered degrees in various disciplines. The Indian Universities Act brought about reforms in higher education. It established separate universities in major cities, including Calcutta, Bombay, and Madras, and gave more autonomy to Indian educational institutions. However, the British still retained control over the curriculum and administration.

The British education system had a profound impact on Indian society. It created a new class of Western-educated elite known as the "Brown Sahibs" who served as intermediaries between the British rulers and the Indian population. The education system also led to the emergence of a new intelligentsia that questioned British rule and eventually played a pivotal role in India's struggle for independence. The British education system faced criticism from various quarters. Critics argued that it undermined indigenous knowledge, neglected vocational and practical skills, and perpetuated social inequalities. Indian nationalists and reformers called for a more inclusive and culturally rooted education system that honoured Indian languages, traditions, and values.

The British education system had a complex legacy in India. While it provided opportunities for some Indians to access Western education and contribute to modernization, it also had profound social, cultural, and economic implications. The impact of the British education system continued to be felt even after India gained independence in 1947, as elements of the colonial education system persisted and underwent further reforms.

Here Are Some of the Main Education Policies that were Implemented & The Major Contributions of Report In British Period.

Table 1.1 Main Education Policies & The Major Contributions of Report In British Period

Acts	Major outcomes
Charter Act 1813	Grant of rupees 1 lakh for education
Mountstraute Elphinstone Minutes 1823	English and Western science
Lord Macaulay Minutes 1835	English and Western science and Need of Public Education
Wood's Dispatch 1854	Teacher training, Scholarship, University Establishment
Hunter's commission 1882	Hierarchical education, Private Philanthropic approach &, Governance of education
Lord Curzon Conference 1901	Primary Education, Curriculum Reforms, Government recognition for Secondary Schools
Indian University Act 1904	Government control over higher education Grant of Rupees 5 lakhs for higher education.
Ghokhale Resolution 1913	Compulsory Primary Education, Private Philanthropic approach
Salder (Calcutta) University Commission 1917-19	12 years school scheme ,3 years degree, Women education Teacher learning institutes, Affiliation, Establishment of 7 new universities
Tilak Maharashtra Vidyapeeth 1921	National Education
Hartog Committee 1929	Vocational Education, Minority Education

Wardha Scheme 1937	Vocational, Mother tongue & Hindi medium services & Community learning
Sapru committee	Vocational Education
Abbot: Wood Report 1936-37	Hierarchy of Vocational Education
Dr Zakir Hussian Committee	Activity based education, Basic craft
Sargent Report 1937	Covered all aspects of education, Reforms in education level, Skill training for working professionals, Establishment of employment bureaus, libraries, Higher remuneration to teachers to attract good talent
BHORE Committee 1946	Primary Health centers, 3 months trainings in social medicine
University Education Commission 1948	Establishment of new universities
D.S. Kothari Commission 1964-66	It's a mile's stone in the Indian Education System to overview the various stages of education
Education Policy 1986	Higher Education System in India
Revision in Education in Education Policy 1992	Rules regarding Higher Education System
State Universities have separate Acts which needed to be combined – Maharashtra Vidyapeeth Act 1994 so these 3 committees were formed: • Kakodkar Committee • Dr.Ram Thakale Committee • Dr A.S. Nigavekar Committee	Future Of Education in Maharashtra Subdivision of 3 main universities Mumbai, Pune, & Nagpur Reforming of authorities in State Universities
New Education Policy, (NEP)	Seamless Education

Source: Wikipedia

Now 2019 right in the new education policy ,2019 from early childhood education at since the age of 3 till post doctoral research and overview of education

system in India is taken as seam less education as education is travelled through different stages cafeteria approach.

India has a demographic dividend which means it has become the highest population in the working Age group 15-40 in the world. There are several committees, reports acts passed in both pre & post-independence period. It can be said that the various reports on education during the British period, despite their drawback are considered while drafting the educational polices after the independence till date for the quest of quality education there is a need of the fast-growing digitization of Management Education. WITH the advent of technology and its surging acceptability in society at large, there is a huge scope in take education even for the remotest part of the country, Digitization of education is one of the ways to get India placed among top countries of the world in terms of higher education. Today's India's education sector is witnessing the increased use of technology such as Cloud Computing, Artificial Intelligence and Virtual Reality in day-to-day practices related to education sector. Different education policy 1813, 1823, 1835, 1854, 1882, 1901, 1904, 1913, 1917, 1929, 1934, 1935, 1937, 1944, 1946, 1956-64, 1986, 1992, 2019 NEP. The Government is also focusing on greater use of technology as it looks to implement large-scale reforms such as Revitalizing Infrastructure and Systems in Education (RISE) scheme. MOOC platforms, NPTEL (National Programme on Technology Enhanced Learning) are already in use for promotion of higher technical education. The Researcher wishes to focus her investigation on Management Education sectors. This study focusses on measuring the efficiency and impact of digitization in the Management Education. State of Maharashtra is one of the progressive states of India. Maharashtra has along legacy of rich culture & tradition in terms of socio-economic development over last several years though Mumbai is the politic capital of the state Maharashtra. The Pune metro polis is noted and recognized on different other parameters. Pune was earlier known as pensioner paradise it is seat of higher education, it is well-known as industrial city, it is a technology hub of modern age. Next to Mumbai the M.I.D.C. has as many as setups. In an around there are many MSMEs that have spread around Pune. This has made it necessary for management education. Also, there are many trades association in its different trade & commerce.

Management Education as a specialized branch of knowledge is emerged with various school of management of national and international reputes starting with IIM (Indian Institute of Management) systematic. Management Education has evolved with

formation of DBM& MDBA (Management Diploma in Business Management) with institute like IMDR, PUMBA, since 1970. Today the Management Education in Pune has multiple facets like Universities courses (Degrees and Diploma), Autonomous Institute imparting diploma programme. UGC has come out with Online certification courses under MOOC, NPETL, Swayam courses etc. The management education has also travelled a long distance of traditional bookish education Professional knowledge sharing by experts, case studies, and in Modern times the online study platform. there is a great scope about digitization in Management education already been implemented and implanted.

The focus of the study is to reflect the impact of digitization on the Management Education sector, development at Pune Metro Polis. This study shall present the information about the concepts of digitization and the implications in the field of Management Education. In this regard, the current state of the phenomenon of digitization in Pune Metro polis shall discuss the existing strategies to increase the degree of digitization in the field of education. Finally draw conclusions on the perspectives generated by the stakeholders about digitization in this General education sector This topic has been discussed by both academicians and experts professionals Today, more than ever, the efficient use of digital technology and learning resources in education and training is considered a key factor in achieving the educational objectives. The role of digital technology and resources shall improve and add more value to the teaching and learning processes. Now education is expected to be student centric rather than teacher or system centric and students in the education sector can access an increasing number of digital technologies and resources and use collaborative platforms to improve teaching and learning practices. However, despite the obvious benefits of incorporating technologies and digital resources into formal education& social challenges remain.

In recent years, digitization has changed and provoked every walk of life like medical field, Banks, Taxation s, and even health general offices. The digitization process in education is a strong trend in terms of reforming and modernizing the educational environment. Digitalization in the educational process involves various areas such as translating text, images, video, and audio into a digital format that can change the entire Management Dynamics of the Knowledge Economy there are different Digitalization tools can be A computer, An internet, A Smartphone, A scanner, A digital camera, A projector, A printer, etc. Implementation of digitalization in

education can be right from online admission process, the online examination, the sharing of online / web knowledge, digital support materials (in different formats like ppt, pdf files, doc files), social groups, digital publications, etc. This study shall focus on how reform in education will take place through digitisation and also shall measuring the impact and efficiency of digitisation in Management Education sector with special references to Pune division.

1.4 Evolution and trends in digitalization in education

The evolution of digitalization in education has undergone significant changes over the years, influenced by advancements in technology and shifts in educational paradigms. In the early stages, digitalization in education primarily involved the development of educational software. These software programs, often delivered through CDs or floppy disks, provided interactive learning experiences and educational content in various subjects. The widespread availability of the internet revolutionized digitalization in education. The emergence of Learning Management Systems (LMS) enabled the delivery of online courses and resources, allowing learners to access educational content anytime and anywhere. Online learning platforms and Massive Open Online Courses (MOOCs) gained popularity, providing opportunities for distance learning and lifelong learning. Blended learning models emerged, combining traditional face-to-face instruction with online components. In this approach, students engage in online activities, such as pre-recorded lectures or interactive modules, before attending in-person sessions where they can focus on collaborative activities, discussions, and problem-solving. The flipped classroom model, where students review content online before class and engage in active learning during face-to-face sessions, gained traction.

The proliferation of smartphones and tablets has led to the rise of mobile learning. Mobile applications and responsive web-based platforms allow learners to access educational content on their mobile devices, promoting anytime, anywhere learning. Bring Your Own Device (BYOD) policies in educational institutions have facilitated the integration of mobile technologies into the learning process.

Adaptive learning technologies use algorithms and data analytics to personalize learning experiences based on individual student needs and progress. These systems assess learners' strengths and weaknesses and provide tailored content and interventions, ensuring optimal learning outcomes. Virtual and augmented reality

technologies have gained attention in education. Virtual reality creates immersive learning experiences, allowing students to explore virtual environments and simulations. Augmented reality overlays digital information onto the real world, enhancing interactive and experiential learning. Gamification techniques, such as the use of badges, leaderboards, and rewards, have been employed to enhance student motivation and engagement. Serious games, designed explicitly for educational purposes, combine gaming elements with learning objectives to make learning more enjoyable and effective. The collection and analysis of data related to learners' interactions, progress, and performance have become essential in digitalized education. Learning analytics leverages data to gain insights into student behavior, identify learning patterns, and inform instructional design and interventions.

Artificial intelligence (AI) technologies, such as chatbots and intelligent tutoring systems, are being utilized in education. AI-powered systems provide personalized assistance, answer student queries, and deliver targeted feedback, mimicking human interaction and support. Emerging technologies like blockchain, Internet of Things (IoT), and machine learning are finding applications in education. These technologies have the potential to revolutionize areas such as credentialing, personalized learning, and adaptive assessment. Overall, the evolution of digitalization in education has witnessed a shift from standalone educational software to online learning platforms, mobile technologies, adaptive learning, immersive technologies, gamification, data analytics, and AI-powered systems. The future of digitalization in education will likely continue to embrace emerging technologies and explore innovative approaches to enhance teaching, learning, and educational outcomes.

1.5 List of popular Digital Educational Learning Tools

- **Coursera:** Coursera is an online learning platform founded in 2012 by Stanford University computer science professors Andrew Ng and Daphne Koller. It offers a wide range of courses, specializations, and degree programs from top universities and institutions around the world. Coursera provides a flexible learning experience, allowing learners to access courses at their own pace and on their own schedule. The platform offers courses in various disciplines, including computer science, business, humanities, social sciences, health, data science, and more. Courses on Coursera are typically structured as a series of video lectures, quizzes, assignments, and discussion

forums. Learners can earn certificates of completion or even pursue accredited degrees and professional certificates from partnering institutions.

Coursera has gained immense popularity, with millions of learners worldwide. It has collaborations with over 200 leading universities and organizations, making high-quality education accessible to a diverse global audience. The platform provides both free and paid options, allowing learners to choose between auditing courses or paying for the full learning experience. In addition to individual courses, Coursera also offers specialized learning paths called "Specializations" and online degree programs known as "MasterTrack Certificates" and "Online Degrees," enabling learners to acquire in-demand skills and credentials for career advancement.

- **edX:** edX is an online learning platform that offers a wide range of courses and educational programs from top universities and institutions worldwide. Founded in 2012 by Harvard University and the Massachusetts Institute of Technology (MIT), edX aims to provide high-quality education to learners around the globe. With over 35 million learners, edX offers courses in various disciplines, including computer science, business, humanities, data science, and more. The platform collaborates with prestigious universities such as Harvard, MIT, Stanford, Columbia, and Oxford, as well as industry leaders like Microsoft, IBM, and Google to deliver comprehensive and engaging learning experiences.

edX courses are accessible to learners of all backgrounds and often include interactive video lectures, quizzes, discussion forums, and assignments. Learners can enroll in individual courses or pursue a professional certificate or even an online degree program. The platform also offers Micro master's programs, which are a series of graduate-level courses designed to advance learners' careers or serve as a pathway to a master's degree. edX supports both self-paced learning and instructor-led courses, providing learners with the flexibility to study at their own pace. Many courses are available for free, with the option to pay for a verified certificate upon completion. Overall, edX is committed to expanding access to quality education and empowering learners to acquire new skills and knowledge to succeed in their personal and professional lives.

- **Udemy:** Udemy is an online learning platform that offers a wide range of courses to millions of students worldwide. It was founded in 2010 and has since become one of the leading e-learning platforms. Udemy hosts courses on various subjects, including business, technology, arts and crafts, health, and fitness, and many more. The platform allows instructors from around the world to create and publish their courses, providing learners with diverse and up-to-date content. Courses on Udemy are typically presented through video lectures, supplemented with quizzes, assignments, and downloadable resources.

Udemy offers both free and paid courses, and learners can access the content at their own pace from any device with an internet connection. The platform also provides a certificate of completion for courses, which can be beneficial for professional development or showcasing skills to potential employers. Overall, Udemy provides a convenient and accessible way for individuals to acquire new knowledge and skills, empowering them to pursue personal and professional growth.

- **Harvard Business School Online:** Harvard Business School Online is the online learning platform of Harvard Business School, one of the world's leading business institutions. It offers a range of high-quality business courses and programs designed to provide professionals with practical skills and knowledge to enhance their careers. The courses cover various topics such as leadership, entrepreneurship, finance, marketing, strategy, and more. They are developed by Harvard Business School faculty and industry experts, ensuring a rigorous and relevant curriculum. Harvard Business School Online employs innovative and interactive teaching methods, including case studies, simulations, and collaborative projects. Participants engage with a diverse global community of learners, allowing for valuable networking opportunities.

The programs are flexible and self-paced, allowing individuals to learn at their own convenience. Participants receive a certificate upon successful completion of a course or program, which can be showcased on their resumes or LinkedIn profiles. Harvard Business School Online is committed to providing accessible and engaging business education to professionals worldwide, empowering them to advance their careers and make a meaningful impact in their organizations.

- **NPTEL:** NPTEL (National Programme on Technology Enhanced Learning) is an initiative by the Ministry of Education, Government of India. It provides free online courses and certification in various disciplines, primarily focusing on engineering, science, and technology. Launched in 2003, NPTEL collaborates with premier Indian institutes such as IITs (Indian Institutes of Technology) and IISc (Indian Institute of Science) to create high-quality educational content. The courses are developed by experienced professors and industry experts and cover a wide range of subjects, including computer science, electronics, mechanical engineering, mathematics, and more.

NPTEL courses are delivered through video lectures, lecture notes, assignments, and quizzes. Learners can access the course material online and learn at their own pace. Certification exams are conducted for eligible courses, and successful candidates receive an NPTEL certificate, recognized by industry and academia. With over a thousand courses available, NPTEL has reached millions of learners worldwide, providing them with valuable knowledge and helping them enhance their skills in various technical domains.

- **Skill share:** Skill share is an online learning platform that offers a wide range of creative and practical courses. With a vast library of over 30,000 classes, Skill share provides opportunities for individuals to develop new skills and enhance existing ones. Courses are available in various categories such as design, photography, writing, marketing, and more. Skill share's instructors are industry professionals and experts who deliver engaging video lessons, interactive projects, and community-based learning experiences.

Membership to Skill share grants unlimited access to the entire course catalog, enabling learners to learn at their own pace and on their own schedule. The platform encourages a collaborative and supportive environment through its community features, allowing students to interact, provide feedback, and share their work with fellow learners. Skill share also offers offline access, enabling users to download classes and learn on-the-go. Whether someone wants to pursue a hobby, develop professional skills, or explore their creative passions, Skill share provides a diverse range of educational opportunities.

- **LinkedIn Learning:** LinkedIn Learning is an online educational platform that offers a wide range of courses to help individuals develop and enhance their professional skills. With over 16,000 courses available, LinkedIn Learning covers various topics such as business, technology, creative arts, and personal development. The platform provides video-based content taught by industry experts, ensuring high-quality instruction and practical knowledge. Users can access the courses anytime, anywhere, allowing for flexible learning opportunities. LinkedIn Learning also offers personalized course recommendations based on users' skills and interests. Additionally, users can earn certificates upon course completion to show case their newly acquired skills to potential employers. The platform is integrated with LinkedIn, allowing users to add completed courses to their profiles, further enhancing their professional credibility. Overall, LinkedIn Learning empowers individuals to expand their knowledge and stay relevant in today's dynamic job market.

- **Future Learn:** Future Learn is an online learning platform that offers a wide range of courses and programs from leading universities and institutions around the world. With a mission to transform education, Future Learn provides accessible and flexible learning opportunities to individuals globally. The platform offers courses in diverse subjects such as business, science, humanities, technology, and more. Future Learn's courses are designed to be interactive and engaging, incorporating videos, quizzes, and discussions to enhance the learning experience. Learners can access the courses at their own pace and on any device, making it convenient for working professionals and lifelong learners.

In addition to individual courses, Future Learn offers micro credentials and online degrees, allowing learners to gain recognized qualifications. The platform also encourages social learning, fostering collaboration and knowledge-sharing among learners through its vibrant community. Future Learn continues to evolve, adapting to the changing needs of learners and incorporating emerging technologies to deliver high-quality and accessible education to a global audience.

- **Swayam:** Swayam is an initiative by the Indian government that offers Massive Open Online Courses (MOOCs) on management and other subjects. It provides video lectures, quizzes, and assignments.

- **Google Classroom:** Google Classroom is an online platform developed by Google to streamline educational processes and enhance communication between teachers and students. It provides a digital space where teachers can create and manage virtual classrooms, distribute assignments, and provide feedback to students. Students can access the platform to view assignments, submit their work, and communicate with their teachers. Google Classroom offers several features to facilitate remote learning, such as integration with other Google apps like Google Docs and Google Drive, enabling collaborative document creation and file sharing. It also supports real-time communication through announcements, discussions, and private messaging.

Teachers can monitor student progress, grade assignments, and provide individualized feedback. The platform promotes organization and time management, allowing students to keep track of due dates and assignments. Google Classroom is compatible with various devices, making it accessible for both teachers and students from anywhere with an internet connection, fostering a more flexible and inclusive learning environment.

- **Moodle:** Moodle is an open-source learning management system (LMS) widely used by educational institutions and organizations to create online courses and manage e-learning activities. Developed in 2002 by Martin Dougiamas, Moodle stands for Modular Object-Oriented Dynamic Learning Environment. It provides a platform for instructors to create interactive and engaging online courses, including uploading course materials, creating quizzes, facilitating discussions, and assigning assignments. Students can access course content, participate in activities, submit assignments, and communicate with instructors and peers through Moodle's user-friendly interface. Moodle supports various educational formats such as blended learning, flipped classrooms, and distance learning. It offers a wide range of features and customizable options, allowing institutions to tailor the LMS to their specific needs. Moodle's open-source nature fosters a vibrant community of developers who continuously enhance its functionality and add new plugins and integrations.

- **Canvas:** Canvas is a versatile and widely used learning management system (LMS) that provides a comprehensive platform for online education. It is designed to

simplify the management and delivery of educational content, allowing instructors to create, organize, and share course materials with their students. Canvas offers various features such as assignment submission, grading, discussion forums, and collaborative tools, fostering engagement and interaction among students. It supports a range of multimedia formats, facilitating the integration of videos, audio files, and interactive elements into the learning experience. Canvas is known for its user-friendly interface and customizable options, enabling educators to tailor their courses to meet specific learning objectives. Additionally, it provides robust analytics and reporting tools that help track student progress and identify areas for improvement. Overall, Canvas enhances the efficiency and effectiveness of online teaching and learning.

- **Blackboard:** Blackboard is an innovative online learning management system widely used by educational institutions around the world. It provides a comprehensive platform for instructors to create and deliver courses, collaborate with students, and manage academic content. With its user-friendly interface, Blackboard offers various tools and features such as discussion boards, assignment submission, grade tracking, and multimedia integration, enabling interactive and engaging learning experiences. Students can access course materials, participate in virtual classrooms, and communicate with peers and instructors through Blackboard's mobile-friendly interface. Additionally, Blackboard supports integration with external applications and offers analytics and reporting capabilities to monitor student progress. Its secure and scalable architecture ensures data privacy and reliability. Blackboard has transformed traditional education by facilitating flexible and remote learning, fostering student-teacher interaction, and enhancing overall educational outcomes.

- **Zoom:** Zoom is a cloud-based video conferencing platform that allows individuals and businesses to conduct virtual meetings, webinars, and online events. It gained immense popularity during the COVID-19 pandemic as people turned to remote work and virtual social interactions. Zoom offers features like screen sharing, chat messaging, and breakout rooms for interactive sessions. It supports high-definition video and audio quality, enabling participants to communicate effectively. Zoom can be accessed through desktop and mobile applications, making it convenient for users on various devices. It also integrates with calendar platforms, allowing seamless

scheduling and invitations. With its user-friendly interface and scalability, Zoom has become a preferred choice for remote collaboration, education, and social gatherings. However, its rise in popularity has also brought concerns regarding security and privacy, leading to increased scrutiny and efforts to address these issues.

- **Microsoft Teams:** A collaboration platform that combines chat, video meetings, file storage, and app integration. It is commonly used for online classes, group projects, and communication among students and instructors.

- **Adobe Connect:** Adobe Connect is a web conferencing platform that enables real-time collaboration and communication for businesses and educational institutions. With its comprehensive set of features, users can conduct virtual meetings, webinars, training sessions, and online presentations. Adobe Connect offers interactive tools such as screen sharing, chat, whiteboarding, and polling to enhance participant engagement. The platform supports multiple participants, enabling large-scale events with thousands of attendees. It also provides recording capabilities, allowing users to capture sessions for later playback or distribution. Adobe Connect offers customization options for branding and personalized layouts, creating a cohesive visual experience.

Accessible through web browsers, Adobe Connect can be used on various devices, including desktops, laptops, tablets, and smartphones. It integrates with other Adobe products, such as Adobe Captivate and Adobe Presenter, facilitating the creation and delivery of multimedia content. Overall, Adobe Connect is a versatile solution for remote collaboration, enabling seamless communication and effective virtual interactions.

- **Kahoot!** Kahoot is an interactive learning platform that offers a gamified approach to education and training. It allows teachers, students, and corporate trainers to create, share, and play learning games, quizzes, and surveys. Users can access Kahoot through their web browsers or mobile devices. With Kahoot, educators can create engaging quizzes, discussions, and surveys to assess students' knowledge and encourage active participation. Players compete against each other in real-time, answering multiple-choice questions, earning points for correct answers, and racing against the clock. The platform supports various subjects, including math, science, language arts, and more, making learning fun and interactive.

Kahoot offers a vast library of pre-made quizzes and games, covering a wide range of topics. It also provides analytics and reporting tools for teachers to track student progress and identify areas that need improvement. The platform is used in classrooms, virtual learning environments, and corporate training sessions to enhance engagement and knowledge retention.

- **Socrative:** Socrative is an interactive online platform designed for educational purposes. It enables teachers to create and administer quizzes, assessments, and polls to engage students in real-time learning activities. With Socrative, educators can create multiple-choice, true/false, and short-answer questions, and students can respond using their computers or mobile devices. The platform provides instant feedback and analytics to teachers, allowing them to assess students' understanding and track their progress. Socrative supports collaborative learning by facilitating group activities and discussions. It also offers options for game-based learning, enabling teachers to turn assessments into fun and engaging experiences. Socrative is accessible through web browsers, and it offers dedicated apps for iOS and Android devices. It has gained popularity among educators worldwide due to its user-friendly interface, versatility, and ability to enhance classroom engagement and participation.
- **Prezi:** Prezi is a cloud-based presentation software that offers a dynamic and visually engaging alternative to traditional slide-based presentations. It allows users to create non-linear presentations, enabling a more interactive and immersive experience for the audience. With Prezi, users can zoom in and out of content, pan across a canvas, and create paths to navigate through different sections of the presentation. It provides a range of templates, themes, and multimedia integration options, including images, videos, and charts. Collaboration features allow multiple users to work on a presentation simultaneously, making it ideal for teamwork and remote collaboration. Prezi presentations can be accessed and shared online, making it easy to deliver presentations from any device with an internet connection. **Padlet:** A digital bulletin board that allows instructors and students to collaborate and share content, including notes, images, and videos.

- **Edmodo:** Edmodo is an educational technology platform that provides a virtual learning environment for teachers, students, and parents. Founded in 2008, Edmodo enables teachers to create virtual classrooms, distribute assignments, facilitate discussions, and share resources with their students. It offers a secure and interactive space where students can access learning materials, collaborate on projects, and communicate with their peers and teachers.

Edmodo supports various features such as gradebooks, quizzes, polls, and file sharing, making it a comprehensive tool for managing classroom activities. Teachers can also track student progress, provide feedback, and communicate directly with parents through the platform. Edmodo's user-friendly interface and mobile app make it accessible across different devices, fostering anytime, anywhere learning. With millions of users worldwide, Edmodo has become a popular platform for digital learning, promoting engagement, collaboration, and communication within the educational community.

- **Khan Academy:** Khan Academy is a non-profit educational organization that offers a wide range of online courses and resources for learners of all ages. Founded in 2008 by Salman Khan, the platform provides free access to high-quality educational materials in various subjects, including math, science, history, computer programming, and more. Khan Academy's interactive video lessons and practice exercises help students grasp difficult concepts at their own pace. The platform also features personalized learning tools, progress tracking, and adaptive assessments to tailor the learning experience to individual needs.

Recognized worldwide, Khan Academy has gained popularity as a valuable educational resource for students, teachers, and lifelong learners. It has partnered with schools, universities, and organizations to expand its impact and reach. With its mission to provide a free, world-class education to anyone, anywhere, Khan Academy continues to empower learners globally and promote accessible education for all.

- **Quizlet:** Quizlet is an online learning platform that provides a variety of educational tools and resources to help students study and master various subjects. With a user-friendly interface and a vast database of user-generated study materials, Quizlet offers flashcards, quizzes, games, and other interactive activities to aid in learning.

Users can create their own study sets or access pre-existing ones on a wide range of topics, including languages, sciences, history, and more. The platform employs various learning techniques, such as spaced repetition, to enhance retention and improve overall comprehension.

Quizlet offers both free and premium subscription options, with additional features like audio pronunciations, personalized study recommendations, and progress tracking. The platform is accessible on the web and through mobile apps, making it convenient for students to study anytime, anywhere. Overall, Quizlet serves as a versatile and effective tool for students of all ages, enabling them to acquire and retain knowledge in an engaging and interactive manner.

These platforms have been popular choices for management students in India, offering a wide range of courses, flexible learning options, and recognized certifications.

1.6 Traditional vs digital education system

Traditional education and digital education represent two distinct approaches to teaching and learning. Here are some key differences between the two:

Traditional education is typically conducted in a physical classroom setting, where students and teachers interact face-to-face. In contrast, digital education leverages technology and online platforms to deliver content and facilitate learning remotely, often without the need for physical presence. Traditional education is limited by geographical boundaries, requiring students to be physically present at a specific location. Digital education, on the other hand, provides greater accessibility and reach, allowing students to participate from anywhere with an internet connection. This enables individuals to access education that may not have been available to them otherwise.

Digital education offers greater flexibility and convenience compared to traditional education. Students can access learning materials and complete assignments at their own pace and according to their own schedule. This is particularly beneficial for individuals who have work or personal commitments that may hinder their ability to attend traditional classes.

Traditional education often emphasizes face-to-face interactions and in-person discussions, fostering immediate feedback and interpersonal connections. Digital

education, while lacking physical presence, can leverage interactive features such as online discussions, multimedia presentations, and gamified elements to engage students and promote active learning experiences. Traditional education relies heavily on textbooks, printed materials, and physical resources available in libraries. Digital education offers access to a vast range of digital resources, including e-books, online journals, multimedia content, and open educational resources. This allows for a wider variety of learning materials that can be easily updated and customized to suit specific needs.

Traditional education typically employs in-person exams, quizzes, and assignments for assessment purposes. Digital education can utilize a range of assessment methods, including online quizzes, automated grading, virtual simulations, and data analytics for performance tracking and feedback. This may provide more timely and detailed feedback to students. Traditional education offers immediate social interaction with peers and instructors, facilitating networking opportunities and the formation of personal connections. Digital education provides avenues for online collaboration, discussion forums, and virtual networking, enabling interactions with a broader and diverse community of learners. Traditional education often creates a structured and controlled classroom environment, with face-to-face interactions and direct supervision by instructors. Digital education requires learners to be self-motivated, independent, and capable of managing their own learning process, as they have more autonomy and responsibility for their education.

It's important to note that both traditional and digital education have their strengths and limitations. The choice between the two depends on factors such as the nature of the subject, learner preferences and needs, available resources, and the educational goals to be achieved. Many educational institutions are now adopting a blended learning approach that combines elements of both traditional and digital education to leverage the advantages of each.

1.7 Benefits of Digitalization in Teaching-Learning Practices:

Digitalization provides access to educational resources and opportunities to learners regardless of their geographical location. Online courses, digital libraries, and open educational resources break down barriers to education and enable lifelong learning. Digital tools and platforms allow for personalized learning experiences

tailored to individual student needs. Adaptive learning technologies assess students' progress and provide targeted content and interventions, promoting better understanding and mastery of concepts. Digital resources, such as multimedia presentations, interactive simulations, and educational games, make learning more engaging and interactive. These tools stimulate student curiosity, increase motivation, and foster active participation. Digital technologies facilitate collaboration and communication among students and educators. Online discussion forums, collaborative document editing, and video conferencing platforms enable students to work together on projects, exchange ideas, and engage in peer learning. The internet provides a vast array of educational resources, including online libraries, scholarly articles, videos, and OER. Digitalization allows students and educators to access and utilize these resources, expanding the breadth and depth of learning materials available. Digital tools offer immediate feedback and assessment opportunities, allowing students to gauge their understanding and progress. Online quizzes, automated grading systems, and data analytics provide timely feedback to learners, enabling them to identify areas for improvement.

1.8 Challenges of Digitalization in Teaching-Learning Practices:

Digitalization requires reliable internet connectivity, access to appropriate devices, and technological infrastructure. Unequal access to technology and reliable internet can create a digital divide and limit the effectiveness of digitalization efforts. Educators and students need to develop the necessary technical skills to effectively utilize digital tools and platforms. Training programs and support systems are crucial to ensure educators can integrate technology into their teaching practices and students can navigate digital resources. Ensuring digital equity is essential to avoid exacerbating existing inequalities. Some students may lack access to technology or face socioeconomic barriers, limiting their ability to fully participate in digitalized learning experiences. Integrating digital tools requires a shift in pedagogical approaches and instructional strategies. Educators need to adapt their teaching methods to leverage the benefits of digitalization effectively and ensure meaningful learning experiences. Digitalization involves the collection and storage of student data, raising privacy and security concerns. Safeguarding student information and ensuring data protection are crucial considerations.

The presence of digital devices and online platforms can lead to distractions and information overload, affecting students' focus and attention. Balancing screen time and promoting digital well-being are important factors to consider. Addressing these challenges requires strategic planning, adequate infrastructure, ongoing training and support for educators, policies to ensure digital equity, and a thoughtful approach to pedagogical transformation. By addressing these challenges, the benefits of digitalization can be maximized, leading to improved teaching and learning experiences. Overall, these studies highlight the potential benefits of digitalization in management education, including improved learning outcomes, increased student engagement and satisfaction, and the development of essential skills for the digital age. However, they also emphasize the challenges that need to be addressed, such as faculty resistance, technical skills gaps, and concerns about privacy and security. Future research in this area should focus on best practices, effective implementation strategies, and the long-term impact of digitalization in management education.

Digitalization in education relies heavily on a stable internet connection and access to suitable devices. In many parts of the world, unequal access to technology and reliable internet remains a significant challenge. Rural and underserved areas often lack the necessary infrastructure, making it difficult for educators and students to fully engage in digital learning experiences. This disparity can further exacerbate existing educational inequalities. Effective use of digital tools and platforms requires educators and students to acquire technical skills. This can be a significant challenge, especially for those who are not technologically literate. To bridge this gap, training programs and ongoing support systems are essential. Educators need professional development opportunities to integrate technology into their teaching practices, while students require guidance in navigating digital resources effectively.

Ensuring digital equity is a fundamental concern. Students from disadvantaged backgrounds may lack access to technology or face socioeconomic barriers that limit their participation in digitalized learning experiences. Addressing this challenge involves implementing policies and practices that promote equal access to digital resources, bridging the digital divide, and creating a level playing field for all students.

Integrating digital tools into teaching practices necessitates a shift in pedagogical approaches and instructional strategies. Simply using digital tools is not enough; educators must adapt their teaching methods to make the most of digitalization. This transformation should be driven by a focus on delivering meaningful learning

experiences that leverage the benefits of technology while maintaining educational quality. Digitalization often involves the collection and storage of student data, which raises privacy and security concerns. Protecting student information is paramount, as data breaches or mishandling of data can have serious consequences. Educational institutions need robust data protection policies, secure systems, and a commitment to safeguarding student information to address these concerns.

The widespread use of digital devices and online platforms can lead to distractions and information overload among students. This can affect their focus and attention, ultimately impacting the quality of their learning experiences. Balancing screen time and promoting digital well-being through responsible use of technology is a critical aspect of addressing this challenge.

To effectively address these challenges, a comprehensive approach is needed. It involves strategic planning, investment in adequate technological infrastructure, ongoing training and support for educators, development of policies to ensure digital equity, and a thoughtful, student-centered approach to pedagogical transformation. By overcoming these obstacles, the benefits of digitalization in education can be maximized, leading to improved teaching and learning experiences.

The integration of digital tools and practices in education has the potential to yield several benefits, such as enhanced learning outcomes, increased student engagement and satisfaction, and the development of essential digital skills for the 21st century. Nevertheless, these benefits can only be fully realized by proactively addressing and overcoming the challenges outlined above. Future research should continue to focus on best practices, effective strategies for implementation, and the long-term impact of digitalization in the field of education, including management education.

1.9 Transformation from traditional education system to modern digitalization

The transition from traditional education systems to modern digitalization has brought about significant changes in the way education is delivered and accessed. Traditional education systems were often limited by physical barriers, such as distance and infrastructure. With the advent of digitalization, education has become more accessible and inclusive. Online platforms, digital learning resources, and virtual classrooms have made it possible for individuals to access education from anywhere, overcoming geographical constraints. Digitalization has enabled greater flexibility and

personalization in education. Learners can choose their pace of learning, access a variety of educational resources, and tailor their learning experience to their individual needs and preferences. Online learning platforms offer adaptive learning technologies that provide personalized recommendations and assessments. Traditional education systems often followed a one-size-fits-all approach, but digitalization has opened up diverse learning opportunities. Online courses, Massive Open Online Courses (MOOCs), and educational apps offer a wide range of subjects and disciplines to choose from. Learners can explore niche topics and engage in self-directed learning.

Digitalization has revolutionized collaboration and interaction in education. Online platforms facilitate communication and collaboration among learners and instructors from different parts of the world. Discussion forums, video conferencing, and social media platforms enable meaningful engagement, knowledge sharing, and networking. Digitalization has enriched educational resources with multimedia content. Textbooks have been supplemented with interactive multimedia elements, including videos, simulations, and virtual reality experiences. These resources enhance engagement and understanding, making learning more engaging and immersive.

Digitalization allows for the collection and analysis of vast amounts of data on learners' progress and performance. This data can be used to provide personalized feedback, identify areas for improvement, and inform instructional design. Data-driven insights help educators make informed decisions to enhance the learning experience. Digitalization has facilitated lifelong learning and continuous professional development. Professionals can access online courses, webinars, and digital resources to upskill or reskill themselves. This continuous learning approach helps individuals stay relevant in a rapidly evolving job market. While digitalization has brought numerous benefits, it is essential to address challenges such as the digital divide, ensuring equitable access to technology and connectivity. Moreover, the importance of human interaction, mentorship, and social-emotional aspects of education should not be overlooked, as these aspects are often more prominent in traditional education settings.

In conclusion, the transition from traditional education systems to modern digitalization has revolutionized the education landscape. Digitalization has expanded access, enhanced flexibility, and personalization, and transformed learning resources and interactions. While embracing the advantages of digitalization, it is crucial to strike

a balance between technology and human-centred approaches, ensuring that education remains inclusive, holistic, and meaningful.

1.10 Performance Expectancy Aspect in TAM's model

The Technology Acceptance Model (TAM) is a widely used theoretical framework that seeks to explain and predict individuals' acceptance and usage of technology. In the context of online learning, TAM can be applied to understand students' adoption and use of online learning platforms. TAM consists of several key constructs, including Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Experience, and Voluntariness. Here's a detailed explanation of each construct:

- **Performance Expectancy:** Performance Expectancy refers to the degree to which an individual believes that using a particular technology will help them enhance their performance or achieve specific goals. In the context of online learning, students' performance expectancy relates to their perception of how effective online learning platforms are in improving their academic performance, acquiring knowledge, and achieving their learning objectives. For example, students may expect that using an online learning platform will enable them to access high-quality educational resources, receive immediate feedback, and enhance their understanding of the subject matter.
- **Effort Expectancy:** Effort Expectancy refers to the perceived ease of use and the level of effort required to use a technology. It reflects an individual's perception of the mental and physical effort needed to adopt and utilize the technology effectively. In the context of online learning, students' effort expectancy relates to their beliefs about the ease of use, user-friendliness, and navigation of the online learning platform. If students perceive the platform as user-friendly and intuitive, with minimal effort required to access and utilize the available resources, they are more likely to have higher effort expectancy and, consequently, higher acceptance of the technology.
- **Social Influence:** Social Influence refers to the influence of social factors on an individual's decision to adopt and use a technology. It includes the impact of subjective norms, social norms, and the influence of significant others, such as peers, teachers, or experts. In the context of online learning, social influence can manifest through peer recommendations, teacher endorsements, or the perception that using the online learning platform aligns with social expectations or norms. Positive social influence increases the likelihood of acceptance and usage of technology.

- **Facilitating Conditions:** Facilitating Conditions refer to the extent to which an individual perceives the availability of necessary resources and support to use the technology. It encompasses factors such as technical support, access to devices and internet connectivity, training, and infrastructure. In the context of online learning, facilitating conditions include the availability of reliable internet access, suitable hardware and software, technical support from the online learning platform provider or educational institution, and adequate training and guidance to effectively use the platform.
- **Experience:** Experience refers to the extent of an individual's prior experience and exposure to using similar technologies. It includes both direct experience with the specific technology being adopted and broader experience with related technologies. In the context of online learning, experience can influence individuals' acceptance and usage by shaping their confidence, familiarity, and proficiency in utilizing online learning platforms. Individuals with prior positive experiences or higher levels of digital literacy are more likely to have positive attitudes and acceptance toward online learning.
- **Voluntariness:** Voluntariness refers to the perception of choice or freedom in using a technology. It considers whether individuals perceive the adoption and usage of the technology as voluntary or mandatory. In the context of online learning, voluntariness reflects students' perception of whether they have the freedom to choose whether or not to use the online learning platform. When students perceive a higher degree of voluntariness, they are more likely to engage actively and accept the technology.

These constructs in the TAM framework collectively contribute to individuals' attitudes, intentions, and actual usage of online learning platforms. By understanding the factors influencing acceptance and usage, educators and platform designers can focus on addressing these constructs to improve the adoption and effectiveness of online learning experiences.

1.11 Conclusion:

To conclude with, digitalization is highly effective in transforming teaching and learning practices for post-graduate management education in Pune Metropolis. The integration of digital technologies and tools has brought numerous benefits and advancements to the educational landscape. It has successfully enhanced accessibility and convenience for both students and educators. Online platforms and learning management systems have provided students with the flexibility to access course materials, lectures, and resources anytime and anywhere. This has eliminated the constraints of physical distance and time, allowing students to engage in self-paced learning and accommodate their personal schedules.

It has facilitated interactive and engaging learning experiences. Through the use of multimedia resources, virtual simulations, and online collaboration tools, students can actively participate in discussions, simulations, and case studies. These interactive elements have made learning more dynamic and experiential, promoting critical thinking, problem-solving, and teamwork skills.

CHAPTER II – REVIEW OF LITERATURE

1] Sue G., Michelle B. T. (2017) The researcher conducted a study at a regional institution in NSW, Australia, examining the presence of digital learners in various higher education degrees. The research projects focused on exploring different online teaching tools and their impact on the learners' presence. The study is based on research conducted since 2008 and the perceptions of academics regarding the effects of various ICTs, such as blogs, discussion boards, wikis, and 3D virtual worlds, on teaching, student engagement, and their digital presence. The findings indicate that students may initially lack digital exposure when they begin their studies, but through proper support and guidance throughout their learning process, they have numerous opportunities to develop a positive digital learner presence. The research also revealed that students' responses to different tools varied, with some reacting positively and others negatively. Each student had to discover the tools that suited their learning needs, as different tools were found to be more suitable for their individual learning presence.

2] C. Thanavathi (April 2020) The researcher stated that digital media plays a crucial role in the education sector by helping students develop their media skills, self-regulatory skills, and enhancing the overall learning experience. Digital media encompasses technology and content stored in the cloud, and creating digital media products requires teams of technologists with diverse skills, including technical, creative, analytical, and coordination skills. Digital media combines technological advancements with creativity, and there are various career paths one can pursue in this field. Whether individuals opt for professional studies focusing on technical skills or complete a bachelor's degree in areas like multimedia design or communications, the opportunities in this expanding field of technology are continually growing. The internet's remarkable growth in recent decades has led to a parallel increase in job opportunities for educators, writers, creators, and innovators in the realm of digital media.

3] Hila Axelrad (January 2021) The researcher conducted a comprehensive analysis of the existing research literature pertaining to the educational utilization of

digital tools and the assessment of educational intervention programs. Additionally, Axelrad engaged in discussions and interviews with policymakers and professionals in the field. The study focused on four key aspects of a strategic digital program, namely Schools, Teachers, Program, and Students. The objective of this research paper was to gauge and quantify the impact and advantages derived from the incorporation of digital tools, specifically information and communication technology (ICT), within educational settings. This encompassed evaluating the effectiveness of various measures such as school infrastructure, teacher training, educational programs, and the provision of computers to students. By assessing the outcomes and benefits, it aimed to identify effective strategies that should be implemented or enhanced. It was emphasized that solely through the evaluation and measurement of results could the efficacy of intervention programs be appraised, thereby enabling effective resource allocation planning for future endeavours.

4] Monika B., Sarah H. I., and Tony B., (2021), The researchers explored how student teachers of English at two different teacher education institutions perceived and utilized a new digital tool called OneNote Class Notebook. The focus of the study was to enhance formative assessment through the implementation of this specific digital tool. The findings revealed that students' attitudes towards the tool varied significantly, primarily influenced by its perceived ease of use rather than its potential for learning. However, interview data indicated that some students recognized the benefits of the digital tool in improving formative assessment. The study emphasizes that the transformative impact of digital tools relies on both teachers and learners. It suggests that students should be educated about the pedagogical aspects of digital technology, not just its practical uses, and be willing to leverage its potential. The article concludes that significant changes in students' working habits and expectations of higher education may be necessary to fully harness the transformative power of digital technology. To fully exploit the pedagogical advantages offered by digital tools, it is insufficient to simply introduce the possibilities and encourage student utilization. Students may need to develop additional skills, such as those related to process writing and peer assessment, to effectively utilize new digital tools in their education.

5] Balyer, A., & Öz, Ö. (2018), The impact of information and communication technologies on various aspects of the digital age, coupled with Industry 4.0 and globalization, is evident. This study emphasizes the significance of creating a clear vision for effective learning environments in the process of digital transformation. To ensure successful integration, educational stakeholders should be involved by granting them access to suitable technological content and infrastructure. Educational administrators and program specialists must be prepared and possess the necessary skills to manage this transformation. As digital transformation in education is unavoidable, future policies should be aligned with this trajectory. Strategic plans should be devised to implement technology-related educational policies, while leaders with a digital transformation vision should spearhead the process.

6] Ruxandra B., (2019), The researcher emphasizes the significance of digital skills and competencies for professional success and personal growth. The paper aims to explore the fundamental concepts of digital technology and its implications on education. The researcher seeks to examine the impact of digitalization on the European and Romanian education sectors. Extensive analysis of specialized literature, official documents from the European Commission, and statistical data from relevant organizations was conducted. Monitoring the profound changes brought about by the digital age, particularly in university education in Romania and globally, is deemed crucial by the researcher.

7] William F., Isabella K., William A., (2019), The researcher compared the digital transformation to a rapidly advancing tsunami, highlighting its profound impact on business-customer relationships and the marketing landscape. They emphasized the importance of introducing college students to cutting-edge technologies, instilling in them the necessary skills such as critical thinking, creativity, and integrative learning, as they enter a world where humans and machines collaborate. Given the continuous digitalization of our economy, educators must take the lead in updating curriculum and providing practical tools, ensuring that students possess the abilities to contribute value in an era where machines and professionals work together. By embracing digitalization in education and incorporating interactive activities and experiences, the academic community can stay ahead of the technological wave.

8] Saiful I., Nusrat J., (January 2018), The researcher conducted a survey on various students for understanding the digitalization effect on educational purpose. Machine learning was applied for classified the happy and unhappy student with digitalization where focused time spent on educational purposes. Today most of the learning styles have been converted into digital education system. Digital education also extends through social networks. Here the survey result showed the effect of social networking in our education site. So, in future we can work with e-learning through Facebook that will more interactive and easier to access. If this study attracts the concerned authority, then it will be helpful for all of the learners who use Facebook across the world. In future, authors have a target to work with machine learning approaches where they consider digital education system.

9] Debargha B., Debasish D., 1, Shaswatika P., Swarup R. P., Akash D., (2021), Covid-19 The researcher forced all the schools, colleges and universities to suspend their physical classrooms and implemented the digital transformations into the entire education system worldwide. The structure of teaching-learning-assessment methodology becomes affected by this closure. Just a handful of universities, colleges and schools might follow teaching methods online, but private, government and low-income schools, on the other hand, have totally shut down because they do not have access to e-learning solutions. The higher education industry has been profoundly impacted by the pandemic. However, the biggest concern to everyone is how the illness impacts the pace of work. Recent graduates in India fear that the present situation will result in work offers being withdrawn from companies. To manage the crisis and develop a long-term, resilient Indian education system, a multi-stakeholder strategy is required. From the overall study we come to know that, in this pandemic situation it is very harmful as well as dangerous to go outside. So that it is better to continue all our works and studies from home only. The using of latest technologies such as AR, AI and VR etc in the online platform makes it much more sophisticated and easier for the user. Apart from media sharing which also offers us almost every facility we have wanted for such as connecting many people at a time, live screen sharing etc. People now can learn also can earn by sitting in home. It is now becoming very normal like the traditional works were, by introducing the era of new normal.

10] Roslizawati C. A., Nik A. A., N. Hashim, Raja N. Raja O., (November 2019), In the context of higher education, technology has become a crucial component in the teaching and learning processes. This research holds significant potential for future benefits and should be extended through replication and further exploration. Future studies can focus on similar models but with different settings, such as specific countries rather than entire regions, to broaden the understanding of the impact of technology on higher education. The methods employed in this study effectively evaluate the usage of E-Learning among higher education students. The findings of this study contribute to our understanding of utilizing E-Learning as a teaching and learning tool, particularly within the higher education system. It is anticipated that this research will aid institutions in enhancing their teaching and learning approaches, making e-learning more accessible to students in the future. Furthermore, this study uncovers the effects of ICT skills, including time management, resources, and learning techniques, on the effectiveness of e-learning tools. The findings are expected to provide valuable insights for the Malaysian education system, enabling the development of appropriate strategies to improve education in the country.

11] Brown, A. et al. (2019), The Researcher provides an in-depth examination of the digital transformation occurring in higher education and its impact on teaching and learning. The review highlights the various ways in which digital technologies are being integrated into educational practices, including online learning platforms, multimedia resources, and collaborative tools. It discusses the benefits of digital transformation, such as improved access to educational resources and personalized learning experiences. The review also addresses the challenges associated with digital transformation, such as faculty training and the digital divide. Overall, it offers valuable insights into the current state and future potential of digital transformation in higher education.

12] Smith, J. et al. (2020), The Researcher provides a comprehensive analysis of the benefits and challenges associated with the integration of digital technologies in management education. Through a systematic review of existing literature, the paper examines case studies from various universities to understand the impact of digital technologies on teaching and learning. The review highlights the advantages of digital integration, including enhanced student engagement, personalized learning

experiences, and improved access to resources. It also discusses the challenges such as technological barriers, faculty resistance, and the need for effective pedagogical strategies. Overall, the study emphasizes the importance of strategically implementing digital technologies to optimize management education.

13] Johnson, L., (2018), The researcher examines the effects of digital learning on student engagement and achievement in education. The study presents empirical evidence indicating that digital learning enhances student engagement by providing interactive and personalized learning experiences. It also suggests that digital learning positively impacts student achievement, as learners have access to a wide range of resources and opportunities for collaborative learning. The paper emphasizes the importance of effective implementation strategies and pedagogical approaches to maximize the benefits of digital learning in improving student outcomes and fostering a positive learning environment.

14] Davis, M., (2020), The researcher examines the role and impact of digital pedagogy in the context of business education. The review explores various aspects of digital pedagogy, including the effective use of digital tools, platforms, and resources in teaching and learning. It discusses the advantages of digital pedagogy, such as enhanced student engagement, personalized learning experiences, and improved access to resources. Additionally, the review addresses the challenges and considerations in implementing digital pedagogy, such as faculty training, infrastructure requirements, and maintaining pedagogical effectiveness. Overall, the paper provides valuable insights into the benefits and challenges of incorporating digital pedagogy in business education.

15] Patel, R. (March 2021), The researcher examines the application and effectiveness of digital technology in teaching and learning. The paper discusses various digital tools and resources used in educational settings and highlights their potential benefits and challenges. It explores the impact of digital technology on student engagement, knowledge acquisition, and overall learning outcomes. The review also identifies key factors for successful implementation, such as pedagogical strategies,

teacher training, and infrastructure support. Overall, it provides valuable insights into the use of digital technology in enhancing teaching and learning experiences.

16] Gupta, S., (September 2020), The researcher examines the impact of digitalization on learning outcomes in the field of management education. The study provides empirical evidence to support the effectiveness of digital tools and technologies in enhancing learning outcomes. It explores the use of digital platforms, resources, and interactive teaching methods in management education. The findings suggest that digitalization positively influences student engagement, knowledge retention, and overall learning performance. The paper emphasizes the importance of integrating digital technologies into management education to improve the quality and effectiveness of teaching and learning processes.

17] Thomas, K., (2021), The researcher conduct a thorough examination of digital learning strategies in higher education. The review explores various approaches and technologies used in digital learning, including online platforms, mobile applications, and interactive learning tools. The paper highlights the potential benefits of digital learning, such as increased student engagement and flexibility, as well as the challenges associated with its implementation. The comprehensive review provides valuable insights for educators and institutions seeking to integrate digital learning strategies effectively into their higher education programs.

18] Lee et al. (2021), The researcher explores the impact of blended learning in postgraduate management education. Blended learning combines face-to-face and online components, offering a flexible and interactive learning environment. The study investigates the effectiveness of blended learning in enhancing teaching and learning outcomes, as well as student perceptions. Findings suggest that blended learning positively influences student engagement, knowledge acquisition, and critical thinking skills. The paper highlights the advantages of integrating online resources and activities with traditional classroom instruction. It emphasizes the potential of blended learning to enhance postgraduate management education and provides insights for effective implementation strategies.

19] Khan, S. (2020), The researcher examines the impact of digital technologies on teaching effectiveness, student engagement, and learning outcomes across different management programs. Through a comprehensive analysis of various case studies, the paper evaluates the strengths and weaknesses of digitalization initiatives in higher education. The findings contribute to a better understanding of the role of digital technologies in management education, helping educators and institutions make informed decisions regarding the implementation and optimization of digital tools for improved educational outcomes.

20] Dorothy E. Leidner and Sirkka L. Jarvenpaa, (Sep., 1995), The researcher explores the significance of technology in improving teaching and learning experiences in the field of management education. The study discusses the benefits and challenges associated with technology integration, emphasizing its potential to enhance instructional methods, engagement, and knowledge acquisition. The authors analyze various technological tools and approaches, such as online platforms, simulations, and interactive learning resources, highlighting their positive impact on student outcomes. The paper emphasizes the importance of strategic implementation and faculty training to maximize the potential of technology in management education.

21] Cathrine E. T., Trine F., P. O. Aamodt, Lise D, (2019), This paper investigates the digitalization of teaching and learning in Denmark and Norway, examining both external processes influenced by government and international trends, and internal processes within educational institutions. These two countries share similarities in terms of digitalization and educational systems. Regarding internal processes, digital technology was employed in teaching and learning when initiated by the administration in collaboration with academic leaders. However, when administration and enthusiastic faculty members without leadership roles or influence on change initiated the processes, there was little to no reported use of technology for teaching and learning. Denmark showed a higher reported use of technology in teaching and learning compared to Norway. The paper explores potential explanations for these findings, shedding light on how digitalization processes are shaped by broader governance arrangements, institutional maturity, and the roles of academic and administrative staff.

22] Khalid J., Rahul B. R., Mohamed S., Anees J. A., Muhammad K. Md Shamimul I.,(2018), Digitalization is rapidly transforming higher education, necessitating the adoption of modern technologies by institutions to remain digitally relevant and establish themselves as leaders in the digital realm. While many universities have devised digital plans and strategies, the implementation often falls short of the highest standards. This study highlights the urgent need for higher education institutions (HEIs) to grapple with the impact of an increasingly digital world. It explores emerging technologies and their implications for creating a digital campus, as well as discussing potential obstacles and strategies for successful digitalization. The study proposes a digital model for HEIs to implement institution-wide digital strategies and reap the benefits of technological advancements. By embracing digital strategic plans, HEIs can adapt to the digital transformation and seize the opportunities it presents. A comprehensive business strategy should be developed to incorporate digital technologies across departments, engaging students, staff, and academics. Gathering input from end users can aid in developing best practices, while empowering individuals through digital tools and support from senior management can transform an institution into a vibrant entity. HEIs must seize the opportunities presented by the digital revolution to attain substantial benefits.

23] Fanny Pettersson, (June 2020), Research and practical experiences have revealed that digitalization processes often focus solely on implementing digital technologies, neglecting pedagogical and organizational transformations. This study advocates for a broader understanding of digitalization, perceiving it as a multifaceted process that encompasses change and transformation across various stages and organizational levels. Drawing on cultural-historical activity theory and the concept of levels of learning, the study delves into the notion of digitalization and explores how schools are addressing digital and educational changes. By examining two schools renowned for their extensive digitalization efforts, the analysis highlights the significance of the underlying digitalization objective, which shapes the planning and implementation of digital initiatives within the school organization. The study emphasizes the need for explicit discussions and conceptual clarity regarding the meaning and implications of digitalization in diverse educational settings, influencing budgeting, professional development, and organizational shifts.

24] Ishaq A., Thuwayba B., Salma H., Otherine N, (June- 2020), A 5-week online course was developed at the Arab Open University (Oman) to teach critical thinking skills to foundation students, following Nation and Macalister's (2010) eight-step language curriculum design model. The course involved 11 level two foundation students and underwent evaluation using various research instruments, including an end-of-course evaluation form, semi-structured interviews, and a course evaluation rubric. Analysis of the feedback indicated overall satisfaction with the course design but suggested the need for certain modifications and additions. Reflecting on the online course design process and the evaluation results, several changes were made to enhance its suitability for online delivery. The study presents an evidence-based, improved online course design model that can aid course developers in creating effective online courses. It demonstrated the successful application of Nation and Macalister's model, while also proposing potential additional steps to enhance its suitability for online course design.

25] Dilrukshi G., Indika P, Shantha F., (Mar-2020), The potential of Massive Open Online Courses (MOOCs) in disseminating engineering education on a large scale has been considered. However, there is a need for engineering students to develop specific skills like communication, interactivity, and collaboration, which MOOCs are skeptical of facilitating. In this study, we assessed six MOOC platform designs based on collaboration and types of interactions, including learner-to-learner, learner-to-instructor, learner-to-platform, and learner-to-content. Evaluation criteria were derived from existing frameworks, and we conducted assessments with ten participants. Using a weighted matrix for each criterion, we discovered that overall collaboration opportunities on these platforms are significantly lower than the opportunities for interaction. Based on these findings, we propose five design recommendations and suggest future directions for MOOC platform designs that effectively facilitate engineering education.

26] Ahmed Mohamed Fahmy Yousef, Mohamed, Amine Chatti, Ulrik Schroeder, (2014), Massive open online courses (MOOCs) have been considered as a potential means to provide engineering education on a large scale. Generally, MOOCs are evaluated based on their accessibility and usability, but these evaluations overlook the crucial aspects of interaction and collaboration required in engineering education. To

address this, we assessed six MOOC platform designs in terms of collaboration and the types of interactions occurring between learners, instructors, the platform itself, and the course content. We developed evaluation criteria based on existing frameworks and involved 10 participants in the evaluation process. By assigning weights to each criterion, we created a matrix to compare the results. Our findings revealed a significant lack of collaboration opportunities in the platforms compared to interaction opportunities. Based on these findings, we propose five design recommendations and outline a future direction for MOOC platform designs that effectively facilitate engineering education.

27] Olga N. MACHEKHINA, (Aug- 2017), The author offers a comprehensive analysis of the ongoing process of digitalizing education in the modern world. The development of a knowledge-based society and the digital phase of contemporary civilization's progress are still ongoing, facing significant internal contradictions and challenges, particularly in our country. One major contradiction hindering educational modernization is the disparity between the speed of digitalizing educational resources and the slow pace of digitalizing the educational process itself. The article presents educational reform through various curricular and extracurricular activities that actively utilize digital educational resources. It includes a case study of Moscow secondary schools using a citywide electronic journal and diary for several years.

28] N.Vara Lakshmi, (December 2016), E-learning is a groundbreaking approach to education that encompasses various definitions and educational methods. This author firmly believes that it is a comprehensive and innovative way of learning, tailored to the needs of digital natives. E-learning fosters collaboration, offers choices, and utilizes a wide range of technological resources to ensure a successful online learning experience. However, overcoming the challenges associated with e-learning requires support and the implementation of best practices. Both instructors and learners must embrace the shift from traditional classrooms to e-learning. Although today's learners are comfortable with technology, they may face motivation challenges, but with proper instructor guidance, they can thrive in e-learning environments. Additionally, instructors face the crucial task of designing well-structured courses that support both themselves and the learners.

29] Jha A., Singh A. P., (September 2020), Over the past decade, the Indian education sector has witnessed significant growth, transforming the nation into a hub of knowledge. The government's commendable decisions, such as the establishment of NPTEL for video lectures by prestigious institutions like IITs, IISc, and IIMs, and the creation of new IITs/IIMs across various states, coupled with the commitment to increasing the education budget in the forthcoming NEP 2020, have contributed to this progress. However, the findings of a recent study emphasize the pressing need for robust digital education infrastructure in India. This requirement calls for substantial investments in the education sector and democratic governance. The study sheds light on the diverse challenges faced by digital education in India and offers potential solutions. Despite the ongoing COVID-19 pandemic, the government's prioritization of digital education is evident. It is hoped that the Government of India will take necessary actions to overcome the obstacles hindering the advancement of digital education in the country.

30] Shikha D., Wadhawan S., Gupta S., Issues, (May-2016), Over time, the global education system has undergone a significant transformation, rendering the traditional approach inadequate for the complex and rapidly evolving modern world. The pace of change in today's society is exceptionally fast, necessitating a new and contemporary form of education that can effectively handle the constant influx of information. Consequently, digital education has emerged as a solution to address the shortcomings of traditional methods by utilizing technology, digital content, and instructional techniques to enhance effectiveness and efficiency. This research paper explores upcoming trends in digital education that will shape the future of succeeding generations. While learners today are inherently comfortable with technology, incorporating it into e-learning can pose challenges in terms of student motivation. However, with appropriate support from instructors, learners can thrive in these digital learning environments. Ultimately, instructors face the crucial task of developing well-structured online courses that cater to both their needs and those of the learners, requiring time and careful integration of relevant course components into the e-learning setting.

31] Susan L Morison, Christel McMullan, (April 2014), The study aimed to investigate the interaction between learners and teachers (LTI) in the education of undergraduate medical and healthcare students, specifically focusing on clinical and ward-based tutorials and seminars. The report begins by providing an overview of the Learner-Teacher Interaction study and the research methods employed. It then presents the results and analysis of video sessions from the tutorials and seminars, highlighting examples of effective practices and missed opportunities for learner engagement. The findings indicate that reviewing and seizing opportunities to engage students is highly beneficial. Although the research methods are time-consuming, they offer valuable insights and have the potential to be developed into a self-analysis tool for teachers. In conclusion, this study demonstrates the advantages of using this research approach to improve interactivity between healthcare educators and students, leading to enhanced teaching, student engagement, and learning outcomes. Future research opportunities include exploring different contexts within and beyond healthcare settings, examining interaction from the learners' perspective, and investigating the implications of this approach for interprofessional education. These endeavors hold great potential for further improving learner-teacher interaction and student engagement in the field of healthcare education.

32] William F., Isabella K., William A., (2019), discussed the impact of digital change, comparing it to a fast-moving tsunami. They emphasized how the digitalization of various business practices has created new connections between companies and customers, resulting in significant changes to the marketing landscape. The authors believed that college students should familiarize themselves with these emerging digital innovations and develop skills such as conceptual thinking, critical inquiry, creativity, and integrative learning. The authors stressed the importance of support from stakeholders like higher education institutions, professional associations, publishing companies, and technology firms in promoting faculty efforts to embrace technology and enhance learning continually. They acknowledged that the vast array of pedagogical and practical digital tools available could be overwhelming for faculty, students, and practitioners. However, they suggested that educational conferences and pedagogical journals could offer valuable insights, while attending tech industry conferences could facilitate valuable networking opportunities and business partnerships.

33] Niti S., (Apr 2017), The education industry, including India, has undergone a remarkable transformation with the increasing adoption of digital technology. This surge has revolutionized the teaching and learning landscape worldwide. This is particularly important as students need to bridge the gap between theoretical knowledge and practical applications in the business field. The true educational revolution lies in the digitization of education, empowering students to learn at their own pace, inside and outside the classroom. In India, more than 100,000 schools and colleges have embraced various dimensions of digital technology, thanks to the introduction of educational tools and software. The use of innovative digital tools and technological advancements has greatly influenced and simplified the quality of higher education in India. Cloud-based learning is being seriously considered by educational institutions as a potential replacement or supplement to traditional teaching practices. The advent of the internet, tablets, smartphones, personal computers, laptops, and social media platforms like Facebook has had an unimaginable impact on the proliferation and dissemination of digital education. This paper aims to assess the opportunities and accessibility of digital education in India while addressing the potential challenges and proposing measures to overcome them.

34] Rohidas N., (2018), stated that Technology Enhanced Learning (TEL) is a significant trend in Higher Education in the 21st century. In India, there are various government initiatives focused on e-learning, and one of the major initiatives is the National Programme on Technology Enhanced Learning (NPTEL). The purpose of this paper is to evaluate different aspects of the NPTEL program and assess its key outcomes. The advancement of Information Communication Technology (ICT) has proven to be beneficial in various fields and has brought about a fundamental change in teaching methods. ICT has become a valuable asset in the process of teaching and learning, acting as a backbone in the revamping of the entire learning process in the 21st century. This technological revolution is not limited to developed nations; even developing countries like India have embraced educational technology. The Ministry of Human Resource Development (MHRD) has implemented several measures to facilitate technology-enhanced learning, and NPTEL stands as a major initiative in this regard. Over the past few years, NPTEL has provided an e-learning platform to millions of learners, serving as a collaborative effort between the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc).

35] Diyi Y., Tanmay S., David A., Carolyn P., (December 2013), embarked on a research project focused on investigating the influence of social factors on dropout rates in Massive Open Online Courses (MOOCs). Initial findings confirmed that these social factors indeed impacted dropout rates, presenting an opportunity to improve the design of MOOCs by fostering social engagement, commitment, and reducing attrition. The researchers aimed to further explore the formation of interpersonal connections within online discussion threads and develop strategies to facilitate the integration of latecomers into the course. They formulated key questions to guide their future work, including identifying experiences and interactions between students that predicted continued social engagement, determining the role of sub community structures in attrition patterns, and exploring how participation patterns within sub communities influenced attrition rates. To address these questions, the team utilized mixed membership social network partitioning models, which generated soft partitions representing distinct sub communities within social networks. This approach allowed for a more nuanced analysis as individual members could belong to and be influenced by different sub communities at different times. Additionally, the researchers integrated text-mining techniques with social network analysis to create representations of text that reflected the underlying community structure. Ultimately, the researchers aimed to comprehend the emergence of shared practices within social interactions in MOOCs, enabling the development of support systems that fostered sustained and meaningful engagement in learning within the MOOC environment.

36] The effectiveness of eLearning is crucial in determining whether stakeholders can achieve their goals in online education. The advent of Massive Open Online Courses (MOOCs) has significantly transformed the eLearning landscape, providing access to a vast number of students and reshaping their perceptions of what makes eLearning effective. To tackle this issue, our research employed the Grounded Theory (GT) methodology to identify the factors that influence effective eLearning. Over a two-year period, we actively participated in 16 eLearning courses across five different platforms, leading us to discover 10 dimensions that affect successful eLearning. This paper elucidates the Grounded Theory approach used and the dimensions identified, along with the factors within those dimensions that contribute to effective eLearning. We provide a comprehensive analysis of MOOCs as an emerging educational phenomenon that is rapidly gaining popularity. Consequently, it becomes crucial to

identify the factors that influence effective eLearning within the MOOC platform. The 10 dimensions discovered in this research serve as a guide and should be emphasized by eLearning platforms to provide an effective learning experience. Furthermore, ongoing efforts to identify evolving patterns of student behavior in MOOC courses can lead to the discovery of additional dimensions that contribute to effective eLearning. By incorporating these dimensions, platforms can continually enhance the eLearning experience and ensure its effectiveness in meeting the evolving needs of learners.

37] M Nishad Nawaz, Anjali Mary Gomes, (January 2014), In the modern era, globalization remains a significant force shaping economic and commercial activities worldwide. The fast-paced advancements in technology, shifting economic conditions, and intense global competition have made management education increasingly crucial for individual and industry success. While management education has gained popularity in the past decade or two, its relevance must be critically evaluated in the present context where nurturing talent is vital for driving global progress. The purpose of this paper is to reevaluate and enhance the approaches to teaching management education, with the goal of fostering greater participation and viability in the world economy. By reassessing teaching methods, management education can better equip students with the necessary skills and knowledge to navigate the complex and competitive global environment. To summarize, the influence of globalization, technological advancements, and fierce global competition demands a critical evaluation and revamping of teaching pedagogy in management education. By prioritizing talent development and preparing individuals to adapt to the changing landscape, management education can contribute to the success of individuals and industries in the world economy.

38] Neetu Singh, (Jan-Dec 2018), In order to ensure quality education in the online/digital platform, teachers must recognize the learning style of their students, regardless of whether the learning is conducted in a real or virtual setting. No learning style is superior or inferior to another. With technology advancing rapidly, the education industry is also adapting to this pace. Currently, the entire system has shifted online, which has also influenced our emotional well-being. Our emotional state plays a significant role in information processing. When we are anxious, tired, or dealing with conflicts or changes, it becomes exceedingly challenging to acquire and process

information effectively. The COVID-19 pandemic and the swift transition to online education have raised concerns about the quality assurance of teaching and learning.

39] Qiang Huang, (September 2018), Online learning encompasses various contexts such as blended learning, distance learning, virtual learning, and web-enhanced learning. Among the different aspects of online learning, the roles of teachers have gained attention in research. This study aimed to investigate how 153 university students perceived the roles of their teachers in an online blended English course. A questionnaire called the STRI, consisting of 27 items and a 5-Likert-scale, was employed for data collection. Statistical analyses demonstrated high reliability and validity of both the questionnaire and its three sub-roles. The results indicated significant differences among the three sub-roles: the cognitive role, affective role, and managerial role. Notably, the managerial role received higher ratings compared to the cognitive role, while the affective role had the lowest ratings. Descriptive statistics highlighted the significance of teachers maintaining records of students' learning in the managerial role. Overall, the study suggests that teacher roles in online learning were reduced, with the managerial role being more prominent than the cognitive and affective roles. These findings provide insights for classroom implications and lay the foundation for future research comparing teacher roles in different educational contexts.

40] Florence M., Kiran B., (March 2019), The exponential growth of online learning in higher education institutions has created an urgent need for comprehensive guidelines that can effectively guide both new and experienced online instructors in their teaching practices. This study aimed to explore the roles of online instructors and categorize the essential competencies required for effective online teaching. Through interviews with eight distinguished online faculty members from various parts of the United States, critical insights were gained. The findings revealed that online instructors undertake five distinct roles: Facilitator, Course Designer, Content Manager, Subject Matter Expert, and Mentor. The tasks performed by online instructors were found to fall into two main categories: Course Design and Teaching. This research not only enriches the existing literature but also holds significant implications for educational institutions as they strive to offer an increasing number of high-quality online courses and programs to their students.

41] Srivastava K., Dey S., (January. 2018), The advent of digital technology has revolutionized society and necessitated a paradigm shift in education. Modern teachers are now expected to act as digital networkers, fostering creativity in students, and utilizing smart tools to facilitate change. The use of real-time smart classrooms and magnetic induction boards enhances knowledge exchange, leading to more impactful teaching and learning experiences. However, the integration of digital tools presents challenges that need to be addressed for successful implementation. This study focuses on the issues faced by teachers in using digital tools in classrooms, specifically in the state of Jharkhand, India. A quantitative research design was employed to collect data from teacher educators. The findings indicate that limited accessibility and network connection, inadequate technical support, insufficient training, limited time, and lack of teachers' competency are significant challenges. Additionally, the research reveals that male teachers exhibit a higher utilization of digital tools compared to female teachers. The study's outcomes provide valuable information and recommendations for integrating new technologies into the teaching and learning process, emphasizing the need to broaden the scope of technology-driven activities for B.Ed. teachers who are already familiar with basic technologies but lack proficiency in advanced tools.

42] C. Barathi, N. Prakash, (May-2021), In today's era of Information and Communication Technology, e-learning has become crucial for the development of individuals and the future of nations. India, with its technological advancements, has seen a significant surge in the acceptance of online education in recent years. Numerous students and professionals have joined various e-learning platforms to improve their skills. This upward trend indicates that the number of individuals embracing online education is poised to grow substantially in the coming years. This substantial expansion can be attributed to the rising number of paid online education users, which is estimated to grow from 1.57 million in 2016 to 9.5 million in 2021. Adopting technology in higher education can greatly enhance the integration of industry-relevant knowledge. Taking a step-by-step approach to implementing these technologies will yield substantial improvements. The disruptive nature of educational technology trends will positively transform higher education, elevating it beyond its current state. By equipping students with the necessary skills, higher education plays a crucial role in shaping a bright future for both individuals and society at large.

43] Mary C., (May-2021), Collaborative learning is a technique in which students engage in high-quality peer interactions that improve their learning and social interactions skills. This learning method is not so frequently used in higher educational institutions, though it is frequently used in schools. This paper aims to highlight the transformative benefits of a collaborated learning environment in enhancing the assimilation of knowledge in the online mode and compare it with the individual learning approach commonly used in colleges. The sample consists of two batches of undergraduate students with a class strength of 50 or 60 students. The conclusion drawn is that collaborative learning can genuinely enhance the learner's online experience and the educator if done systematically. The learners showed greater motivation to learn. This approach reduces the anxiety level of the individual learner and shows a gradual increase in self-esteem as the number of collaborations increase. The informal arrangement in the group without the teacher's presence facilitated the learners to share and discuss ideas more openly. When this is accomplished individually, the process can be tedious, boring or overwhelming. It was observed that the quality of the teaching and learning is greatly enhanced when collaborative learning activities are included, even in the online classroom.

44] K. Dash, (May-2021), Online education, a form of electronically supported learning dependent on the internet, has become the new norm for both work and study due to the Covid-19 pandemic and extended lockdowns. While online learning was already present before the pandemic, its prominence and significance have grown exponentially during these challenging times. India, with its rapid technological development, has made significant progress in online education. With a population of over 1.3 billion and widespread access to high-speed internet and smartphones, India has a large number of technologically inclined individuals. The internet has transformed various aspects of life in India, including shopping, business, socializing, and learning. Online education, alongside e-commerce, holds a significant position in the online industry. Despite its advantages, online education faces challenges, particularly in rural areas where internet access is still limited. The lack of infrastructure in rural regions exacerbates connectivity and accessibility issues, widening the digital gap between urban and rural areas. To establish a new normal for online education, the future requires adequate infrastructure, well-trained educators and students, consistent government policies, and universal fast internet access.

45] Kothekar D., (May-2021), The Covid-19 pandemic has presented significant hurdles for the global education community. According to UNESCO, at the peak of the pandemic, around 1.5 billion students worldwide were engaged in remote learning. The shift to online teaching and learning has necessitated specific knowledge and skills in designing effective learning experiences and creating engaging digital environments. Educators are grappling with questions about the realities of online teaching, how to foster engaged learning in a digital setting, and how to ensure meaningful learning experiences. Instructors, many of whom had no prior experience with online or distance education, have been forced to explore innovative approaches to teaching and learning. They have begun experimenting with personal challenges, small group assignments, project-based learning, and the creation of short videos. Through their experiences during the initial days of online teaching, educators have developed novel pedagogical ideas, including the creation of courses centered on Covid-19. These ideas offer a unique perspective on the future of online education in the years to come.

46] B. Deshpande, P. Tilak, (May-2021), Online education has emerged as a crucial component in the education sector, shedding light on the significance of teaching at all levels. With the support of the government, communication, exchange, and interaction through digital platforms have shown rapid improvement. A study has been conducted to examine the impact of innovative teaching methods employed in online education, assessing both desirable and undesirable outcomes. Data collection and the use of Google forms were employed for analysis. The contemporary educational landscape emphasizes the integration of advanced technologies, creating a conducive classroom environment. However, it is important to note that simply incorporating technology does not guarantee comprehensive educational transformations. Teachers play a crucial role in continuously reflecting on their teaching methods and utilizing their potential to inspire students. As a result, students are influenced by their teachers' exemplary behavior, ultimately becoming active and competent individuals over time. Thanks to the internet, education is now able to transcend geographical barriers and time constraints, illuminating the global stage with its brilliance.

47] L. Attar, (May-2021), Due to the COVID-19 pandemic, distance learning, which was primarily utilized by colleges and universities, is now being embraced by elementary and high school students as well. Distance education refers to a teaching

approach where a teacher and learner are physically separated, with education delivered through various means such as online classes, video conferencing, audio tapes, and weekend sessions. It is also known by other terms like distance learning, e-learning, online learning, web-based learning, home study courses, and correspondence. This article aims to shed light on the current state of distance education in India, discussing its types, advantages, challenges, and potential solutions. While it is unlikely that educational networks will completely replace traditional lectures, advancements in technology suggest that future learning and collaborative work may undergo significant transformations. The field of Open and Distance Learning is rapidly expanding, and it is not inconceivable that the entire education and training system will eventually be predominantly driven by this approach.

48] S. Patwa, (May-2021), The landscape of traditional education has undergone a radical transformation in recent years, fuelled by the rapid advancement of the internet and emerging technologies. The confines of a physical classroom no longer represent the sole learning option. With the advent of online education, a high-quality learning experience is now accessible anytime and anywhere, as long as one has a computer and internet access. We find ourselves at the dawn of a new era, a revolution in education. Online education empowers both teachers and students to establish their own learning pace, offering unparalleled flexibility in creating schedules that align with individual agendas. The geographical barriers are also shattered, as online education enables learning and teaching from any corner of the world. Commuting and adhering to rigid schedules become obsolete. Moreover, online education not only saves time but also allows for financial savings that can be redirected towards other essential priorities. The virtual classroom transcends physical boundaries, extending its reach wherever there is an internet connection. This presents a remarkable opportunity to combine education with travel, making learning a truly enriching and immersive experience.

49] Technology will play a crucial role in shaping the future of education, particularly in addressing the challenges posed by online teaching, learning, and evaluation. In the current educational landscape, the effective utilization of technology is intertwined with the process of teaching and learning. This chapter aims to delve into the theoretical foundations of pedagogy and explore the beliefs and values associated with the integration of technology in educational practices. By doing so, it seeks to

provide insights into the incorporation of technology in pedagogical experiences. Connectives, a learning theory developed by George Siemens and Steven Downs, emphasizes the importance of making connections and fostering creative combinations of knowledge. According to Siemens (2004), a community facilitates interaction, sharing, dialogue, and collaborative thinking among individuals with similar areas of interest. This means that students can acquire knowledge about topics like COVID-19 from sources such as Instagram posts, Facebook updates shared by their friends, and related online content. By exploring comments and following links to personal blogs, online newspapers, or official websites, students can gather information from diverse sources.

50] The global recognition and growing significance of English as a language of communication necessitate both communicative skills and cognitive abilities from learners. English, as a medium of communication and lingua franca, has sparked curiosity and interest in language acquisition. To enhance our communicability, employability, and overall language proficiency, we must actively develop our communicative skills and cognitive capabilities. Unfortunately, due to a lack of proper communication techniques, many individuals miss out on numerous opportunities. This article aims to emphasize the importance of communicative and cognitive abilities in language learning through digitization. Motivation plays a crucial role in mastering communicative skills, as it serves as the driving force behind sustained learning. In the current climate of insecurity and the COVID-19 pandemic, education must persist. By effectively utilizing digital tools in the teaching-learning process and gauging learner response, we can bridge the gap of knowledge and continue the educational journey.

51] Open Educational Resources (OER) refer to publicly accessible materials and resources that can be freely used, modified, enhanced, and redistributed, subject to certain licenses. These resources are available for educators and students without the need for payment of royalties or license fees. However, like any system, OER has its own advantages and disadvantages. However, there are copyright issues that need careful consideration. This chapter discusses the limitations and various online educational resources available to teachers and students. Many educational institutions are adopting open content and practices, with policies emerging at different levels, from national to local. Creative Commons, along with other open organizations, has

facilitated the development of the Open Policy Network, connecting advocates, organizations, and policymakers to promote open policies and practices that benefit the public. The OER Policy Registry, now part of the OER World Map, contains numerous policies from around the world, emphasizing the global importance of open education.

52] The Indian economy has been a witness to remarkable advancements in technology across all sectors, particularly in the field of education. The education sector has undergone a significant transformation, providing enhanced quality education and skills development. According to Clark, teaching encompasses activities designed to shape student behavior. Online education has emerged as a crucial component of teaching and learning at all levels, offering affordable access to knowledge through various technological channels. This progress is evident in the substantial investments in global edTech, which reached US\$18.66 billion in 2019, with the online education market projected to reach \$350 billion by 2025. A recent study focused on the impact of online teaching design on the teaching process, examining both desirable and undesirable outcomes. Through data collection and interviews, the study determined that online teaching is more effective for both educators and students, leading to optimal results in the teaching and learning experience.

53] The impact of the COVID-19 pandemic has been profound, affecting individuals worldwide. No sector of the global economy has been spared, including the service industry. The education sector, in particular, has undergone a significant transformation to adapt to the demands of the new normal. This analysis delves into the extensive changes implemented by schools, colleges, and governments to address these requirements. Moreover, it proposes crucial areas that warrant attention to enhance the resilience of young people in the face of this ongoing crisis. Life is replete with problems and challenges, and it is essential to learn how to confront them. It is equally crucial to instill this resilience in our students. While we often refer to police officers, doctors, and nurses as corona warriors, we should also take pride in acknowledging teachers and students as corona warriors. By embracing evolving strategies, we will undoubtedly acquire the necessary skills to transition effectively from the old normal to the new normal.

54] This paper aims to explore teaching pedagogy with effective and efficient planning to enhance the future prospects of students. It assesses both traditional and innovative teaching methods in imparting knowledge to students. The adoption of innovative teaching approaches has not only improved education but has also empowered individuals, leading to better governance and the achievement of human development goals in the country. Technology has revolutionized the classroom experience, allowing teachers to be available anytime through e-learning, eliminating time constraints for communication. Given the changing times, it is crucial for educators to reconsider their teaching strategies. Technological advancements offer numerous innovations in the field of education, bringing about significant changes in the traditional teaching and learning processes. The concept of a paperless and penless classroom is emerging as an alternative to traditional methods. However, challenges such as legal and ethical issues, media literacy, inadequate funding, and the tension between tradition and technology need to be addressed for successful implementation of technology in education.

55] This article offers a framework for discussing pedagogy as various teaching approaches. It also provides a review and summary of effective pedagogy using Information and Communications Technology (ICT) with a focus on promoting critical thinking and empowering learners to transform their life situations. While this approach has gained recent momentum, there is a scarcity of studies dedicated solely to it. Hence, the current study aims to explore significant literacy challenges in education, teacher-student roles, and the impact of COVID-19 on the world, while providing recommendations for integrating this pedagogical approach. The study analyzes existing books and articles on the subject to achieve its objective. The findings indicate that although literacy teaching is a novel and valuable approach, it is not widely implemented in the educational system. The article also offers insights into constructive approaches and guidelines for leveraging ICT tools to enhance literacy and numeracy instruction in the context of the ongoing COVID-19 situation. The article emphasizes the need for deliberate decision-making and tailored focus on development, ensuring alignment with specific literacy or numeracy teaching objectives, as well as the individual's teaching context, skills, and expertise. Integration of ICT in development work can effectively support teaching in literacy and numeracy, if clear subject objectives are established.

56] Assessment plays a crucial role in the teaching and learning process, enabling both teachers and students to gauge the level of understanding and comprehension. It aids in determining the effectiveness of knowledge delivery and guides the choice of teaching pedagogy based on students' comprehension levels. While different assessment methods exist, each comes with its own advantages and disadvantages. The COVID-19 pandemic necessitated a shift in routines and work patterns worldwide, impacting every sector, including education. Consequently, the education sector had to transition from traditional classroom teaching to online instruction, prompting the need for new assessment methods. In this chapter, I explore various effective methods of formative and summative assessment specifically tailored for the online teaching and learning environment. These methods offer insights into evaluating student progress and enhancing the overall educational experience.

57] The COVID-19 pandemic has exposed the shortcomings of an education system heavily reliant on physical presence of students and teachers. The continuity of education in higher institutions has become a pressing concern. Consequently, there has been a significant push towards technology-enabled learning in Indian higher education. A shift in the teaching and learning paradigm is necessary to establish an environment that embraces technology. As schools and colleges remain closed due to lockdown measures, both students and educators have turned to educational technology platforms to maintain academic progress. Online learning has gained immense popularity in these challenging times. It is now crucial for policymakers and educators to seize this opportunity and revamp the Indian higher education system, fostering resilience and supporting technology integration, equity, excellence, and expansion. This transformative moment holds the potential to shape a brighter future for education in India.

58] Education has the power to transform lives when teachers and students integrate knowledge from different subjects, critically evaluate diverse perspectives, and explore various inquiries. This paper aims to explore the challenges encountered during this process and shed light on the emerging issues. Rather than focusing on technical aspects, which have been the primary concern in online teaching, the problems discussed here are inherently pedagogical. Two crucial assumptions are examined: the existence of a Virtual Classroom and the possibility of creating an Online Learning

Community for language teaching. The focus is on the changing learner profile and behaviors in online learning and their profound impact on traditional teaching methods. Urgently, a call is made for a fundamental shift in online teaching, moving away from teacher-centered approaches and towards a personalized, small-group-oriented, multidimensional model. In this vein, a proposal for online teaching design is presented, offering specific and practical suggestions for online teachers. Currently, we are facing a monumental educational crisis—the COVID-19 pandemic has forced over 1.6 billion children and youth worldwide out of school, posing a significant threat to global education.

59] The role of technology in education is undeniable, as it has transformed classrooms and provided abundant educational opportunities. Digital learning tools such as computers, iPads, smartphones, and smart digital whiteboards have digitized the learning process, breaking down barriers between students and teachers. When used by great teachers, technology can be truly transformative. Educators must remember that technology should facilitate the teaching and learning process, rather than replace teachers entirely. It is crucial to strike a balance and ensure that technology enhances the structured teaching-learning process. Recent advancements in educational technology have yielded positive results, increasing student engagement and motivation. Teaching with technology shifts the traditional roles of institutions, teachers, and students, making the learning environment more learner-centered. Rather than resisting change, teachers should embrace new technologies to improve the quality of education and make it more captivating. However, proper planning is necessary for effective integration of technology into teaching. This article explores the objectives of educational technology, various types of technology used in teaching, its impact on the teaching-learning process, the advantages of technology in education, and the readiness of educators to adopt it. It also addresses the challenges faced during implementation and provides strategies to overcome them. Technology is a powerful force shaping today's educational landscape, and with perseverance, teachers can successfully integrate it into their practice.

60] This chapter explores the rapid expansion of learning technology and communication, leading to an abundance of information sources. While books and teachers were traditionally relied upon for information, the advent of CD-ROMs, the

Internet, and databases has revolutionized access to knowledge. These resources are readily available and easily accessible, although not all are free or unrestricted. Consequently, many higher education institutions face the challenge of providing affordable information to their students. This initiative proposes an instructional teaching and learning design that leverages Open-Source Software to create and disseminate learning materials in various electronic formats. Both teachers and learners play crucial roles in this process. Teachers are responsible for establishing, organizing, and managing the learning environment, providing guidance and support to students. Students, on the other hand, actively participate in searching, organizing, analysing, and presenting information. Together, they contribute to the development of Open Educational Resources.

61] Research has demonstrated the significant impact of innovative teaching methods on student learning. However, implementing these strategies can be daunting, as it requires stepping out of our comfort zones and risking failure. Nevertheless, experimenting with new methods and approaches can enhance student engagement, motivation, and academic achievement, benefiting both teachers and students. This paper explores the two levels of educational theory. At the macro-level, the relationship between education and society undergoes transformation and adaptation due to globalization and the integration of digital technologies. At the micro-level, within the teacher-learner relationship, a blend of traditional and innovative techniques is employed, emphasizing experiential learning through the utilization of novel methods. This approach enables participants to familiarize themselves with and apply the most relevant innovative teaching methods, such as project-based learning with non-formal foundations, experiential learning utilizing technology, and collaborative discussions among peers, teachers, and educational staff. The paper's primary objective is to acquire knowledge about new educational pedagogies in response to the evolving technological and economic landscapes, where continuous learning is imperative for students.

62] Digital technology and the internet have revolutionized education, leading to the widespread adoption of online classrooms worldwide. Online educational technology has become increasingly popular due to its flexibility and accessibility, making education more attainable for marginalized groups. This study examines the current state of online teaching and learning and highlights the advantages it offers. The

article emphasizes the shift from traditional face-to-face instruction to online education and presents strategies to enhance faculty success in transitioning to online teaching platforms. By exploring the present scenario and discussing the benefits, this article sheds light on the importance of online technology in education and the policies aimed at improving the online learning experience for both educators and learners.

63] The Internet has become a powerful global medium for connecting people worldwide. It enables individuals from different countries to engage in discussions on various topics within minutes. This has led to a widespread shift towards automation and online platforms across various sectors. Notably, industries such as banking, shopping, and services have embraced online platforms. Similarly, the field of education has also adapted its strategies to thrive in this new era of technology. This chapter explores the transition from traditional teaching to online teaching and its impact on the teaching of Online Design. It examines both the positive and negative effects associated with this shift.

64] Multimedia has gained significant prominence in the field of education, serving as a versatile tool within the realm of educational technology. By transcending barriers and limitations, multimedia has emerged as a ubiquitous instrument for teaching diverse masses across various disciplines. The advancements in information and communication technologies (ICTs) have revolutionized the contemporary education system through the proliferation of Open Educational Resources (OERs). However, effectively harnessing the opportunities afforded by technological progress poses substantial challenges for education systems, encompassing aspects such as cost, accessibility, fairness, instructional methods, and quality. Leveraging multimedia simulations enhances the efficiency of knowledge acquisition, fostering greater engagement and interaction between teachers and students. This paper provides an overview of the utilization of multimedia and OERs in teaching and learning, showcasing their potential and significance.

65] The COVID-19 lockdown has accelerated the adoption of digital technology across various sectors. Businesses, educational institutions, analytics, computer systems, data management techniques, and online education solutions have become essential for efficient functioning and improved quality and delivery time in challenging

situations. This shift towards technology in education has brought about significant changes, such as a transition from teacher-centered to student-centered learning. The implementation of the new education policy emphasizes liberal education and allows students to enroll in courses from any college or university, regardless of their location, based on the quality of teachers and course fees. The student will ultimately receive a degree from their home university, resulting in a cost-effective approach to quality education. India's education system is undergoing rapid technological transformation, impacting all sectors, including education. It is crucial for today's teachers to acquire digital skills to guide their students in becoming responsible digital citizens. This article highlights the role of technology in online education.

66] The advent of online teaching has revolutionized education, providing a valuable opportunity for individuals to become self-reliant and advance in life with essential knowledge. This paper explores the practicality and benefits of online learning platforms, such as Zoom meetings, Google, and YouTube tutorials, which enable students to grasp concepts thoroughly. Notably, this approach not only benefits students but also empowers teachers. Whether influenced by the COVID-19 pandemic or other factors, the changing times demand self-reliance rather than dependence on others. Embracing advanced technology and becoming technologically proficient are opportunities for learners to grow. Regardless of the presence or absence of COVID-19, progress is essential. The information and insights presented here will undoubtedly prove valuable. As the world never stops, it is crucial to remain proactive and adaptable in all circumstances. Now is the time to develop we and strive for success in life's journey.

Research Gap-

To identify the research gap in the field of "To study the effectiveness of digitalisation in teaching-learning practices for post-graduate management education in Pune metropolis," you would need to review the 60 research papers that have been conducted on the topic.

Numerous studies within this domain heavily rely on theoretical frameworks and anecdotal evidence, rather than rigorous empirical research. There is a clear need for more quantitative studies that gather data on student outcomes, including academic performance, engagement, and satisfaction. While some studies may investigate the overall effectiveness of digitalization, there is a notable gap in examining the efficacy of specific digital tools or platforms used in post-graduate management education. For instance, exploring the impact of learning management systems, online simulations, or virtual collaboration tools could provide valuable insights. The effectiveness of digitalization in teaching and learning is likely to vary based on student characteristics, such as their prior digital literacy, motivation, and learning styles. Consequently, understanding how these factors influence the effectiveness of digitalization presents an important research opportunity. Many studies predominantly focus on short-term outcomes, neglecting to assess the long-term impact and sustainability of digitalization in post-graduate management education. Investigating the enduring effects of digital learning initiatives and identifying strategies for maintaining their effectiveness over time would be highly valuable. Additionally, comparing the effectiveness of digitalization with traditional teaching methods could offer insights into the advantages and limitations of each approach. Conducting comparative studies involving both digital and non-digital instructional methods could help elucidate the unique contributions and potential drawbacks of digitalization. Another vital aspect of successful implementation lies in comprehending the perspectives, experiences, and readiness of faculty members to incorporate digital tools into their teaching practices. Research endeavours could delve into the barriers and facilitators encountered by faculty members in adopting digital technologies, as well as strategies to promote their effective use.

CHAPTER – III – RESEARCH METHODOLOGY

3.1 INTRODUCTION

This study aims to investigate the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis. The rapid advancement of technology has led to the integration of digital tools and platforms in educational settings. This research will explore the impact of digitalization on the teaching and learning processes, student engagement, and overall learning outcomes in the field of management education. The study will employ a mixed-methods approach, combining qualitative interviews and surveys with students and faculty members from various management institutes in Pune. The findings will provide valuable insights into the benefits, challenges, and potential areas for improvement in leveraging digital tools for teaching and learning in the context of post-graduate management education.

3.2 CHOICE OF THE TOPIC

This research topic focuses on evaluating the effectiveness of digitalization in the context of teaching and learning practices in postgraduate management education in Pune metropolis. It aims to examine how the integration of digital tools and technologies impacts the educational outcomes, student engagement, and overall learning experience in management field. Pune is known for its numerous educational institutions, including renowned business schools and management institutes. Evaluating the digitalization efforts in this specific region will provide insights into the broader implications for postgraduate management education in similar metropolitan areas.

3.3 STATEMENT OF THE PROBLEM

The degree of adaptation for digital media refers to the extent to which individuals, organizations, or educational institutions incorporate and utilize digital media in their activities and practices. It reflects the level of integration, acceptance, and proficiency in using digital technologies for various purposes. When studying the effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis, assessing the degree of adaptation for digital media can provide valuable insights.

- Digitalization refers to the integration of digital tools and technologies into the teaching and learning process.
- The study aims to evaluate how digitalization has been implemented and its impact on the quality of education in these programs.
- The study seeks to assess the effectiveness of digitalization in teaching and learning practices.

By addressing the statement of the problem, researchers can gain a comprehensive understanding of the effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis. The findings will contribute to educational policymaking, curriculum design, and instructional strategies to optimize the integration of digital tools and technologies in this educational domain.

3.4 SCOPE OF THE STUDY

The scope of the study focusing on the effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis should be defined to provide clarity and boundaries for the research. Here are some considerations for defining the scope:

- **Geographic Scope:** The study will specifically focus on Pune metropolis, which is a major educational hub in India known for its postgraduate management education programs. Limiting the scope to Pune metropolis allows for a more focused and manageable study within a specific context.
- **This research is confined to post graduate management studies to 12 different Deemed universities in Pune metropolis.**
- **Digitalization in Teaching and Learning:** The study will examine the digitalization efforts in teaching and learning practices, specifically related to postgraduate management education.
- **Participants:** The study will involve educators (professors, instructors, and teaching staff) and postgraduate management students from different educational institutions in Pune metropolis. The sample size and selection criteria should be clearly defined to ensure representative participation.

- **Effectiveness Measures:** The study will assess the effectiveness of digitalization in teaching and learning practices by examining student engagement, learning outcomes, and the perceptions of educators.
- **Timeframe:** The study should specify the timeframe during which data will be collected and analyzed. It is important to consider any potential temporal limitations or changes in digitalization practices over time that may impact the study's findings.

3.5 RESEARCH METHODOLOGY

OBJECTIVES

1. To Ascertain the Degree of Adaptation for Digitalization in Teaching Learning.
2. To Investigate the Effectiveness of the Teaching Learning Process.
3. To examine the facilitating conditions for educators regarding the integration of digital tools and technologies in their teaching methods.

HYPOTHESIS

1. There is no strong relationship between teaching experience and performance expectancy.
2. There is no significant difference between gender based on facilitating condition.
3. There is no significant difference between gender and degree of adaptation for Digitalization in Teaching Learning.

3.5.1 Construction of Tools

When studying the effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis, several parameters can be considered to assess the impact and outcomes of digitalization. These parameters can help evaluate the effectiveness of digital tools and technologies in enhancing educational processes and achieving desired learning outcomes. Here are some key parameters to consider were performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, experience, Voluntariness.

When evaluating the effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis, the researcher

considered the following parameters based on the Technology Acceptance Model (TAM) and related frameworks:

3.5.2 Performance Expectancy:

This parameter focuses on the perceived benefits and expected improvement in performance resulting from the use of digital media means. Measure how students and educators perceive the effectiveness of digital tools in enhancing their learning and teaching outcomes, such as improved understanding, higher efficiency, and increased productivity.

Effort Expectancy: Assess the perceived ease of use and simplicity of digital media means. Measure how students and educators perceive the effort required to adopt and use digital tools in their educational activities. Evaluate whether digitalization simplifies tasks, reduces cognitive load, and enhances the overall user experience.

Social Influence: Examine the impact of social factors on the acceptance and adoption of digitalization in postgraduate management education. Measure the influence of peers, educators, and institutional norms in shaping attitudes and behaviors towards digital media means. Consider how social interactions and recommendations influence the willingness to embrace digital tools.

Facilitating Conditions: Evaluate the availability of necessary resources, support, and infrastructure to facilitate the effective use of digital media means. Assess factors such as access to reliable internet connectivity, availability of appropriate hardware and software, technical support, and training opportunities for students and educators.

Experience: Consider the prior experience and familiarity of students and educators with digital tools and technologies. Assess how their past experiences and exposure to digital media means influence their acceptance and effectiveness in utilizing such tools for teaching and learning. Evaluate whether prior experience with digital tools enhances the acceptance and utilization of new technologies.

Voluntariness: Explore the degree of voluntariness and autonomy in adopting digital media means in postgraduate management education. Assess whether students and educators have the freedom to choose whether or not to use digital tools, and how their perceived autonomy affects their acceptance and engagement with digitalization.

By considering these parameters, derived from TAM and related frameworks, insights into the factors influencing the acceptance and effectiveness of digital media means in postgraduate management education. These parameters help understand the

attitudes, motivations, and contextual factors that contribute to the successful implementation of digitalization in teaching and learning practices.

3.5.3 Pre-Testing of Questionnaire

Pretesting of the questionnaire was done with 20 faculties and 50 students through a pilot study which helped in providing a valuable insight to ensure the reliability, validity, and clarity of the questionnaire before conducting the actual research on large data. Following table shows us the result of reliability and validity test results.

Reliability and Validity Test – Faculty Questionnaire

Reliability and Validity test was applied on the data to evaluate the adequacy of the measurement model. To understand the **validity of data Pearson's Correlation Test** was applied and to understand the **Reliability of the data Cronbach Alpha test** is applied on the pilot data.

According to Pearson's Correlation, the correlation between the items total score will help in identifying the validity of the questionnaire. Thus, by applying it to the questionnaire it can be observed from that the value of the significance (2-tailed) is obtained as $0.000 < 0.05$, so it can be concluded that items are valid. Thus, we can see in the table above that for each item the above said values are met and so the validity is successfully obtained.

After doing the validity test the next step is to determine the consistency and reliability of the questionnaire for which Cronbach alpha test is applied.

Table 3.1 - Reliability Statistics

Cronbach's Alpha	N of Items
.732	31

The alpha coefficient obtained for the selected items is .732, suggesting that the items have relatively acceptable. (Note that a reliability coefficient of .70 or higher is considered “to be acceptable” in most social science research situations.).

Thus, Validity and Reliability of the data is successfully obtained for the pilot data of 40 Samples of faculty members.

Reliability and Validity Test – Students Questionnaire

Reliability and Validity of the data is evaluated to test the adequacy of the measurement model. To understand the **validity of data Pearson's Correlation Test** was applied and to understand the **Reliability of the data Cronbach Alpha test** is applied on the pilot data.

According to Pearson's Correlation, the correlation between the items total score will help in identifying the validity of the questionnaire. Thus, by applying it to the questionnaire it can be observed that the value of the significance (2-tailed) is obtained as $0.000 < 0.05$, so it can be concluded that items is valid. Thus, we can see in the table above that for each item the above said values are met and so the validity is successfully obtained.

After doing the validity test the next step is to determine the consistency and reliability of the questionnaire.

Table No. 3.2 - Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.936	.936	23

To check the Reliability Cronbach alpha is applied on the data. The alpha coefficient obtained for the selected items is .936, suggesting that the items have relatively acceptable. (Note that a reliability coefficient of .70 or higher is considered “to be acceptable” in most social science research situations.).

Thus, Validity and Reliability of the data is successfully obtained for the pilot data of 54 Samples.

3.5.4 Final Collection of Data

After the final testing, validity, and reliability and after making proper modifications, collection of data was done by using the questionnaire for faculties and students consisting of various parts. The first part of the questionnaire of the faculty members consists of demographic profile, questions based on performance expectancy, effort expectancy, social influence, facilitating conditions, Experience, and voluntariness. The second questionnaire was made for the students opinion towards digitalization in teaching learning and their experience and satisfaction was obtained.

The third interview schedule made for deans and hod was put forth to understand the management point of view towards the digitalization in teaching learning and challenges observed in management angels was formulated.

3.6 SELECTION OF SAMPLE

3.6.1 Sample Size Determination

Table No 3.3 – University wise Student Intake and Faculty Information

Sr. No	Name of Deemed University	Year of Deemed University	MBA	MBA (IT)	MBA (HR)	MBA Executive	MBA (Innovation & Entrepreneurship)	Health Care Mgt	MBA (Communication Mgt)	IB	Marketing	Finance	Agri Business Mgt	Project & Construction Mgt	Total	Faculty-student ratio as Per UGC [2016] 1:10
1	Tilak Maharashtra Vidyapeeth - [TMV], Pune	1987	60	0	60	0	0	60	0	0	0	0	0	0	180	18
2	Bharati Vidyapeeth Deemed University - [BVDU], Pune	1996	180	0	60	0	0	0	0	0	0	0	0	0	240	24
3	Symbiosis International University - [SIU], Pune	2002	180	0	0	60	60	0	0	0	0	0	0	0	300	30
4	Dr DY Patil Vidyapeeth - [DPU], Pune	2003	240	0	0	0	0	0	0	0	0	0	0	0	240	24
5	Amity University, Pune	2008	60	0	0	0	0	0	0	0	0	0	0	0	60	6
6	Christ University	2008	600	0	0	0	0	0	0	0	0	0	0	0	600	60
7	Spicer Adventist University - [SAU], Pune	2013	240	0	0	0	0	0	0	0	0	0	0	0	240	24
8	FLAME University, Pune	2014	120	0	60	0	0	0	60	0	0	0	0	0	240	24
9	MIT World Peace University - [MIT-WPU], Pune	2017	240	0	60	0	0	30	0	30	0	40	120	30	550	55
10	Vishwakarma University - [VU], Pune	2017	60	0	0	0	0	0	0	0	0	0	0	0	60	6
11	Sri Balaji University, Pune	2019	360	60	60	0	0	0	0	60	360	60	0	0	960	96
															3670	367

Source: Institute Official Website

Cochran's formula for calculating sample size when the population is infinite: (Sample size of Customers)

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where, n₀ is the sample size,

z= confidence level will be considered 95% and its value is 1.96.

p= maximum variability is 50% that is 0.5

e= confidence interval/ margin of error is 5%

q= 1-p

Table No. 3.4 - Sample Size Calculator

Student		Teacher	
Confidence Level:	95%	Confidence Level:	95%
Margin of Error:	5%	Margin of Error:	5%
Population Proportion:	50%	Population Proportion:	50%
Population Size:	3670	Population Size:	367
Sample size:	348	Sample size:	188

Table No 3.5 – Sample size of Student Intake and Faculty Information

Sr. No	Name of Deemed University	Year of Deemed University	Total Students	Sample Size for Students	Total Teachers	Sample Size for Teachers
1	Tilak Maharashtra Vidyapeeth [TMV], Pune	1987	180	17	18	9
2	Bharati Vidyapeeth Deemed University - [BVDU], Pune	1996	240	23	24	12
3	Symbiosis International University - [SIU], Pune	2002	300	28	30	16
4	Dr DY Patil Vidyapeeth - [DPU], Pune	2003	240	23	24	12
5	Amity University (GBS), Pune	2008	60	6	6	3
6	Christ University	2008	600	56	60	30
7	Spicer Adventist University - [SAU], Pune	2013	240	23	24	12
8	FLAME University, Pune	2014	240	23	24	12
9	MIT World Peace University - [MIT-WPU], Pune	2017	550	52	55	29
10	Vishwakarma University - [VU], Pune	2017	60	6	6	3
11	Sri Balaji University, Pune	2019	960	91	96	50
			3670	348	367	188

Source: Institute Official Website

3.7 METHODS OF DATA COLLECTION

Primary Data

Primary Data was collected for Deans, Department Heads (HoDs), faculty and students members. Students and Faculty members were put forth with structured questionnaire to individually made for both teachers and students. The questionnaire was designed to gather quantitative data related to performance expectancy, effort expectancy, social influence, facilitating conditions, experience, and voluntariness. With help of likert's scale the opinions were categorised for easy interpretation.

Interview schedule was formulated to understand the viewpoint of Dean and HOD's regarding the overall implementation and impact of digitalization in postgraduate management education. The questions were basically put forth based on the department's digitalization initiatives, challenges faced, support provided to faculty, student feedback, and the role of digital media means in achieving educational objectives. Conduct semi-structured interviews to allow for meaningful discussions and gather qualitative data.

Secondary

Secondary data was collected from various sources like AICTE portal, UGC guidelines, target college webpages and other such materials like books, journals, thesis, dissertations that contribute to the detail understanding of the study.

3.8 METHODS OF DATA ANALYSIS

The data collected have been processed by adopting procedure of coding, data entry, editing, transcription, tabulation, and presentation of data.

Coding:

To extract valid information from the data obtained through questionnaire and to make the data appropriate for computer aided analysis appropriate coding is done as per the requirement of SPSS package and Microsoft Excel. The coding was made simpler with the help of numbers that were used as labels for every option.

Data Entry:

After the coding part is over the obtained data is fed into the SPSS package for extracting useful information out of the data available. By applying the concept of

Measurement of Scales option in variable view. The data is entered in the SPSS package for clubbing all the data obtained through interview schedule.

Editing of Data:

Since large data is entered there occurs a chance of any human error while typing. Editing is done if any influential error or outliers occur while feeding the data.

Tabulation:

All the data entered into SPSS were summed up by preparing master table. Based on the requirement of the study appropriate classification of tables were made for extracting the needed information.

Graphical Presentation:

For easy understanding the data is presented in graphical forms like bar charts and pie charts formulated through the help of computer package MS Excel.

Method of Data Analysis:

After tabulation of data in the form of tables, appropriate statistical analyses were used based on the objectives set for the study. Statistical tools like average, percentage analysis, ratio analysis, chi square test, T test, correlation analysis, and regression analysis were used for testing the hypothesis.

3.9 LIMITATIONS OF THE STUDY

During the study on effectiveness of digitalization in teaching and learning practices for postgraduate management education in Pune metropolis, there are several limitations emerged during the research journey.

- The findings of the study cannot be generalised as this study is specifically done for Pune metropolis.
- Sample size of faculty members and students may not represent the entire population of post graduate management colleges in Pune.
- The study relies on self-reported data from faculty members and students, responses they perceive as more favorable or may not accurately remember their experiences or perceptions.
- Since the study conducted is for a specific time frame, it might not fully account for evolving technology and advancements in digitalization.

It is essential to transparently acknowledge these limitations to ensure the credibility and reliability of the study. By recognizing and discussing these limitations, future researchers can build upon the study's findings and address these gaps in knowledge.

3.10 CHAPTER SCHEME

The thesis is divided into six chapters.

CHAPTER 1: INTRODUCTION OF THE STUDY

The first chapter contains a details information about the Indian education system. A journey from traditional mode of education to digitalisation is covered in this chapter.

CHAPTER 2: REVIEW OF LITERATURE

The review process has the purpose to obtain background information of previous studies done on the topic. It includes review on digitalization phases, traditional education system, challenges in usage of technology, advantages of digitalization are covered.

CHAPTER 3: RESEARCH METHODOLOGY

The third chapter presents a brief introduction about the digital teaching learning methodology of collecting the data from the study area is analysed. Various aspects like statement of problem, need, significance, objectives, hypotheses, research design, methodology, scope and limitation of the study. Thus, blueprint of the whole research is provided in Chapter 3

CHAPTER 4: ANALYSIS AND INTREPRETATION

The fourth chapter includes the analysis and interpretation of data collected from dean's, HOD, Faculty members and students of Management Studies with the help of application of various statistical tools. The testing of the hypotheses is validated thereafter.

CHAPTER 5: FINDINGS, SUGGESTIONS & CONCLUSION

In fifth chapter contains findings, suggestions and conclusion of the study is stated.

BIBLIOGRAPHY / WEBLIOGRAPHY

APPENDIX

3.11 CONCLUSION

This study will contribute to the existing body of knowledge by providing insights into the effectiveness of digitalization in post-graduate management education. The findings will help educational institutions in Pune Metropolis to improve their teaching-learning practices and leverage digital tools more effectively. Moreover, the research outcomes can guide policymakers and education stakeholders in making informed decisions regarding the integration of digital technologies in the management education sector.

The present chapter has discussed the background of the study. The condition of women and the need to reach out to understand the current role of government support to women entrepreneurs is brought in to focus on this chapter. The rationale of the study has been discussed in this chapter. It has also covered the methodology adopted for the study, sample selection, the tools for data collection and the statistical analysis have been discussed in this chapter.

CHAPTER - IV –

ANALYSIS AND INTERPRETATION OF

DATA

4.1 Introduction

This chapter contains the analysis of studying the effectiveness of digitalization in teaching –learning process in management students from Pune metropolis. The various aspects covered here are demographic profile, faculty opinion towards digitalization, student's feedback.

- **Section I:** In this section the opinion produced by the faculty members towards of digitalization is analysed. It also helps in understanding the effectiveness of digitalization using TAM models. Thus, analysis and Interpretation of Data Collected from the survey of users with respect to the various aspects like performance expectancy, effort expectancy, social influence, facilitating condition, experience, and voluntariness.
- **Section II:** In the section contains the opinion obtained through interview technique following findings were observed by the Dean and Hod towards digitalization.
- **Section III:** In the section contains the opinion put forth by the students towards digitalization. various cross tables are formed to understand the effectiveness of digitalization.
- **Section-IV:** In this section the hypotheses set are tested for its acceptance or rejection.

4.2 - Section I: Teachers Analysis

4.2.1 Section -I – Demographic Profile of the Respondents

Table No. 4.2.1 - Gender

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	80	42.6	42.6	42.6
	Female	108	57.4	57.4	100.0
	Total	188	100.0	100.0	

Source: Field Survey

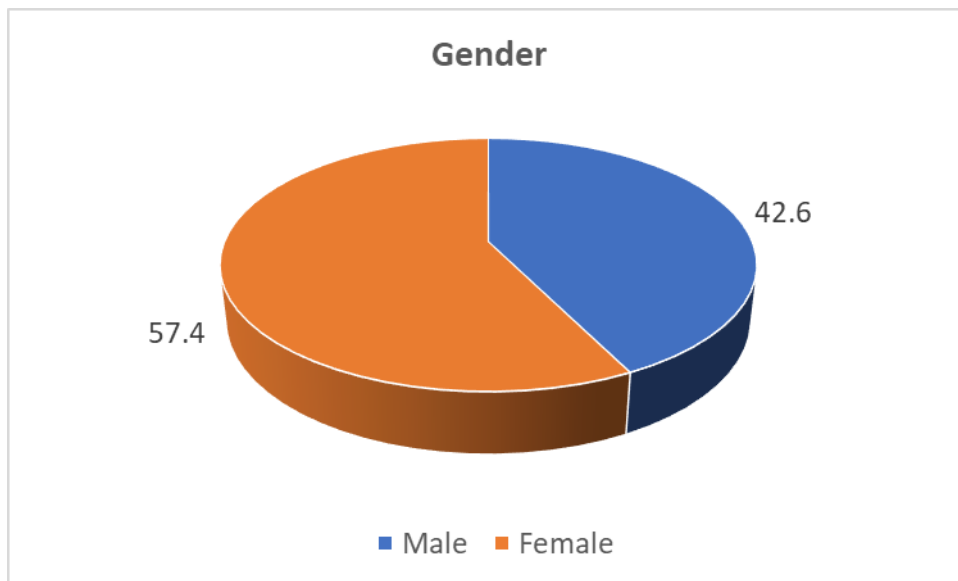


Chart No. 4.2.1 - Gender

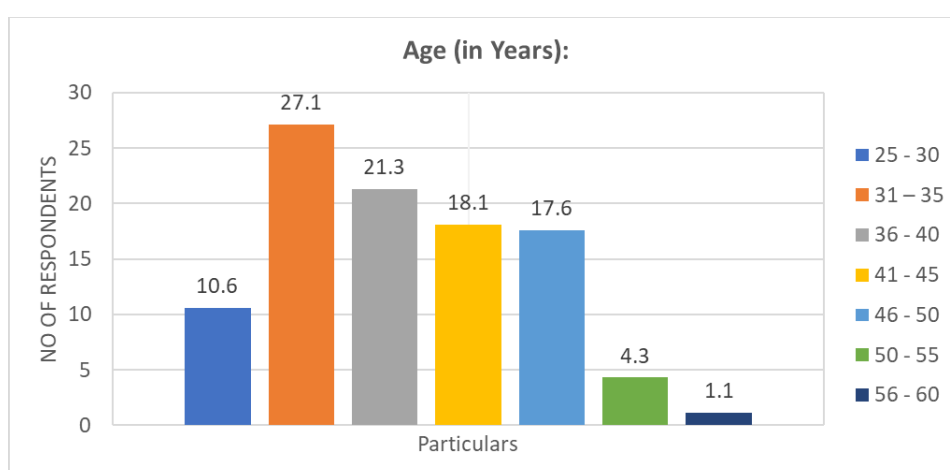
Interpretation:

- Form the above table it was inferred that female (57%) were comparatively more than the male (43%) faculties. Generally, it is observed that female members are more in numbers than the male faculties in teaching profession.

Table No. 4.2.2 - Age (in Years)

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 - 30	20	10.6	10.6	10.6
	31 – 35	51	27.1	27.1	37.8
	36 - 40	40	21.3	21.3	59.0
	41 - 45	34	18.1	18.1	77.1
	46 - 50	33	17.6	17.6	94.7
	50 - 55	8	4.3	4.3	98.9
	56 - 60	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Source: Field Survey

**Chart No. 4.2.2 - Age (in Years)****Interpretation:**

- When the respondents were bifurcated based on the age group, it was observed that a majority of faculty respondents fell in the age group 25 to 30 with 11%. Followed by 31 – 35 age group was around 27% respondents, and 36 to 40 age group was around 21% respondents. Around 18% of faculty respondents were found in the age group 41 to 45 & 46 to 50. Only 4% of opinions were obtained in the age group of 50 to 55 and only 1% from above 56 ages.
- Thus, we can observe from the above table that the majority of the faculty members were young in the context to understand the digitalization technologies.

Table No. 4.2.3 - Teaching Experience (in Years)

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 7	50	26.6	26.6	26.6
	16 - 23	31	16.5	16.5	43.1
	24 - 32	3	1.6	1.6	44.7
	8 - 15	102	54.3	54.3	98.9
	More then 33	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Source: Field Survey

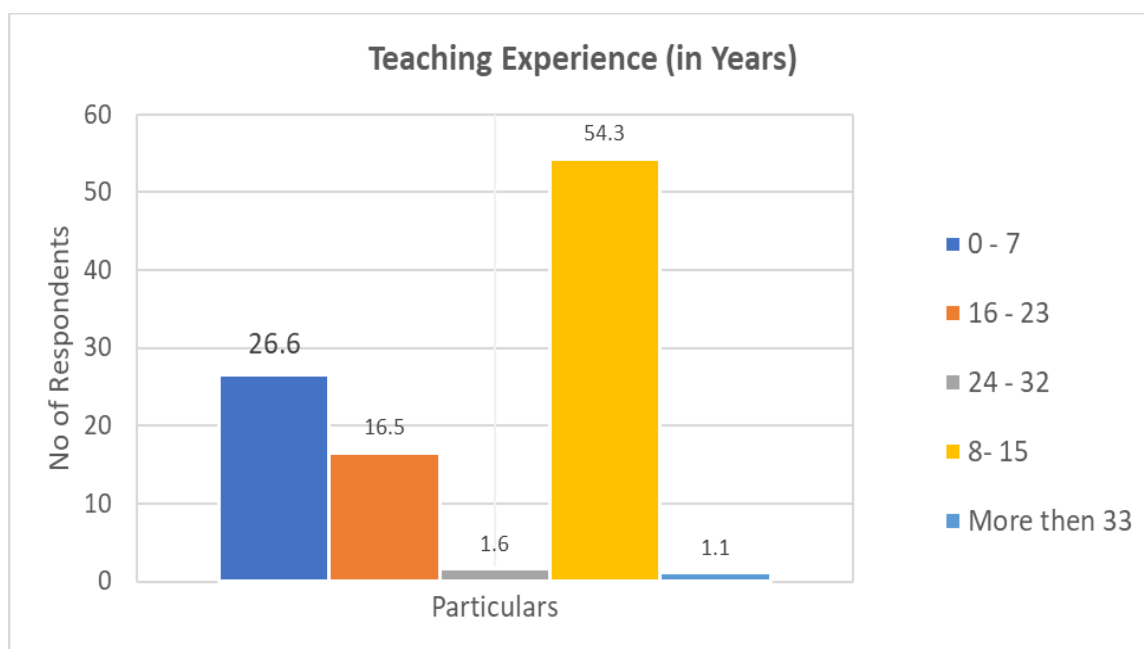


Chart No. 4.2.3 - Teaching Experience (in Years)

Interpretation:

- When the faculty respondents were asked to opine about their teaching experience, it was observed that a majority of 54% faculty respondents fall under 8 to 15 years of experience. 27% of them fell in the 0 to 7 years of experience. Around 16 to 23 years of work experience of the faculty respondents were found with 17% contribution. Around 2% of the respondents had 24 to 32 years of experience. 1% had more than 33 years of experience.

Performance Expectancy

Table No. 4.2.4 - Do You Think Technology Is Very Useful When You Do Your Work?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.1	2.1	2.1
	Disagree	12	6.4	6.4	8.5
	Neutral	2	1.1	1.1	9.6
	Agree	17	9.0	9.0	18.6
	Strongly Agree	153	81.4	81.4	100.0
	Total	188	100.0	100.0	

Source: Field Survey

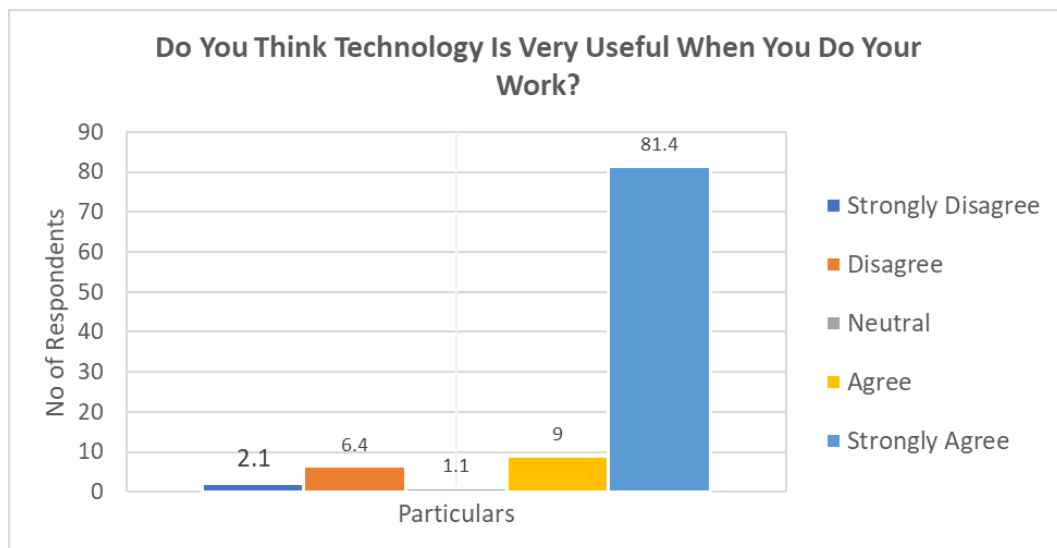


Chart No. 4.2.4 - Do You Think Technology Is Very Useful When You Do Your Work?

Interpretation:

- When the respondents were asked about their opinion towards usefulness of technology it was observed that a majority of the faculty respondents opined strongly agree. 9% stated agree, 6% stated disagree, 2% stated strongly disagree and only 1% had a neutral opinion for the same.
- Thus, it can be observed that majority of the faculty find technology to be very useful in teaching learning.

Table No. 4.2.5 - Do You Find Technology To Be Supportive While Working?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	4.3	4.3	4.3
	Disagree	5	2.7	2.7	6.9
	Neutral	23	12.2	12.2	19.1
	Agree	34	18.1	18.1	37.2
	Strongly Agree	118	62.8	62.8	100.0
	Total	188	100.0	100.0	

Source: Field Survey

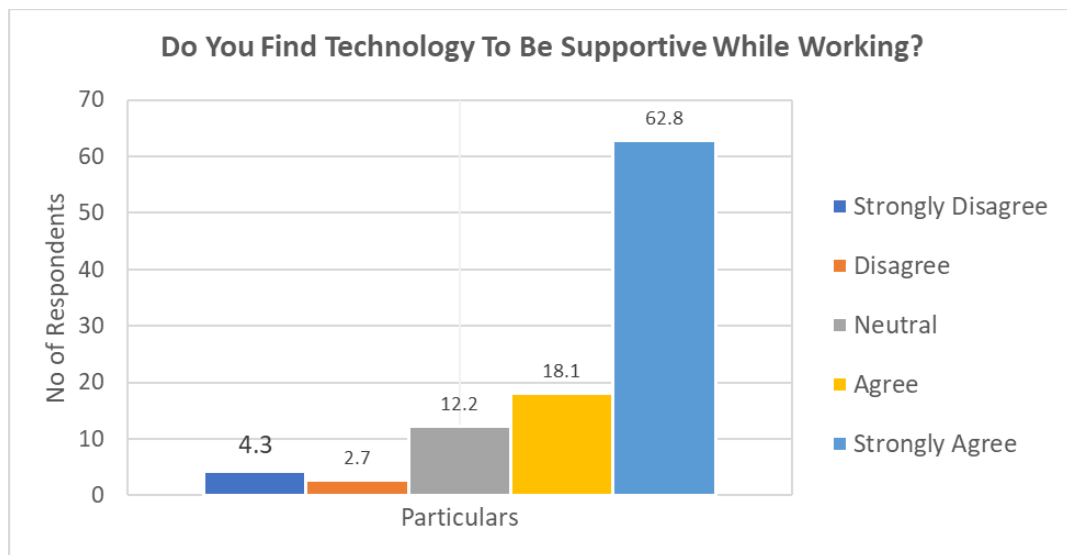


Chart No. 4.2.5 - Do You Find Technology To Be Supportive While Working?

Interpretation:

- When the faculty respondents were asked about the supportiveness of the technology while working, it was observed that around 63% of them stated strongly agree, 18% stated agree, 12% stated neutral, 4% stated strongly disagree and 3% stated disagree.
- Majority of the faculty respondents find technology to be supportive while working.

Table No. 4.2.6 - Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	3.2	3.2	3.2
	Disagree	9	4.8	4.8	8.0
	Neutral	28	14.9	14.9	22.9
	Agree	50	26.6	26.6	49.5
	Strongly Agree	95	50.5	50.5	100.0
	Total	188	100.0	100.0	

Source: Field Survey

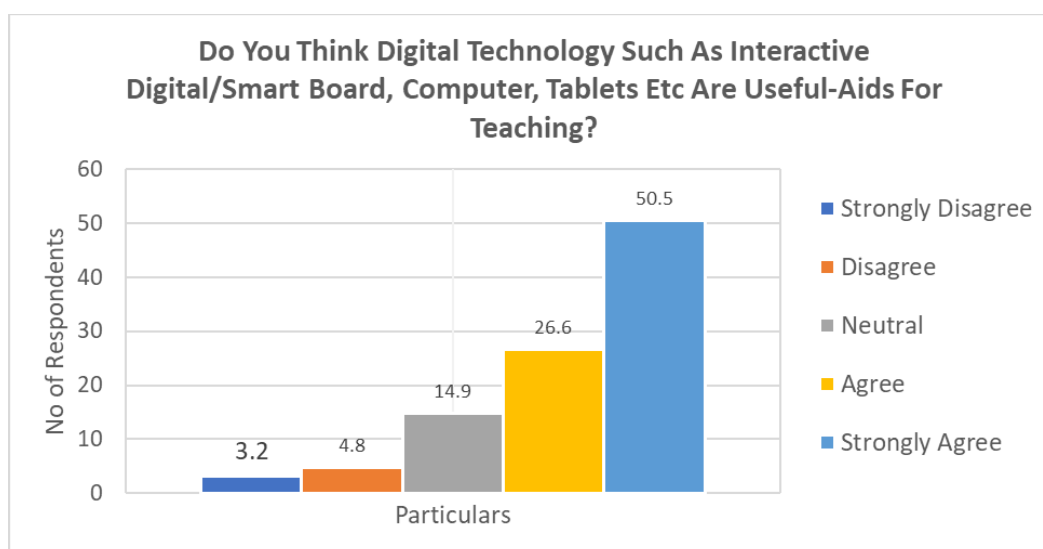


Chart No. 4.2.6 - Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?

Interpretation:

- When the respondents were asked about the useful aids for teaching it was observed that around 51% of the respondents stated strongly agree, 26% stated agree, 15% stated neutral, 5% stated disagree and around 3% stated strongly disagree to this question.
- Thus, majority of the faculty respondents agree to get instructiveness through digital / smartboard, computer tablets etc.

Table No. 4.2.7 - As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	11.2	11.2	11.2
	Disagree	14	7.4	7.4	18.6
	Neutral	47	25.0	25.0	43.6
	Agree	51	27.1	27.1	70.7
	Strongly Agree	55	29.3	29.3	100.0
	Total	188	100.0	100.0	

Source: Field Survey

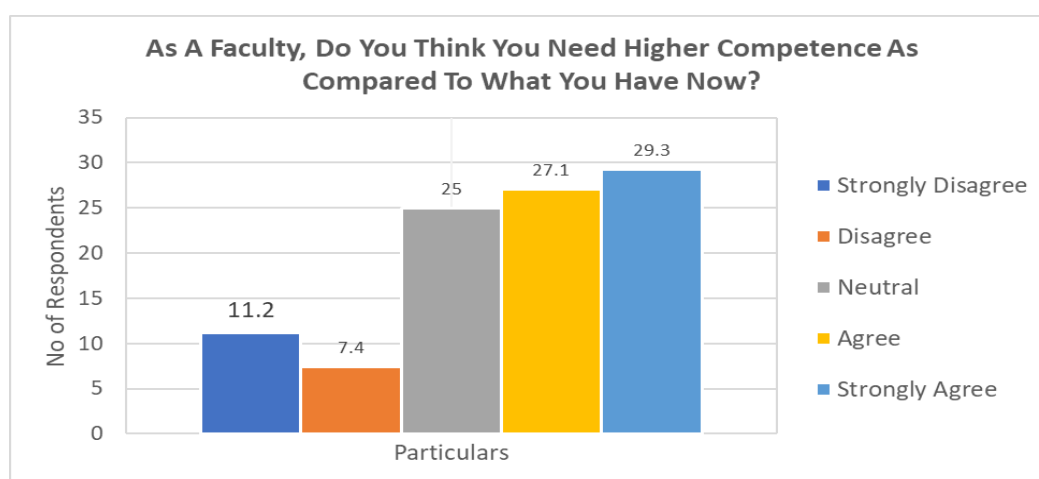


Chart No. 4.2.7 - As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?

Interpretation:

- To understand the performance expectancy of the faculty respondents they were put forth with a question about need for higher competence as compared to what they have now. It was observed that a majority of 29% of the faculty respondents strongly agreed to it, 27% stated agree to the need for more competence. Around 255 of the faculty respondents had a neutral opinion, 7% disagreed to it and 11% stated strongly disagreed to it.
- Thus, we can observe from the above table that there is a strong opinion of the faculty towards need of higher competence level than what they have at present.

Effort Expectancy

Table No. 4.2.8 - Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	32	17.0	17.0	17.0
	Disagree	20	10.6	10.6	27.7
	Neutral	20	10.6	10.6	38.3
	Agree	49	26.1	26.1	64.4
	Strongly Agree	67	35.6	35.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

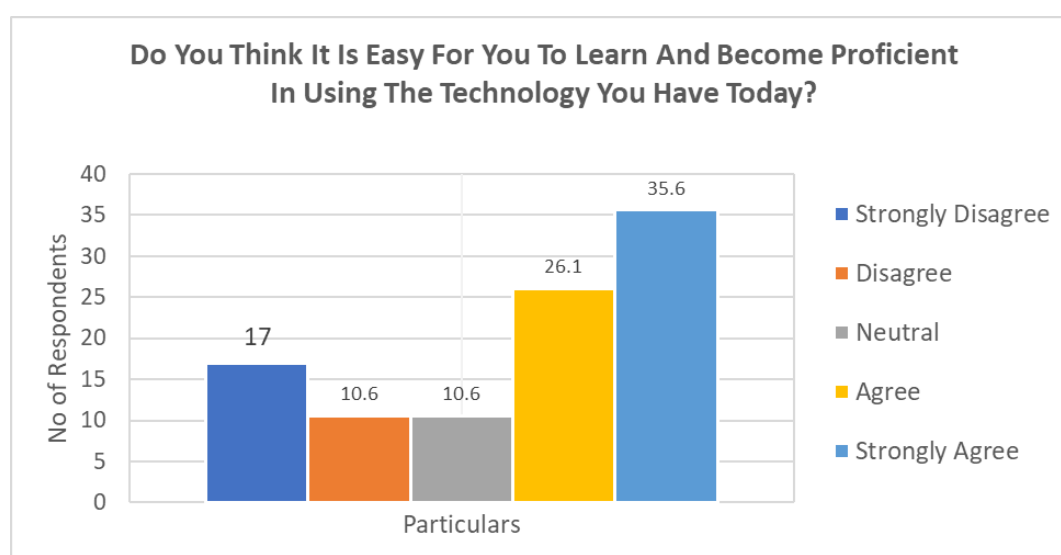


Chart No. 4.2.8 - Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today?

Interpretation:

- To understand the effort expectancy of the faculty respondents, they were put forth with a question as is it easy for the faculties to learn and become proficient in using the technology that they have today. A majority of 36% stated strongly agree, 26% stated agree, 11% had neutral opinion and 11% disagreed and 17% strongly disagreed to it. Thus, we can observe that it's easy to learn and become proficient in using the technology.

Table No. 4.2.9 - Is Technology Difficulty For You To Use?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	53	28.2	28.2	28.2
	Disagree	38	20.2	20.2	48.4
	Neutral	37	19.7	19.7	68.1
	Agree	42	22.3	22.3	90.4
	Strongly Agree	18	9.6	9.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

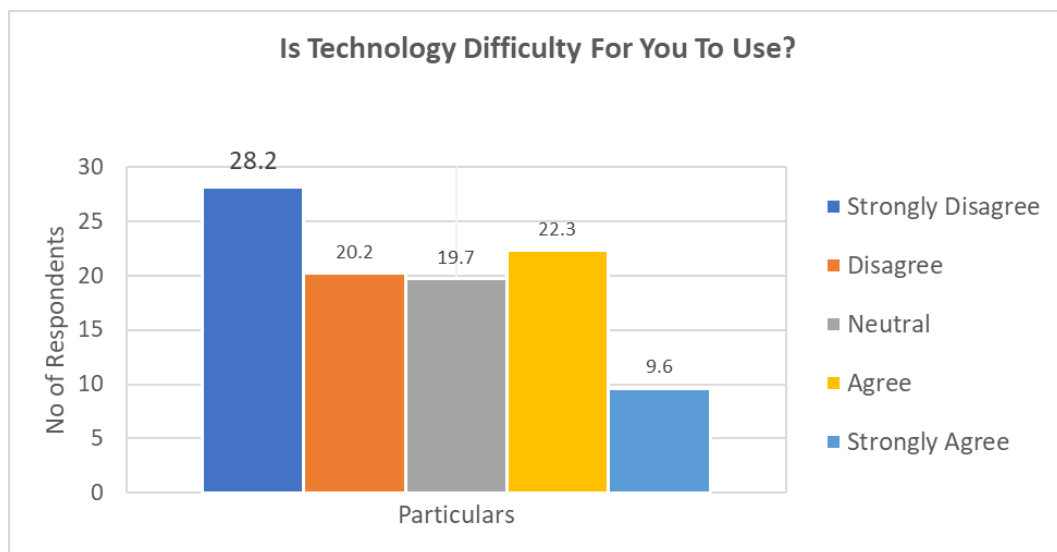


Chart No. 4.2.9 - Is Technology Difficulty For You To Use?

Interpretation:

- To understand the effort expectancy of the faculty respondents, they were put forth with a question asking difficulty level of using the technology. It was observed that around 28% of the faculty respondents stated strongly disagree, 20% stated disagree, 20% stated neutral, 22% stated agree and 10% stated strongly agree.
- Thus, from the above table it can be clearly inferred that faculty respondents felt the difficulty in learning the new technology introduced.

Table No. 4.2.10 - Do You Believe That You Are Competent And Skilled At Using Technology In General?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	6.9	6.9	6.9
	Disagree	15	8.0	8.0	14.9
	Neutral	49	26.1	26.1	41.0
	Agree	49	26.1	26.1	67.0
	Strongly Agree	62	33.0	33.0	100.0
	Total	188	100.0	100.0	

Source: Field Survey

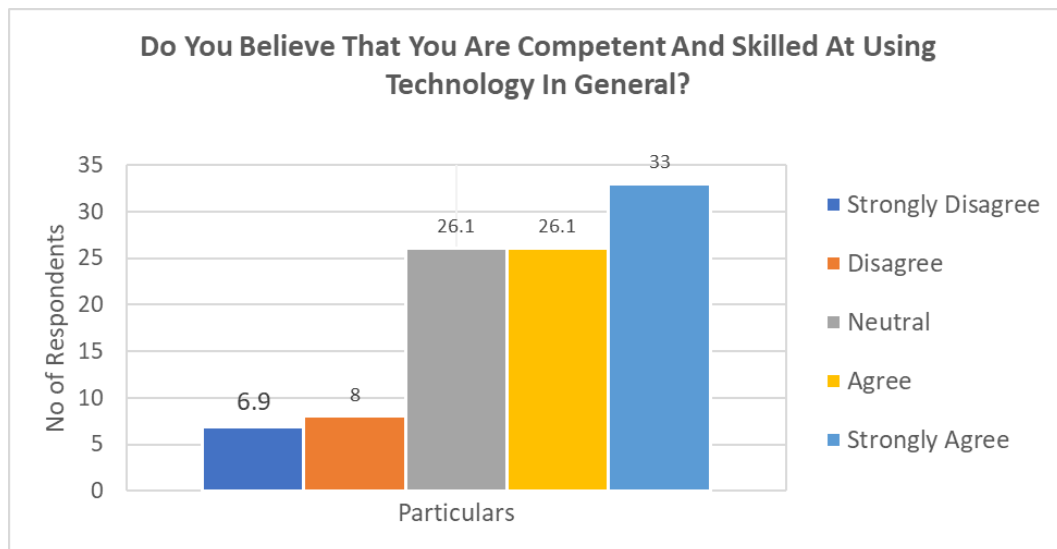


Chart No. 4.2.10 - Do You Believe That You Are Competent And Skilled At Using Technology In General?

Interpretation:

- To understand the effort expectancy, faculty respondents were asked to opine on the belief that whether they believe that they are competent and skilled enough to use the technology in general. It was observed that a majority of 33% of the faculty respondents stated strongly agree, 26% stated agree, around 26% too gave neutral opinion, 8% stated disagree and 7% stated strongly disagree.
- Thus, we can observe that overall the respondents believe themselves to be competent enough to use technology in general.

Social Influence

Table No. 4.2.11 - Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	40	21.3	21.3	21.3
	Disagree	10	5.3	5.3	26.6
	Neutral	25	13.3	13.3	39.9
	Agree	56	29.8	29.8	69.7
	Strongly Agree	57	30.3	30.3	100.0
	Total	188	100.0	100.0	

Source: Field Survey

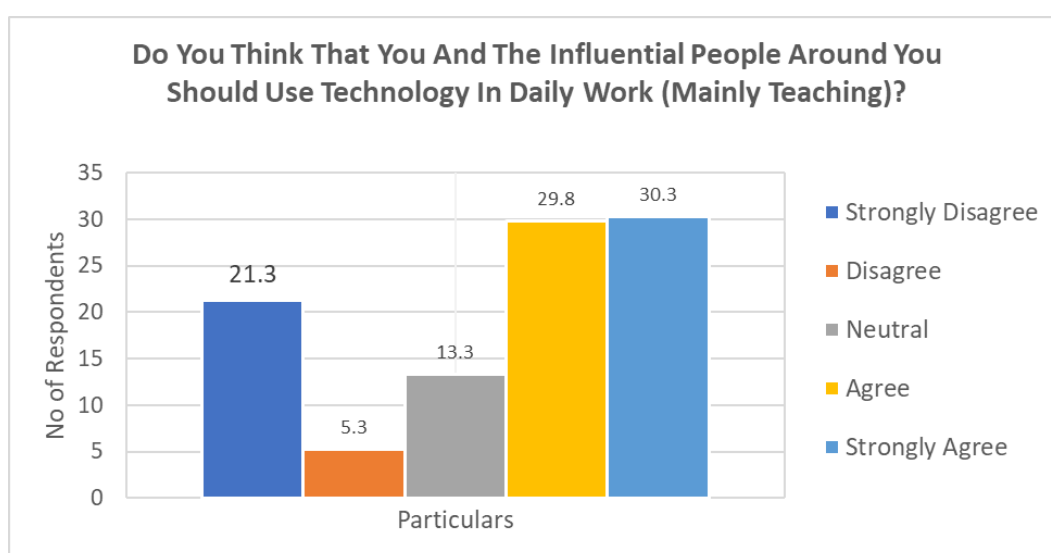


Chart No. 4.2.11 - Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?

Interpretation:

- To understand the Social influence of the respondents the faculty respondents were asked about usage of technology in daily work to influence people. It was observed that 30% of the respondents strongly agree, 30% stated agree, 13% stated neutral, 5% stated disagree and 21% stated strongly disagree to it.
- Thus, we can observe that there is a mixed opinion to this question for usage of technology for influencing others on daily basis.

Table No. 4.2.12 - Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	25	13.3	13.3	13.3
	Disagree	12	6.4	6.4	19.7
	Neutral	19	10.1	10.1	29.8
	Agree	95	50.5	50.5	80.3
	Strongly Agree	37	19.7	19.7	100.0
	Total	188	100.0	100.0	

Source: Field Survey

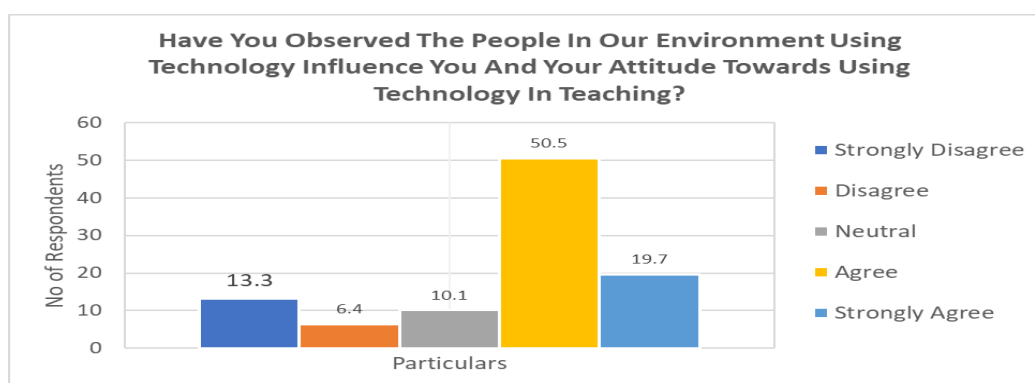


Chart No. 4.2.12 - Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching?

Interpretation:

- To understand more about social influence, the faculty respondents were put forth with a question asking about the influence impact created by other due to the use of technology and its effect on their attitude towards teaching. It was observed that a majority of 51% stated agree, 20% stated strongly agree that it creates a great influence on them. Rest 10% had a neutral opinion, 6% stated disagree and 13% stated strongly disagree to it.
- Thus, we can infer other way of usage of technology has a great influence on attitude of self.

Table No. 4.2.13 - Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	85	45.2	45.2	45.2
	Disagree	40	21.3	21.3	66.5
	Neutral	15	8.0	8.0	74.5
	Agree	27	14.4	14.4	88.9
	Strongly Agree	21	11.2	11.2	100
	Total	188	100.0	100.0	

Source: Field Survey

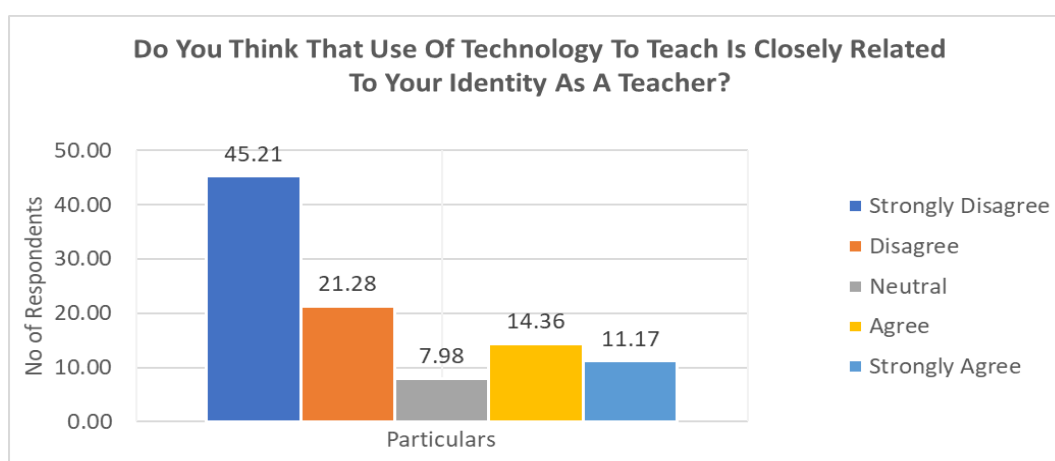


Chart No. 4.2.13 - Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher?

Interpretation:

- To understand more about social influence, the faculty respondents were put forth with a question asking about the use of technology to teach is closely related to your identity as a teacher. It was observed that a majority of 45.21% stated disagree, 21.25% stated disagree that its creates a great influence on them. Rest 7.98% had a neutral opinion, 14.36% stated agree and 11.17% stated strongly agree to it.
- Thus, we can infer other way of usage of technology has a great influence on attitude of self.

Facilitating Conditions

Table No. 4.2.14 - Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	0	0	0	0
	Disagree	4	2.1	2.1	2.1
	Neutral	25	13.3	13.3	15.4
	Agree	66	35.1	35.1	50.5
	Strongly Agree	93	49.5	49.5	100.0
	Total	188	100.0	100.0	

Source: Field Survey

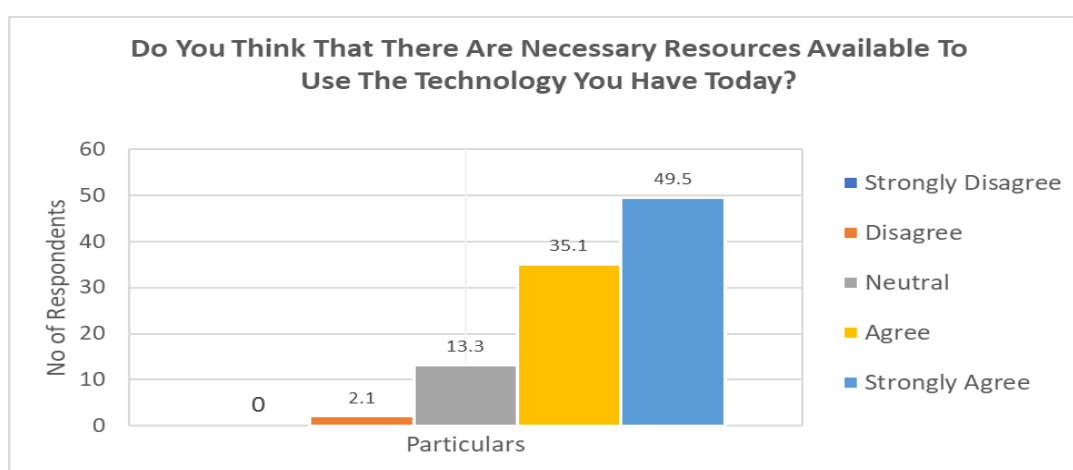


Chart No. 4.2.14 - Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today?

Interpretation:

- To understand the facilitating condition of the faculty respondents they were put forth with a question as weather there is availability of necessary resources to use technology they have today. It was observed that 50% of the respondents strongly agreed to it, 35% agreed, 13% had a neutral opinion and 2% disagreed to it.
- Thus, we can observe from the above table that resources are available for the faculty to use for improving the teaching learning process.

Table No. 4.2.15 - Do You Think That Technology Is Compatible With The Work You Do?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.8	4.8	4.8
	Disagree	4	2.1	2.1	6.9
	Neutral	30	16.0	16.0	22.9
	Agree	67	35.6	35.6	58.5
	Strongly Agree	78	41.5	41.5	100.0
	Total	188	100.0	100.0	

Source: Field Survey

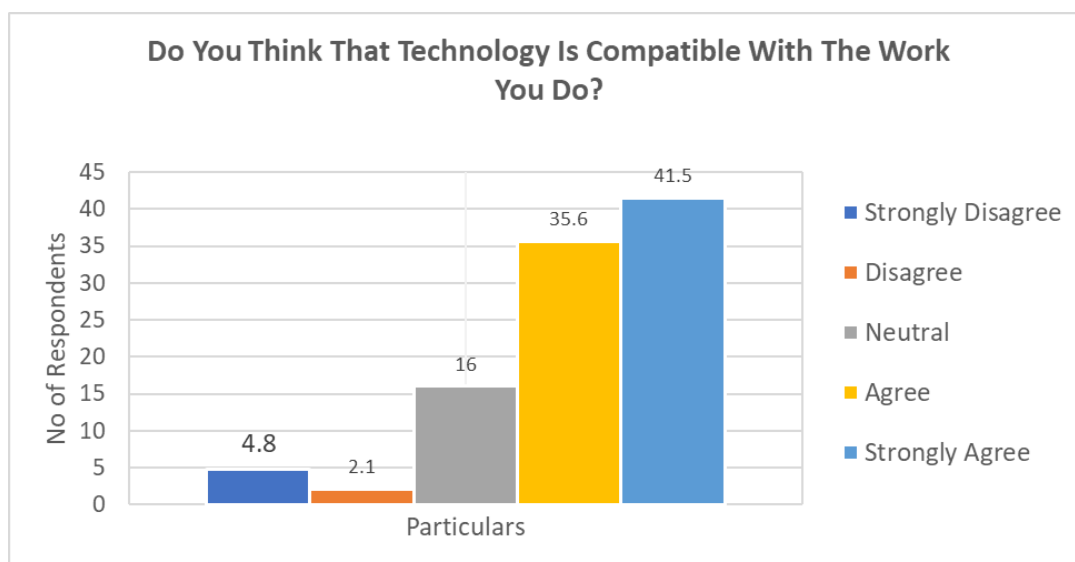


Chart No. 4.2.15 - Do You Think That Technology Is Compatible With The Work You Do?

Interpretation:

- To understand the facilitating condition of the faculty respondents they were put forth with a question as weather they think technology is compatible with the work they do. It was observed that a majority of 42% of the respondents stated strongly agree, 36% stated agree, 16% stated neutral, 2% stated disagree and 5% stated strongly disagree to it.
- Thus, we can observe from the above table that the faculty respondents feel that the technology is compatible with the work they do.

Table No. 4.2.16 - Do You Think Technology Determines / Influences How You Should Do Your Work?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.1	2.1	2.1
	Disagree	15	8.0	8.0	10.1
	Neutral	34	18.1	18.1	28.2
	Agree	90	47.9	47.9	76.1
	Strongly Agree	45	23.9	23.9	100.0
	Total	188	100.0	100.0	

Source: Field Survey

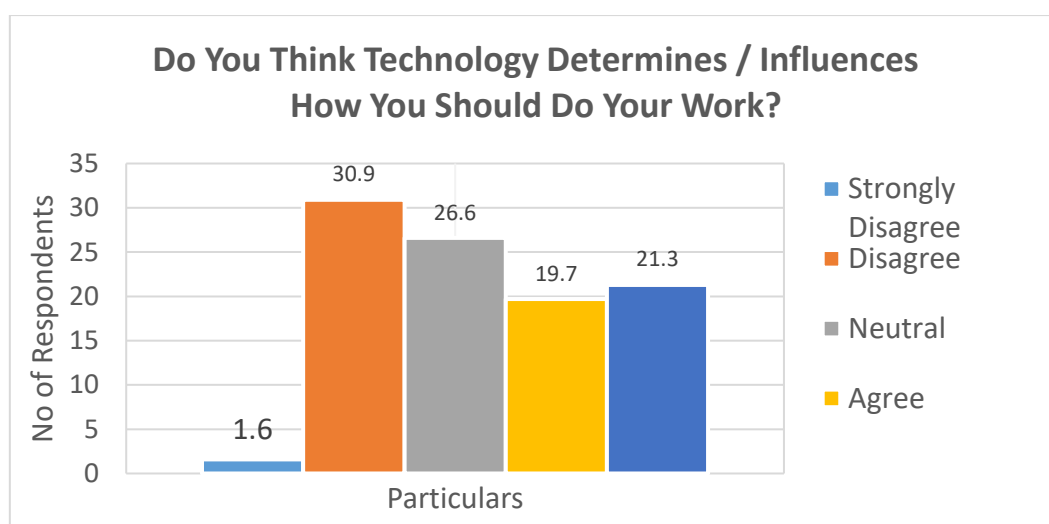


Chart No. 4.2.16 - Do You Think Technology Determines / Influences How You Should Do Your Work?

Interpretation:

- To understand the facilitating condition of the faculty respondents they were put forth with a question as weather this technology is determining how they should work. It was observed through the opinion of the faculty respondents that a majority of them disagreed to it, 27% had a neutral opinion for the same, 20% agreed and 21% strongly agreed to it.
- Thus, we can observe from the above table that technology should not determines how they should do the work is felt by the faculty respondents.

Table No. 4.2.17 - Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.7	3.7	3.7
	Disagree	29	15.4	15.4	19.1
	Neutral	47	25.0	25.0	44.1
	Agree	55	29.3	29.3	73.4
	Strongly Agree	50	26.6	26.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

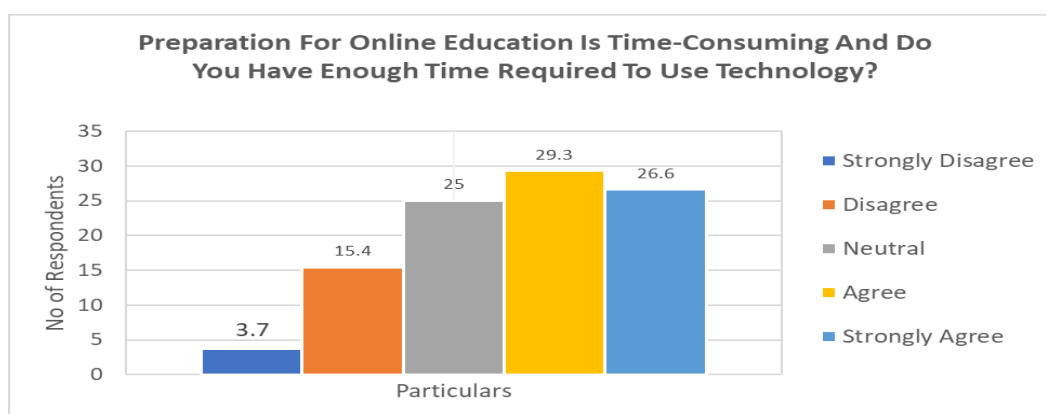


Chart No. 4.2.17 - Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?

Interpretation:

- To understand the facilitating condition of the faculty respondents they were put forth with a question as weather they find enough time to use technology, it was observed that a mixed opinion was observed. Around 27% strongly agreed, 29% agreed to it stating it to be time consuming. Whereas 25% had a neutral opinion and 15% stated disagree and 4% strongly disagreed to it.
- Thus, we can observe that many faculty find technology to be a time-consuming task whereas, some feel it not to be.

Experience

Table No. 4.2.18 - Are You Using Technology For Teaching And In Your Work Since A Long Time?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	11.7	11.7	11.7
	Disagree	16	8.5	8.5	20.2
	Neutral	28	14.9	14.9	35.1
	Agree	49	26.1	26.1	61.2
	Strongly Agree	73	38.8	38.8	100.0
	Total	188	100.0	100.0	

Source: Field Survey

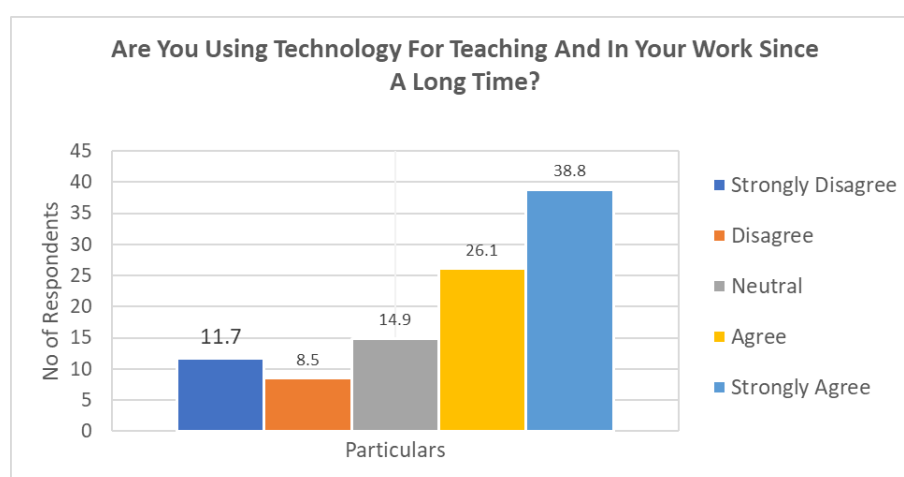


Chart No. 4.2.18 - Are You Using Technology For Teaching And In Your Work Since A Long Time?

Interpretation:

- To understand the experience of the faculty respondents towards technology usage they were put forth with a question as to how they are using technology for teaching and other purpose. 39% of the faculty respondents strongly agreed to it and 26% agreed to it stating the complete usage. Whereas 15% had a neutral opinion and 9% disagreed to it and 125 strongly disagreed to it.
- Thus, we can observe from the above table that considerably number of faculty respondents use technology in their work and for their personal work also.

Table No. 4.2.19 - Do You Use Technology At Home And In Your Free Time?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	4.3	4.3	4.3
	Disagree	15	8.0	8.0	12.2
	Neutral	13	6.9	6.9	19.1
	Agree	53	28.2	28.2	47.3
	Strongly Agree	99	52.7	52.7	100.0
	Total	188	100.0	100.0	

Source: Field Survey

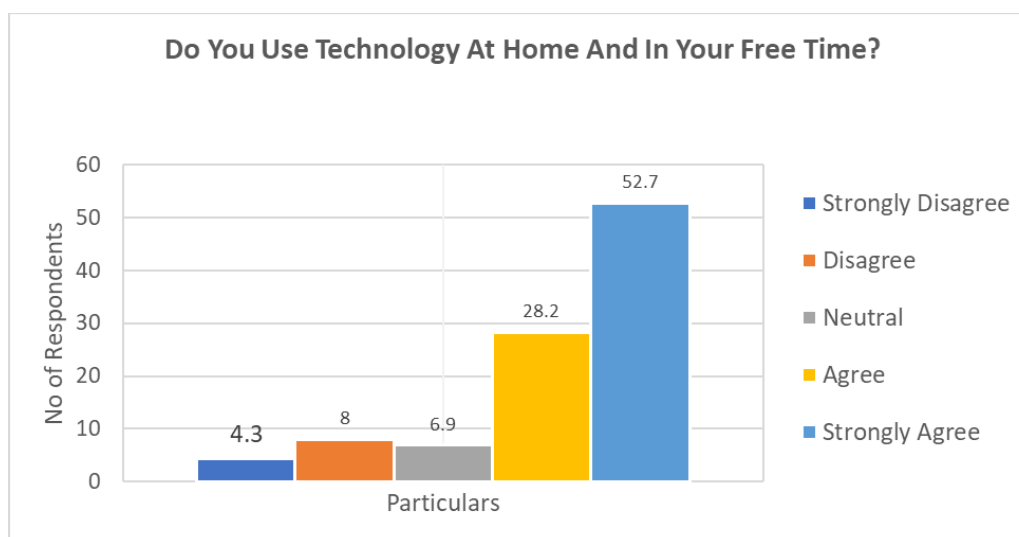


Chart No. 4.2.19 - Do You Use Technology At Home And In Your Free Time?

Interpretation:

- To understand the experience of the faculty respondents they were asked to opine on whether they use technology in their free time and at home. It was observed that a majority of 53% stated strongly agree, 28% stated agree. Likewise, 7% had a neutral opinion and 8% disagreed to it and 4% strongly disagreed to it.
- Thus, we can observe that majority of the faculty respondents use technology at home and in their free time.

Voluntariness

Table No. 4.2.20 - Do You Have An Obligation To Use Technology For Work?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	6.4	6.4	6.4
	Disagree	57	30.3	30.3	36.7
	Neutral	48	25.5	25.5	62.2
	Agree	56	29.8	29.8	92.0
	Strongly Agree	15	8.0	8.0	100.0
	Total	188	100.0	100.0	

Source: Field Survey

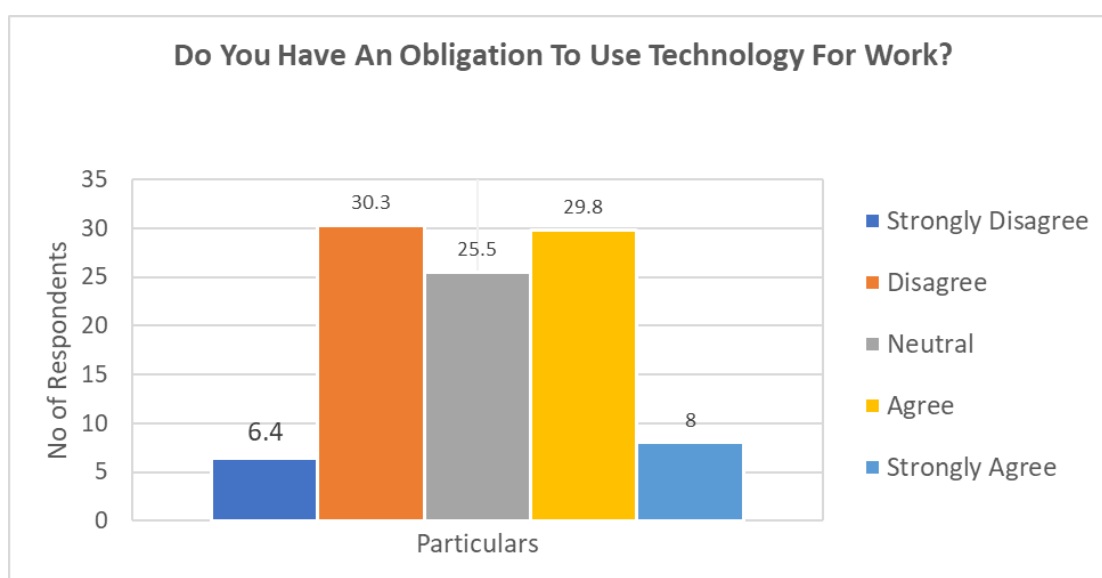


Chart No. 4.2.20 - Do You Have An Obligation To Use Technology For Work?

Interpretation:

- To understand the voluntariness of the faculty respondents were asked to opine about any obligations to use technology for work. It was observed that around 8% of them stated strongly agreed, 30% stated a agree to the obligation towards using the technology. Likewise, 265 had neutral opinion, 30% stated disagree and 6% stated strongly disagree to it.
- Thus, it can be observed that half of the respondents stated obligation to use technology.

Table No. 4.2.21 - Do You use Technology In A Different Manner Than What Is Requested?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	6.9	6.9	6.9
	Disagree	33	17.6	17.6	24.5
	Neutral	59	31.4	31.4	55.9
	Agree	64	34.0	34.0	89.9
	Strongly Agree	19	10.1	10.1	100.0
	Total	188	100.0	100.0	

Source: Field Survey

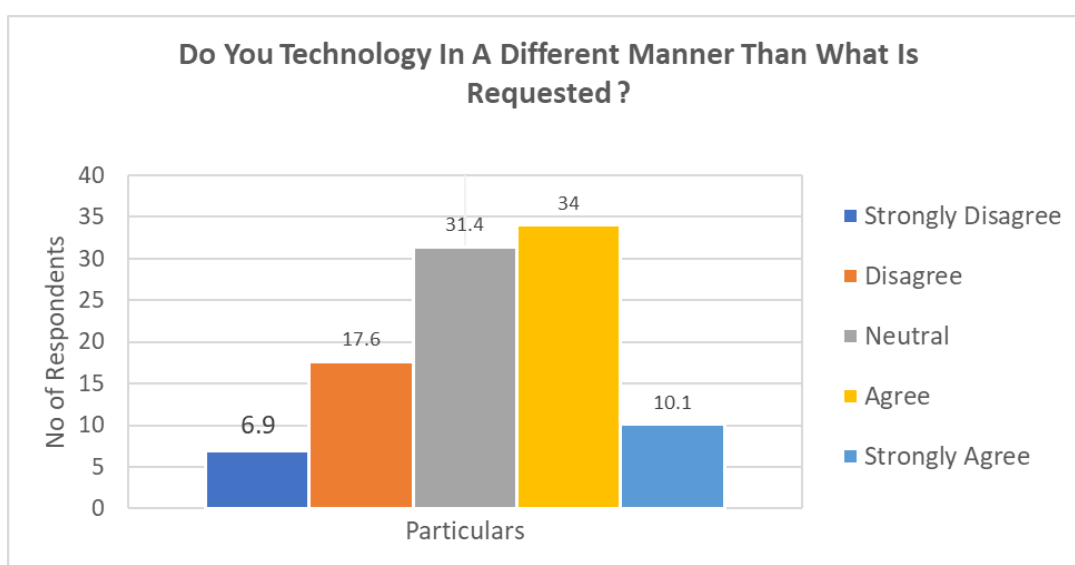


Chart No. 4.2.21 - Do You Technology In A Different Manner Than What Is Requested?

Interpretation:

- To understand the voluntariness of towards using technology other than it is expected, it was observed that a mixed opinion was obtained. Where the respondents stated as follows, 10% strongly disagreed and 34% agreed to it; 31% had a neutral opinion; and 18% strongly disagreed and 7% disagreed to it.
- Thus, we can observe that considerable number of faculty respondents had a neutral opinion towards using the technology other than it is intended to.

Table No. 4.2.22 - Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties?

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.7	3.7	3.7
	Disagree	10	5.3	5.3	9.0
	Neutral	50	26.6	26.6	35.6
	Agree	90	47.9	47.9	83.5
	Strongly Agree	31	16.5	16.5	100.0
	Total	188	100.0	100.0	

Source: Field Survey

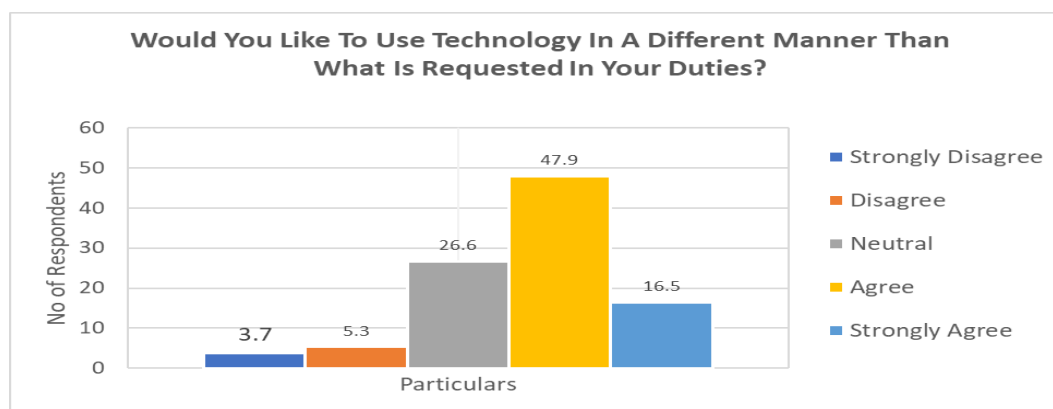


Chart No. 4.2.22 - Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties?

Interpretation:

- When the faculty respondents were asked about the willingness to use technology in a different manner to understand the voluntariness aspect. It was observed that 48% of them stated agree and 17% stated strongly agreed. Likewise, 27% of them stated neutral opinion, 5% disagreed and 4% strongly disagreed to it.
- Thus, we can observe from the above table that considerable number of faculty respondents showed positive interest towards using technology in a different way.

Others

Table No. 4.2.23 - Students Receive More Assignments And Homework Than In Face-To-Face Classes

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.7	3.7	3.7
	Disagree	36	19.1	19.1	22.9
	Neutral	41	21.8	21.8	44.7
	Agree	67	35.6	35.6	80.3
	Strongly Agree	37	19.7	19.7	100.0
	Total	188	100.0	100.0	

Source: Field Survey

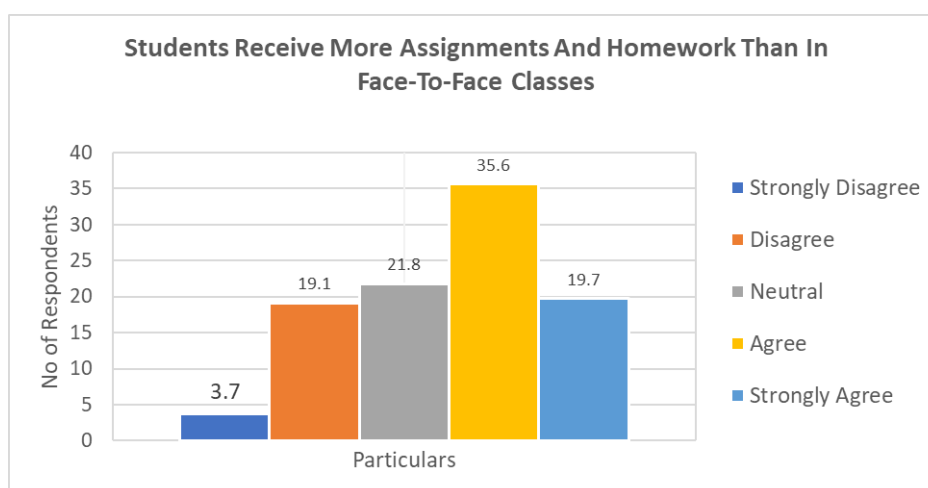


Chart No. 4.2.23 - Students Receive More Assignments And Homework Than In Face-To-Face Classes

Interpretation:

- When the faculty respondents were asked about perception towards receiving more assignments and homework than in face-to-face classes. It was observed that 36% of the respondents agreed to it and 20% of the respondents strongly disagreed to it. Around 22% had a neutral opinion, 19% disagreed and 4% strongly disagreed to it.
- Thus, we can observe from the above table that teachers feel number of assignments increases in online mode in comparison to face to face classes.

Table No. 4.2.24 - Teachers Have Difficulties With The Efficient Organization/Structuring Of Learning Activities To Facilitate Interaction Between Students For Online Classes

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	6.4	6.4	6.4
	Disagree	45	23.9	23.9	30.3
	Neutral	24	12.8	12.8	43.1
	Agree	54	28.7	28.7	71.8
	Strongly Agree	53	28.2	28.2	100.0
	Total	188	100.0	100.0	

Source: Field Survey

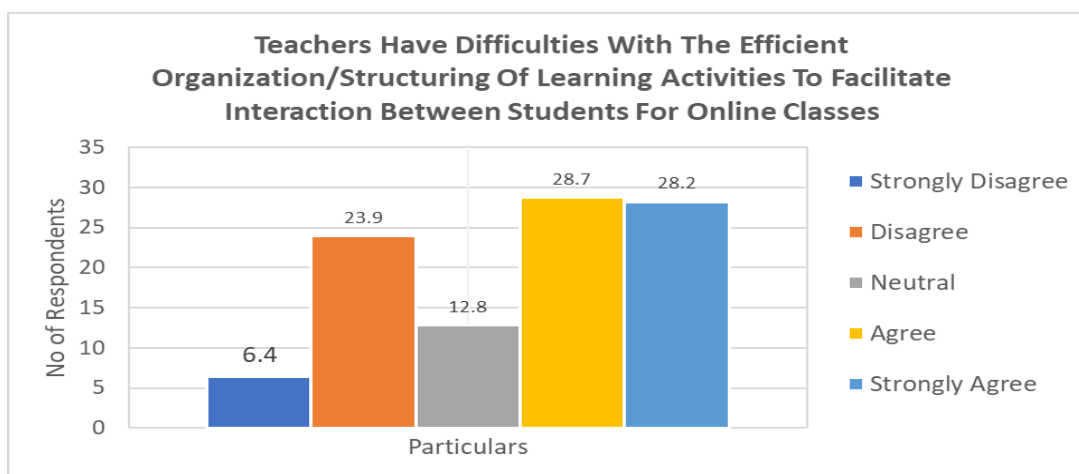


Chart No. 4.2.24 - Teachers Have Difficulties With The Efficient Organization/Structuring Of Learning Activities To Facilitate Interaction Between Students For Online Classes

Interpretation:

- When the respondents were asked about difficulty in efficient structuring of learning activities to facilitate interaction between students for online classes, it was observed that a majority of 29% agreed and 28% strongly agreed to it. Likewise, around 13% of the faculty respondent's neutral opinion, 24% stated disagree and 6% stated strongly disagree to it.
- Thus, we can observe that a mixed opinion regarding efficient organising and structuring of learning activities to facilitate interaction between students for online classes can be observed.

Table No. 4.2.25 - Teachers Have Problems In Providing/Receiving Timely And Relevant Feedback From Students During Online Classes

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.6	1.6	1.6
	Disagree	22	11.7	11.7	13.3
	Neutral	20	10.6	10.6	23.9
	Agree	95	50.5	50.5	74.5
	Strongly Agree	48	25.5	25.5	100.0
	Total	188	100.0	100.0	

Source: Field Survey

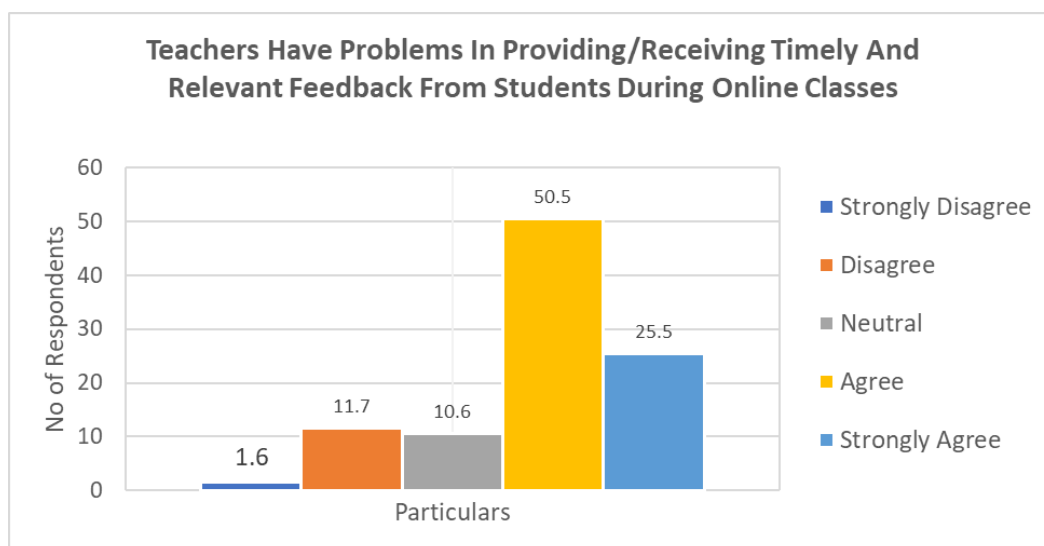


Chart No. 4.2.25 - Teachers Have Problems In Providing/Receiving Timely And Relevant Feedback From Students During Online Classes

Interpretation:

- The above stated table depicts the problems faced by teachers in providing and receiving timely and relevant feedback from students during online class was opined. It was observed that a majority of the faculty respondents agreed to it and 26% strongly agreed to this issue. Around 11% stated neutral opinion, 12% disagreed and 2% strongly disagreed to it.
- Thus, from the above table it can be inferred that teachers find issues in getting relevant feedback during online classes.

Table No. 4.2.26 - Students Enjoy Learning By Using Digital Tools And Resources

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	20	10.6	10.6	10.6
	Disagree	20	10.6	10.6	21.3
	Neutral	38	20.2	20.2	41.5
	Agree	60	31.9	31.9	73.4
	Strongly Agree	50	26.6	26.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

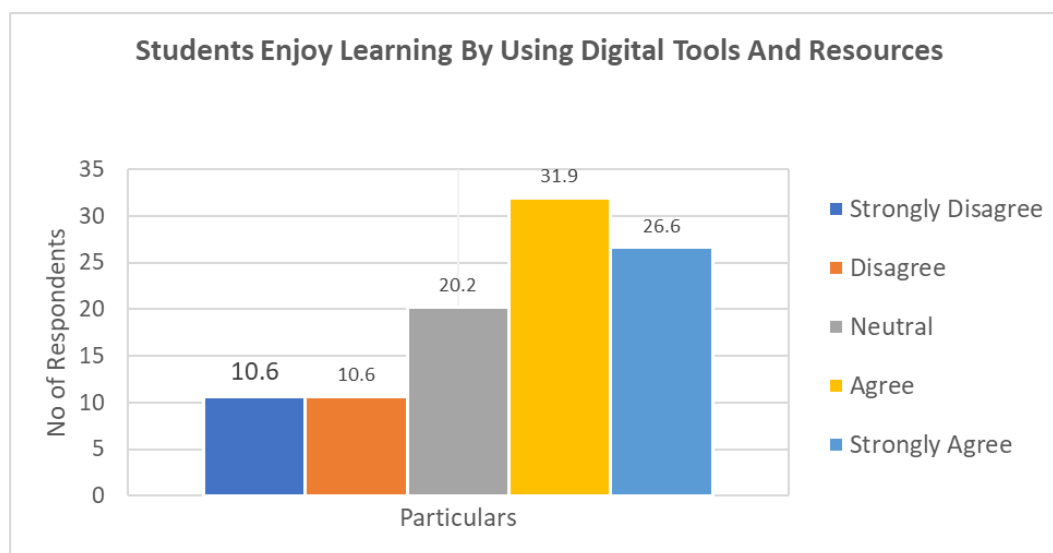


Chart No. 4.2.26 - Students Enjoy Learning By Using Digital Tools And Resources

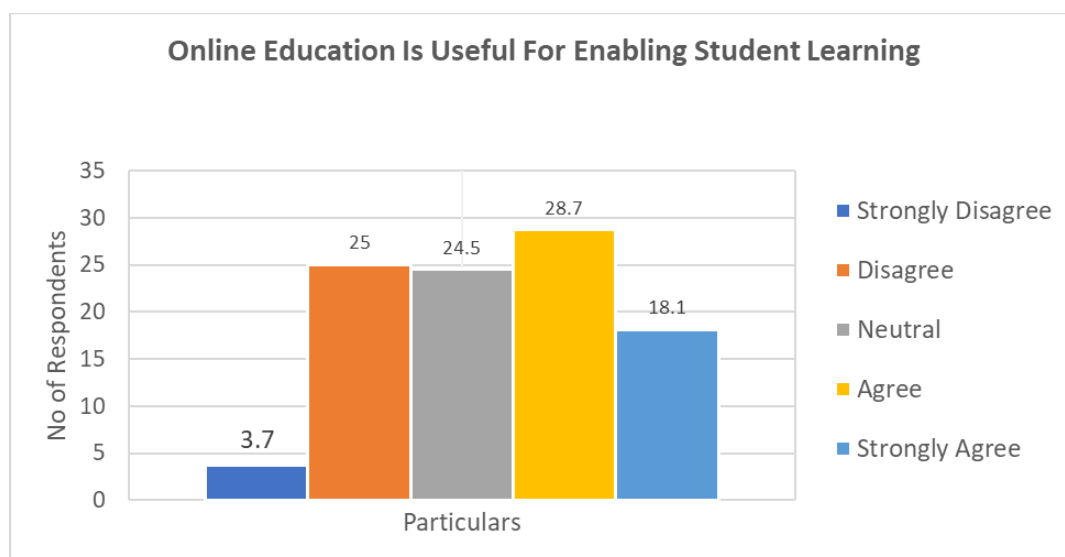
Interpretation:

- When the faculty respondents were asked about students enjoying through digital tools and resources, a majority of 32% agreed to it, 27% strongly agreed to it. Around 20% stated neutral, 11% disagreed and strongly disagreed to it. Thus, we can observe that the teacher believe that the students enjoy learning using digital tools and resources.

Table No. 4.2.27 - Online Education Is Useful For Enabling Student Learning

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	3.7	3.7	3.7
	Disagree	47	25.0	25.0	28.7
	Neutral	46	24.5	24.5	53.2
	Agree	54	28.7	28.7	81.9
	Strongly Agree	34	18.1	18.1	100.0
	Total	188	100.0	100.0	

Source: Field Survey

**Chart No. 4.2.27 - Online Education Is Useful For Enabling Student Learning****Interpretation:**

- When the faculty respondents were asked to opine about the usefulness of online education for students learning, it was observed that around 29% agreed to it, 18% strongly agreed to it. It was observed that 25% of the faculty respondents stated neutral opinion, 25% stated disagree and 4% stated strongly disagree to it.
- Thus, we can observe from the above table that there is a mixed opinion towards usefulness of online education for enabling students learning.

Table No. 4.2.28 - The Online Education Can Be Easily Adapted To Every Subject

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	34	18.1	18.1	18.1
	Disagree	44	23.4	23.4	41.5
	Neutral	42	22.3	22.3	63.8
	Agree	33	17.6	17.6	81.4
	Strongly Agree	35	18.6	18.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

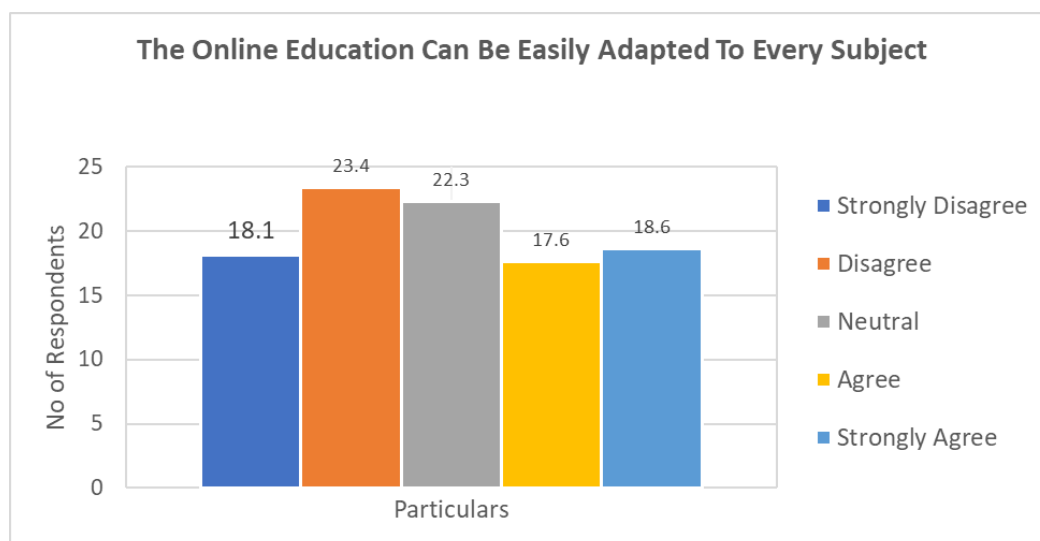


Chart No. 4.2.28 - The Online Education Can Be Easily Adapted To Every Subject

Interpretation:

- When the faculty respondents were asked about adaptability of online education to every subject, a mixed opinion was observed. Wherein, 23% stated disagree and 18% opined strongly disagreed to it. Around 22% stated neutral opinion, 18% stated agree and 19% stated strongly agreed to it.
- Thus, we can observe a mixed opinion stating that not all subjects teachers are comfortable with online mode for teaching.

Table No. 4.2.29 - Online Education Helps To Enables Teachers To Guide And Reward Students

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	32	17.0	17.0	17.0
	Disagree	66	35.1	35.1	52.1
	Neutral	33	17.6	17.6	69.7
	Agree	36	19.1	19.1	88.8
	Strongly Agree	21	11.2	11.2	100.0
	Total	188	100.0	100.0	

Source: Field Survey

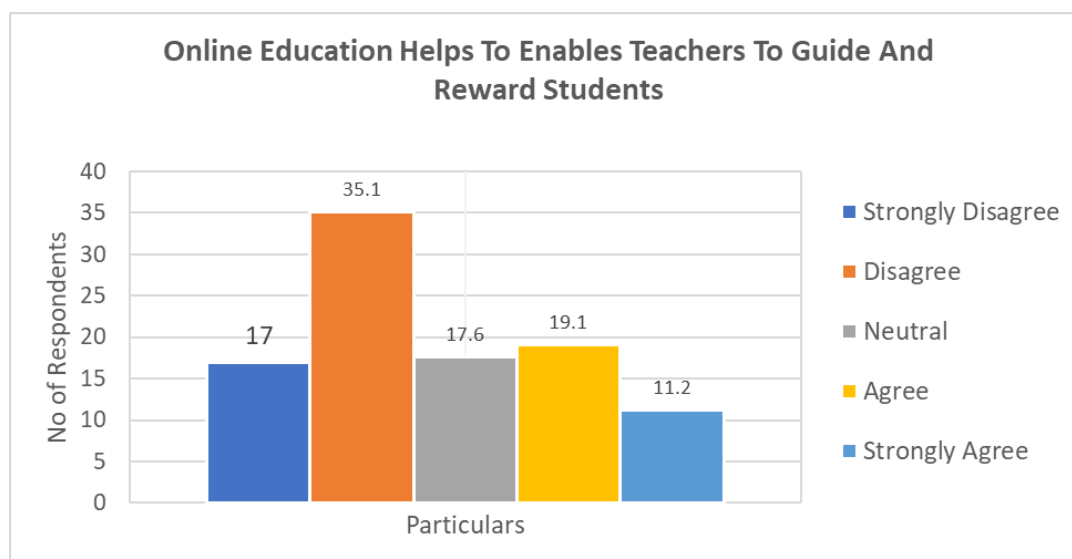


Chart No. 4.2.29 - Online Education Helps To Enables Teachers To Guide And Reward Students

Interpretation:

- When the faculty respondents were asked to opine about the support online education provides to guide and reward students, it was observed that a majority of 35% disagreed to it and 17% stated strongly disagreed to it. Around 18% had a neutral opinion for the same. Around 19% stated agree and 11% stated strongly agree to it.
- Thus, we can observe from the above table that online education helps to enable teachers to guide and reward students.

Table No. 4.2.30 - Online Education Facilitates Student's Engagement In The Active Learning Process In Classrooms.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	7.4	7.4	7.4
	Disagree	81	43.1	43.1	50.5
	Neutral	31	16.5	16.5	67.0
	Agree	42	22.3	22.3	89.4
	Strongly Agree	20	10.6	10.6	100.0
	Total	188	100.0	100.0	

Source: Field Survey

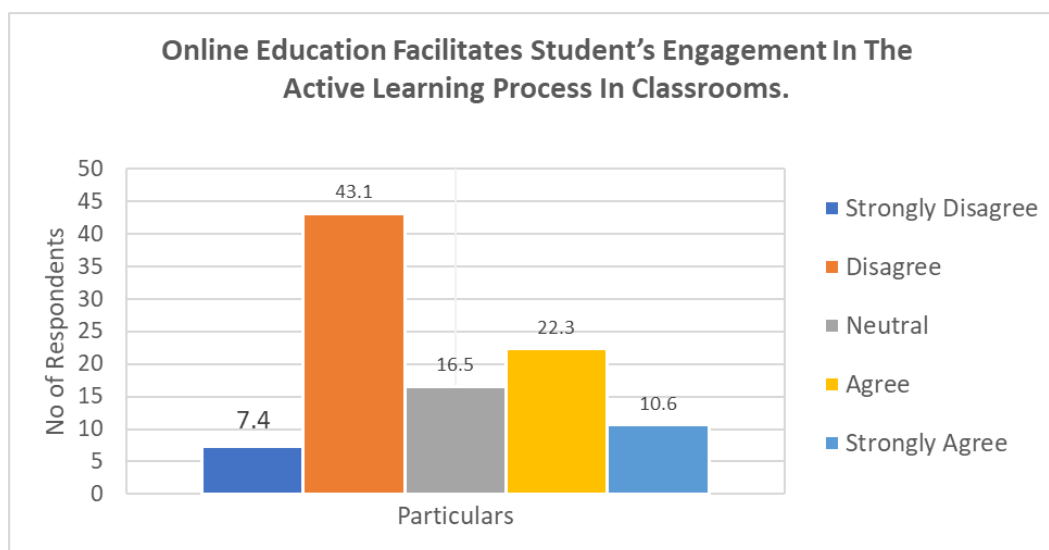


Chart No. 4.2.30 - Online Education Facilitates Student's Engagement In The Active Learning Process In Classrooms.

Interpretation:

- When the respondents were asked about engagement of students through online education, it was observed that a majority of 43% stated disagree, 7% stated strongly disagree. Around 17% stated neutral opinion, 22% stated agree and 11% stated strongly agree to it.
- Thus, from the above table it can be observed that majority of the faculty respondents feel online education does not facilitate students engagement in active learning process.

Table No. 4.2.31 - Online Education Creates Chaos In The Classroom Discipline

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.6	1.6	1.6
	Disagree	34	18.1	18.1	19.7
	Neutral	35	18.6	18.6	38.3
	Agree	84	44.7	44.7	83.0
	Strongly Agree	32	17.0	17.0	100.0
	Total	188	100.0	100.0	

Source: Field Survey

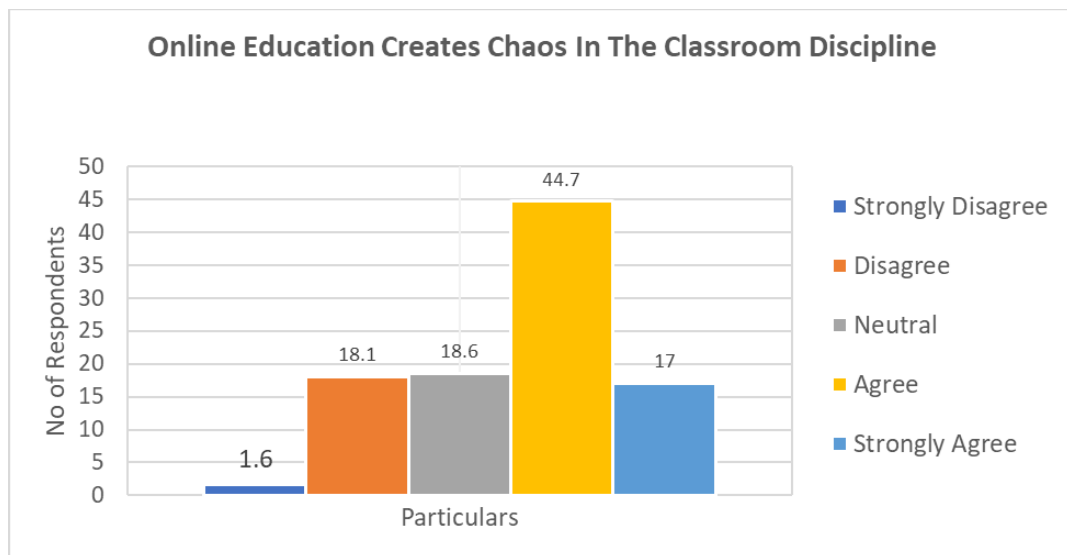


Chart No. 4.2.31 - Online Education Creates Chaos In The Classroom Discipline

Interpretation:

- When the faculty respondents were asked to opine regarding online education creating chaos in classroom discipline, it was observed that 45% of them stated agree, 17% stated strongly agree to it. 19% stated neutral opinion, 18% disagreed and 2% strongly disagreed to it.
- Thus, we can observe that a considerable number of faculty members feel that online education creates chaos in classroom discipline.

Table No. 4.2.32 - Online Education Is Not Feasible As All Students Are Not Tech-Savvy

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.6	1.6	1.6
	Disagree	49	26.1	26.1	27.7
	Neutral	24	12.8	12.8	40.4
	Agree	82	43.6	43.6	84.0
	Strongly Agree	30	16.0	16.0	100.0
	Total	188	100.0	100.0	

Source: Field Survey

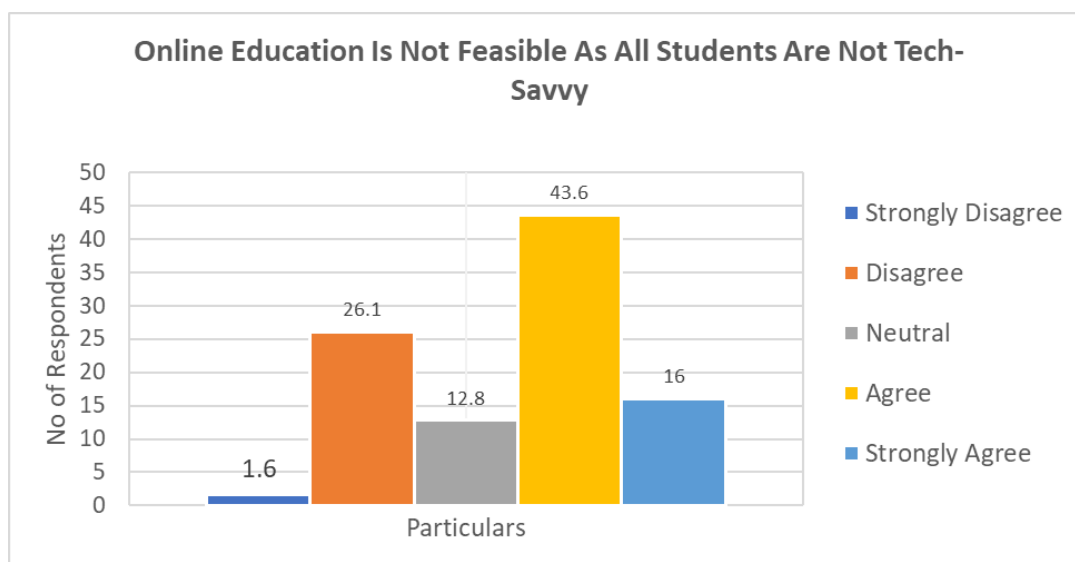


Chart No. 4.2.32 - Online Education Is Not Feasible As All Students Are Not Tech-Savvy

Interpretation:

- When the faculty respondents were asked about the feasibility of online education who are not tech-savvy, it was observed that 44% of the faculty respondents stated agree and 16% stated strongly agreed to it. Likewise, 13% had a neutral opinion, 26% stated disagree and 2% strongly disagreed to it.
- Thus, it can be observed that faculty respondents feel that online education is not a feasible option for those who are not tech savvy.

Table No. 4.2.33 - Online Education Induces Malpractices In Some Cases

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.6	1.6	1.6
	Disagree	58	30.9	30.9	32.4
	Neutral	50	26.6	26.6	59.0
	Agree	37	19.7	19.7	78.7
	Strongly Agree	40	21.3	21.3	100.0
	Total	188	100.0	100.0	

Source: Field Survey

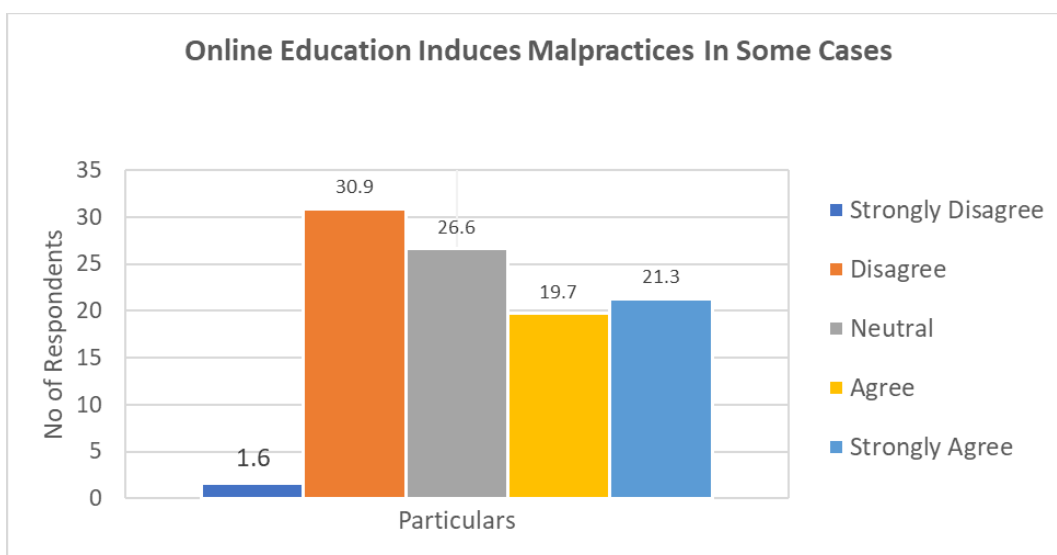


Chart No. 4.2.33 - Online Education Induces Malpractices In Some Cases

Interpretation:

- When the faculty respondents were asked about the malpractice induced due to online education. It was observed that a majority of 21% stated strongly agree, 20% stated agree to it. It was also observed that 27% of the faculty respondents stated neutral opinion, 31% stated disagree and 2% only strongly disagreed to it.
- Thus, from the above table it be inferred that faulty believe that online education had induced malpractices in some cases.

Table No. 4.2.34 Gender * Do You Think Technology Is Very Useful When You Do Your Work? Crosstabulation

Particulars			Do You Think Technology Is Very Useful When You Do Your Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	2	5	0	9	64	80
		%	2.5%	6.3%	0.0%	11.3%	80.0%	100.0%
	Female	Count	2	7	2	8	89	108
		%	1.9%	6.5%	1.9%	7.4%	82.4%	100.0%
Total		Count	4	12	2	17	153	188
		%	2.1%	6.4%	1.1%	9.0%	81.4%	100.0%

Source: Field Survey

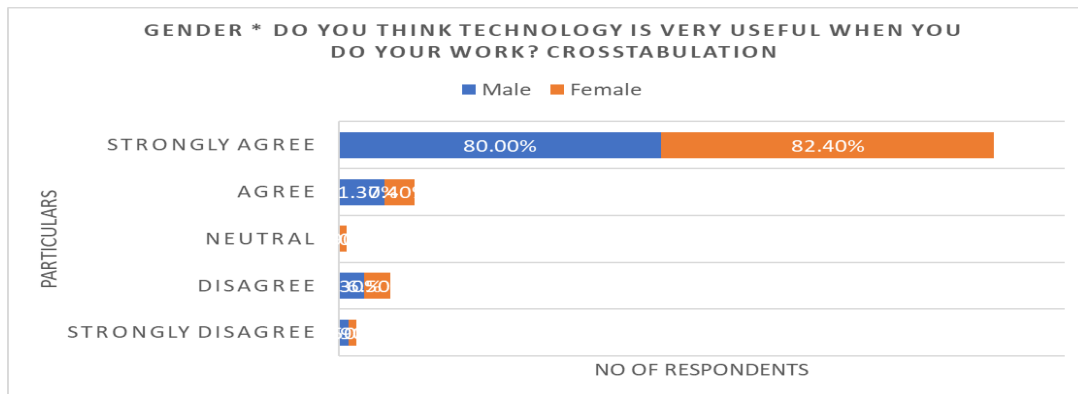


Chart No. 4.2.34 Gender * Do You Think Technology Is Very Useful When You Do Your Work? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on the gender differences and various parameters related to performance expectancy aspect in TAM's model. It was observed that a majority of 80% male and 82% female strongly agree to the usefulness of technology. Likewise, it is observed that 11% of male and 7% female stated agree. None of the male respondent and around only 2% female stated a neutral opinion. Around 6% of male and 7% of female stated disagree and 3% male and 2% female stated strongly disagree to the usefulness of the technology. Thus, we can observe that both male and female have similar kind of opinion towards usefulness of technology.

Table No. 4.2.35 Gender * Do You Find Technology To Be Supportive While Working? Crosstabulation

Particulars			Do You Find Technology To Be Supportive While Working?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	4	5	2	10	59	80
		%	5.0%	6.3%	2.5%	12.5%	73.8%	100.0%
	Female	Count	4	0	21	24	59	108
		%	3.7%	0.0%	19.4%	22.2%	54.6%	100.0%
Total		Count	8	5	23	34	118	188
		%	4.3%	2.7%	12.2%	18.1%	62.8%	100.0%

Source: Field Survey

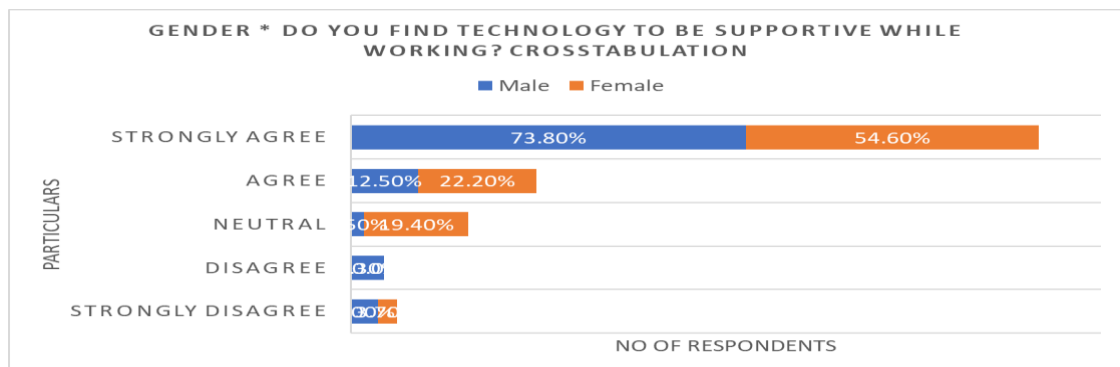


Chart No. 4.2.35 Gender * Do You Find Technology To Be Supportive While Working? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents on the basis of gender differences and various parameters related to performance expectancy aspect in TAM's model. It was observed that a majority of 74% male and 55% female strongly agree to the supportiveness of technology. Likewise, it is observed that 13% of male and 23% female stated agree. None of the female respondent and 6% male stated a neutral opinion. Around 3% of male and 19% of female stated disagree and 5% male and 4% female stated strongly disagree to the supportiveness of the technology. Thus, we can observe that both male and female have supportiveness aspect than female respondents.

Table No. 4.2.36 Gender * Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?

Crosstabulation

Particulars			Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	3	0	4	30	43	80
		%	3.8%	0.0%	5.0%	37.5%	53.8%	100.0%
	Female	Count	3	9	24	20	52	108
		%	2.8%	8.3%	22.2%	18.5%	48.1%	100.0%
Total		Count	6	9	28	50	95	188
		%	3.2%	4.8%	14.9%	26.6%	50.5%	100.0%

Source: Field Survey

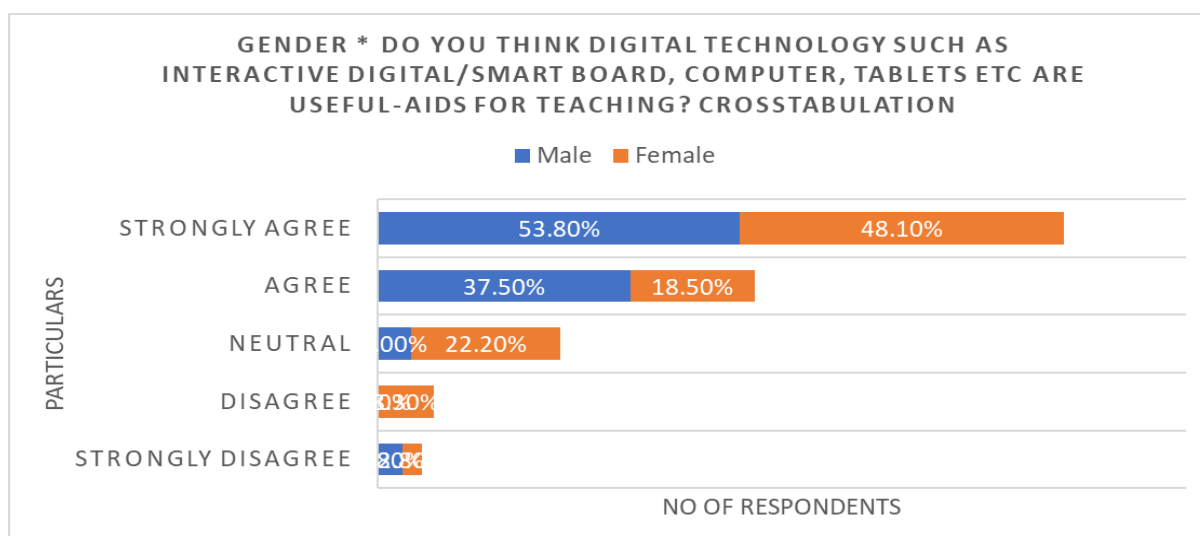


Chart No. 4.2.36 Gender * Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?

Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to performance expectancy aspect in TAM's model. It was observed that a majority of 54% male and 48% female strongly agree to the usefulness of digital aids. Likewise, it is observed that 38% of male and 19% female stated agree. 5% male respondent and 22% female stated a neutral opinion. None of the male and 22% of female stated disagree and 4% male and 3% female stated strongly disagree to the usefulness of the digital aids. Thus, we can observe that almost equal male and female opine towards usefulness of the digital aids. Females disagreed to the usefulness of the digital aids in comparison to male respondents.

Table No. 4.2.37 Gender * As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now? Crosstabulation

Particulars			As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	19	2	11	23	25	80
		%	23.8%	2.5%	13.8%	28.8%	31.3%	100.0%
	Female	Count	2	12	36	28	30	108
		%	1.9%	11.1%	33.3%	25.9%	27.8%	100.0%
Total		Count	21	14	47	51	55	188
		%	11.2%	7.4%	25.0%	27.1%	29.3%	100.0%

Source: Field Survey

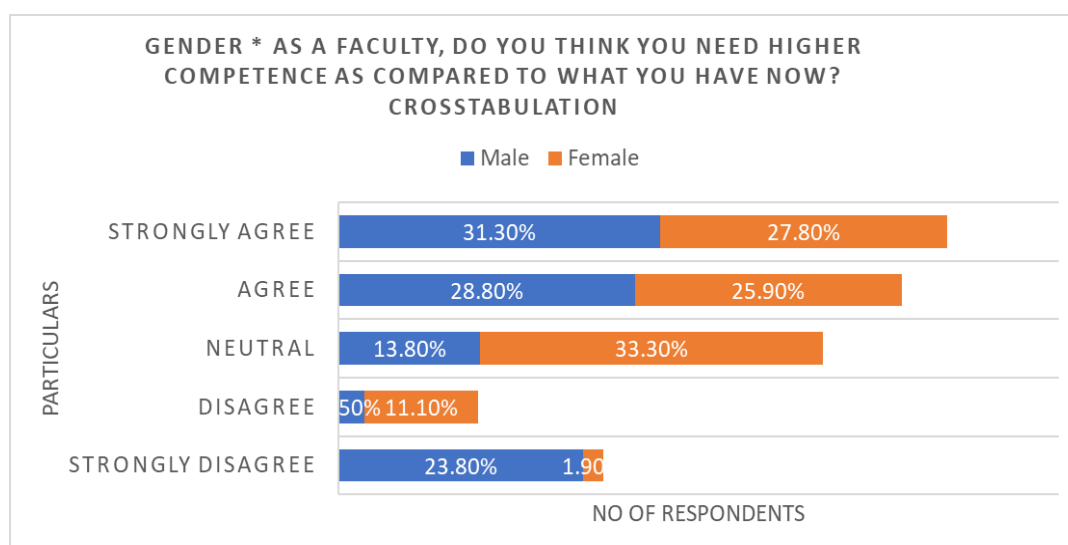


Chart No. 4.2.37- Gender * As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to performance expectancy aspect in TAM's model. It was observed that a majority of 31% male and 28% female strongly agree to the competence in use technology. Likewise, it is observed that 29% of male and 26% female stated agree. 14% male respondent and 33% female stated a neutral opinion. Around 3% of the male and 11% of female stated disagree and 24% male and 2% female stated strongly disagree to the competence of the technology. Thus, we can observe that almost equal male and female opine towards competence in the use of technology. Females disagreed to the competence to the use of the technology in comparison to male respondents.

Table No. 4.2.38 Gender * Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today? Crosstabulation

Particulars			Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	20	5	0	18	37	80
		%	25.0%	6.3%	0.0%	22.5%	46.3%	100.0%
	Female	Count	12	15	20	31	30	108
		%	11.1%	13.9%	18.5%	28.7%	27.8%	100.0%
Total		Count	32	20	20	49	67	188
		%	17.0%	10.6%	10.6%	26.1%	35.6%	100.0%

Source: Field Survey

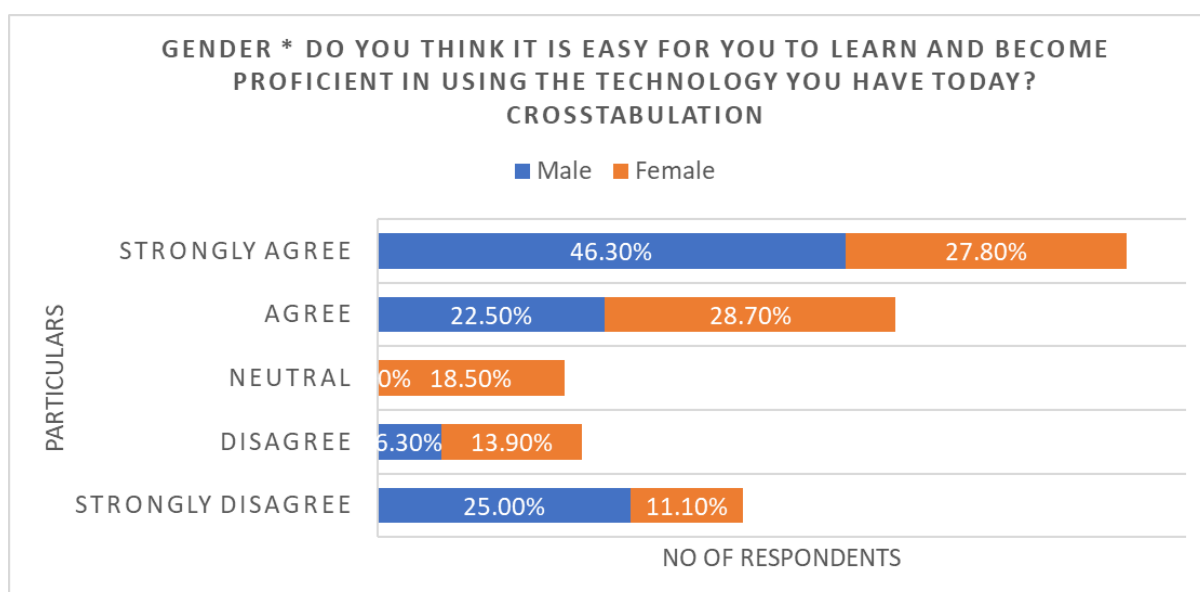


Chart No. 4.2.38 - Gender * Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today? Chart No. 4.2. Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to effort expectancy aspect in TAM's model. It was observed that a majority of 46% male and 28% female strongly agree to the effortless use of technology. Likewise, it is observed that 23% of male and 29% female stated agree. None of the male respondent and 19% female stated a neutral opinion. Around 6% male and 14% of female stated disagree and 25% male and 11% female stated strongly disagree to the effortlessness towards the use of technology. Thus, we can observe that females have a mixed opinion towards the effortlessness of the use of technology and male have a positive opinion towards the effortlessness of the technology.

Table No. 4.2.39 - Gender * Is Technology Difficulty For You To Use?

Crosstabulation

Particulars			Is Technology Difficulty For You To Use?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	29	23	8	14	6	80
		%	36.3%	28.8%	10.0%	17.5%	7.5%	100.0%
	Female	Count	24	15	29	28	12	108
		%	22.2%	13.9%	26.9%	25.9%	11.1%	100.0%
Total		Count	53	38	37	42	18	188
		%	28.2%	20.2%	19.7%	22.3%	9.6%	100.0%

Source: Field Survey

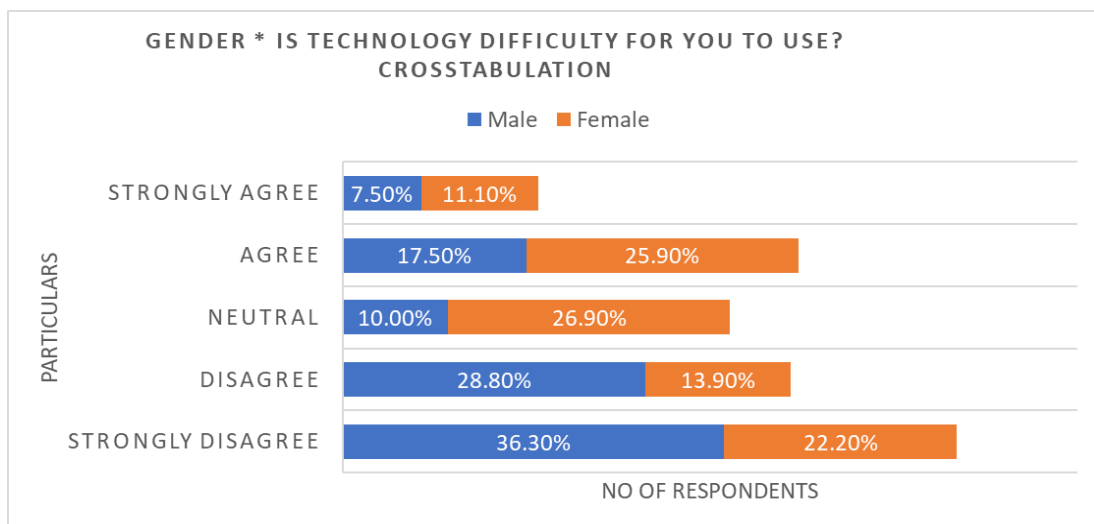


Chart No. 4.2.39 - Gender * Is Technology Difficulty For You To Use?

Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to effort expectancy aspect in TAM's model. It was observed that a majority of 8% male and 11% female strongly agree to the toughness of technology. Likewise, it is observed that 18% of male and 26% female stated agree. 10% of the male respondent and 27% female stated a neutral opinion. Around 29% male and 14% of female stated disagree and 36% male and 22% female stated strongly disagree to the toughness towards the use of technology. Thus, we can observe that females agree to the toughness to the use of technology

in teaching learning in comparison to male, who strongly disagreed to the toughness level of technology for teaching and learning.

Table No. 4.2.40 - Gender * Do You Believe That You Are Competent And Skilled At Using Technology In General? Crosstabulation

Particulars			Do You Believe That You Are Competent And Skilled At Using Technology In General?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	8	3	14	11	44	80
		%	10.0%	3.8%	17.5%	13.8%	55.0%	100.0%
	Female	Count	5	12	35	38	18	108
		%	4.6%	11.1%	32.4%	35.2%	16.7%	100.0%
Total		Count	13	15	49	49	62	188
		%	6.9%	8.0%	26.1%	26.1%	33.0%	100.0%

Source: Field Survey

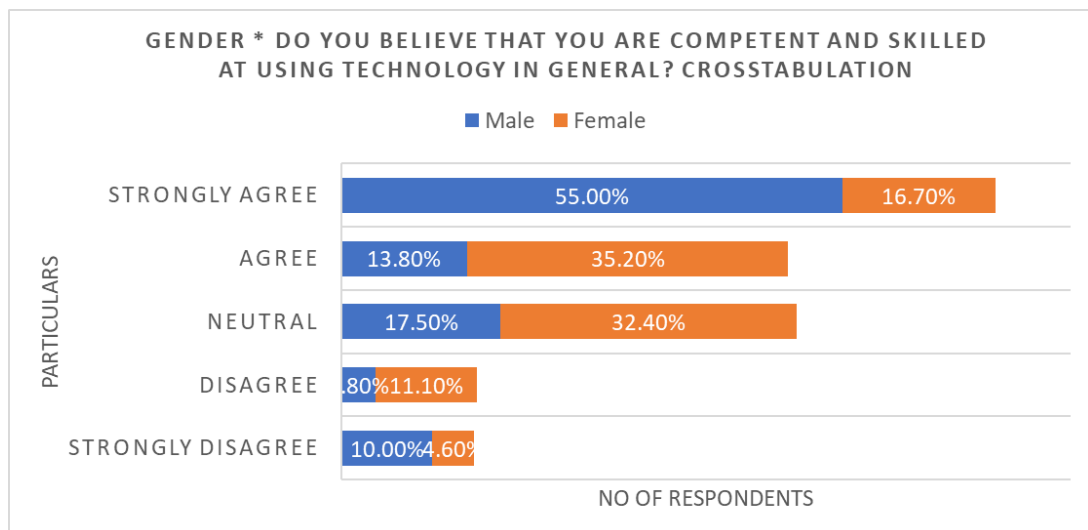


Chart No. 4.2.40- Gender * Do You Believe That You Are Competent And Skilled At Using Technology In General? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to effort expectancy aspect in TAM's model. It was observed that a majority of 55% male and 17% female strongly agree to the competency and skill at using technology. Likewise, it is observed that 14% of male and 35% female stated agree. 18% of the male respondent and 32% female stated a neutral opinion. Around 4% male and 11% of female stated disagree and

10% male and 5% female stated strongly disagree to the competency and skill at using technology. Thus, it is observed that males strongly agree to the competency and skill at using technology in teaching learning in comparison to female respondents.

Table No. 4.2.41 - Gender * Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?

Crosstabulation

Particulars			Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	24	1	8	11	36	80
		%	30.0%	1.3%	10.0%	13.8%	45.0%	100.0%
	Female	Count	16	9	17	45	21	108
		%	14.8%	8.3%	15.7%	41.7%	19.4%	100.0%
Total		Count	40	10	25	56	57	188
		%	21.3%	5.3%	13.3%	29.8%	30.3%	100.0%

Source: Field Survey

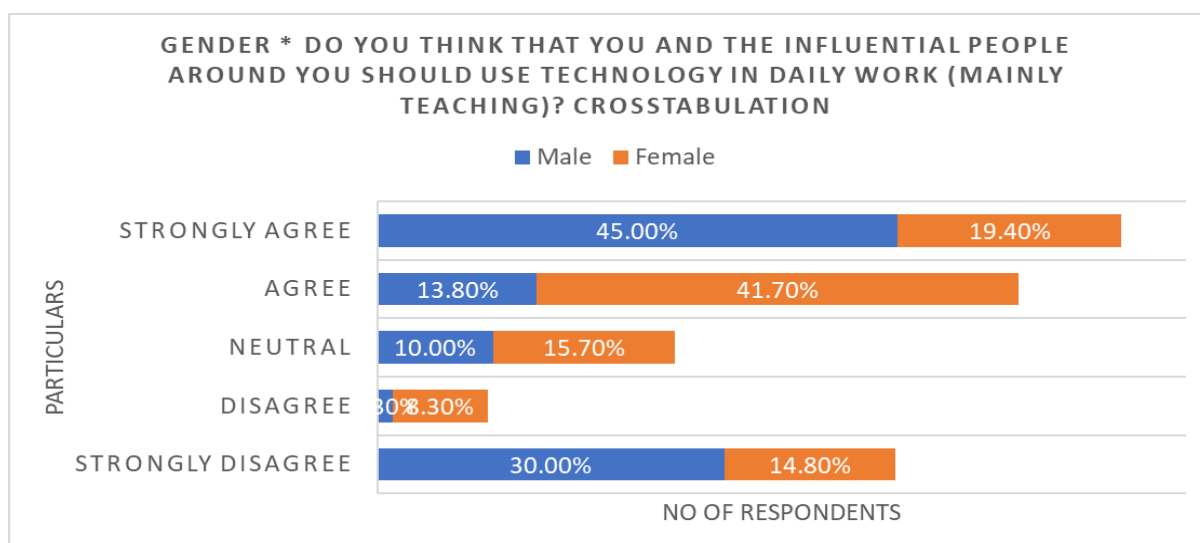


Chart No. 4.2.41- Gender * Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?

Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to social influence aspect in TAM's model. It was observed that a majority of 45% male and 19% female strongly agree to the influential people and their use of technology in daily work. Likewise, it is observed that 14% of male and 42% female stated agree. 11% of the male respondent and 16% female stated a neutral opinion. Around 1% male and 8% of female stated disagree and 30% male and 15% female stated strongly disagree to the influential people and their use of technology. Thus, it is observed that females agree to the influential people and their use of technology in teaching learning in comparison to male, who strongly disagreed to the influential people and their use of technology in daily work.

Table No. 4.2.42 - Gender * Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching? Crosstabulation

Particulars			Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	10	2	2	41	25	80
		%	12.5%	2.5%	2.5%	51.3%	31.3%	100.0%
	Female	Count	15	10	17	54	12	108
		%	13.9%	9.3%	15.7%	50.0%	11.1%	100.0%
Total		Count	25	12	19	95	37	188
		%	13.3%	6.4%	10.1%	50.5%	19.7%	100.0%

Source: Field Survey

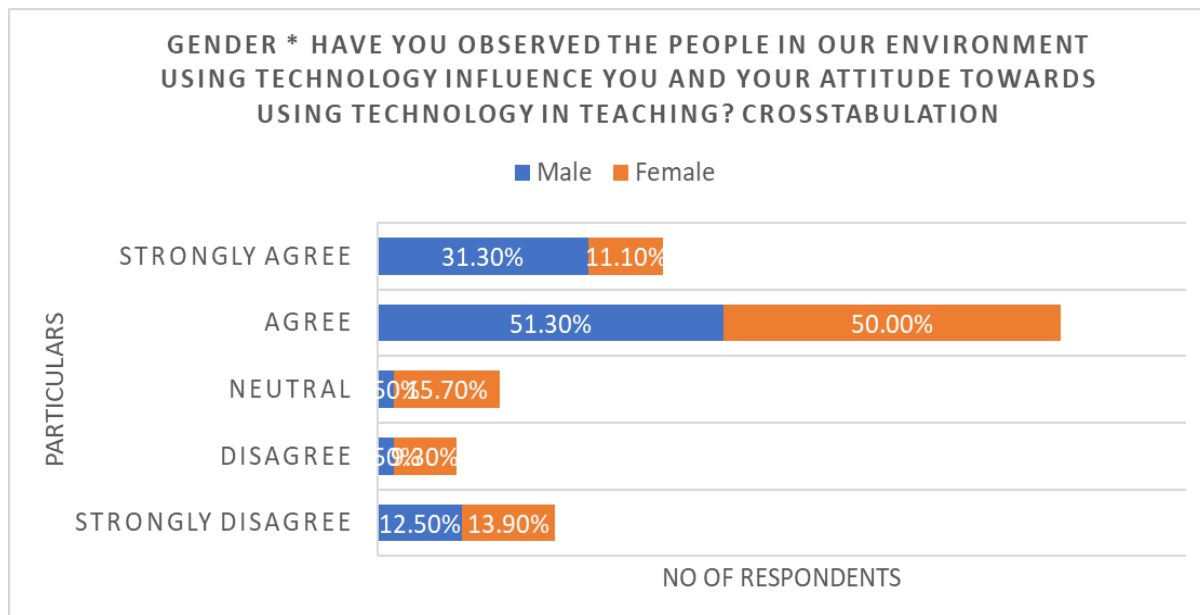


Chart No. 4.2.42 - Gender * Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the influence created due to the attitude towards using technology. It was observed that a majority of 31% male and 11% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed that 51% of male and 50% female stated agree. 3% of the male respondent and 16% female stated a neutral opinion. Around 3% male and 9% of female stated disagree and 13% male and 14% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the attitude towards using technology in teaching learning.

Table No. 4.2.43 - Gender * Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher? Crosstabulation

Particulars			Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	42	11	4	8	15	80
		%	52.5%	13.8%	5.0%	10.0%	18.8%	100.0%
	Female	Count	43	29	11	19	6	108
		%	39.8%	26.9%	10.2%	17.6%	5.6%	100.0%
Total		Count	85	40	15	27	21	188
		%	45.2%	21.3%	8.0%	14.4%	11.2%	100.0%

Source: Field Survey

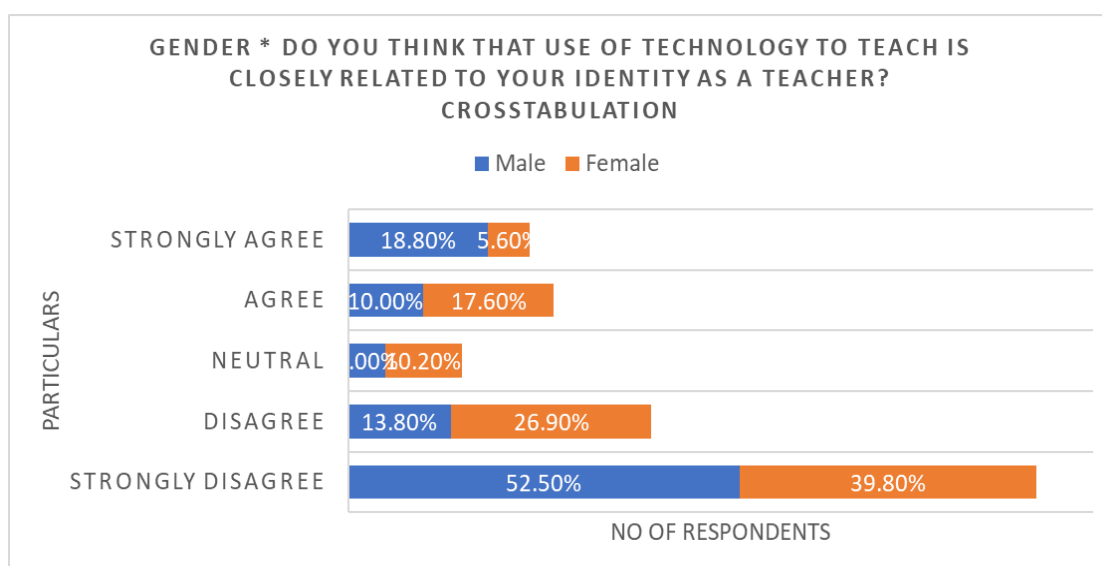


Chart No. 4.2.43 Gender * Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the use of technology and its relation towards their identity as teacher. It was observed that a majority of 19% male and 6% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed that 10% of male and 19% female stated agree. 1% of the male respondent and 10% female stated a neutral opinion. Around 14% male and 27% of female stated disagree and 53% male and 40% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the attitude towards using technology in teaching learning.

Table No. 4.2.44 - Gender * Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today? Crosstabulation

Particulars			Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today?				Total
			Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	1	0	19	60	80
		%	1.3%	0.0%	23.8%	75.0%	100.0%
	Female	Count	3	25	47	33	108
		%	2.8%	23.1%	43.5%	30.6%	100.0%
Total		Count	4	25	66	93	188
		%	2.1%	13.3%	35.1%	49.5%	100.0%

Source: Field Survey

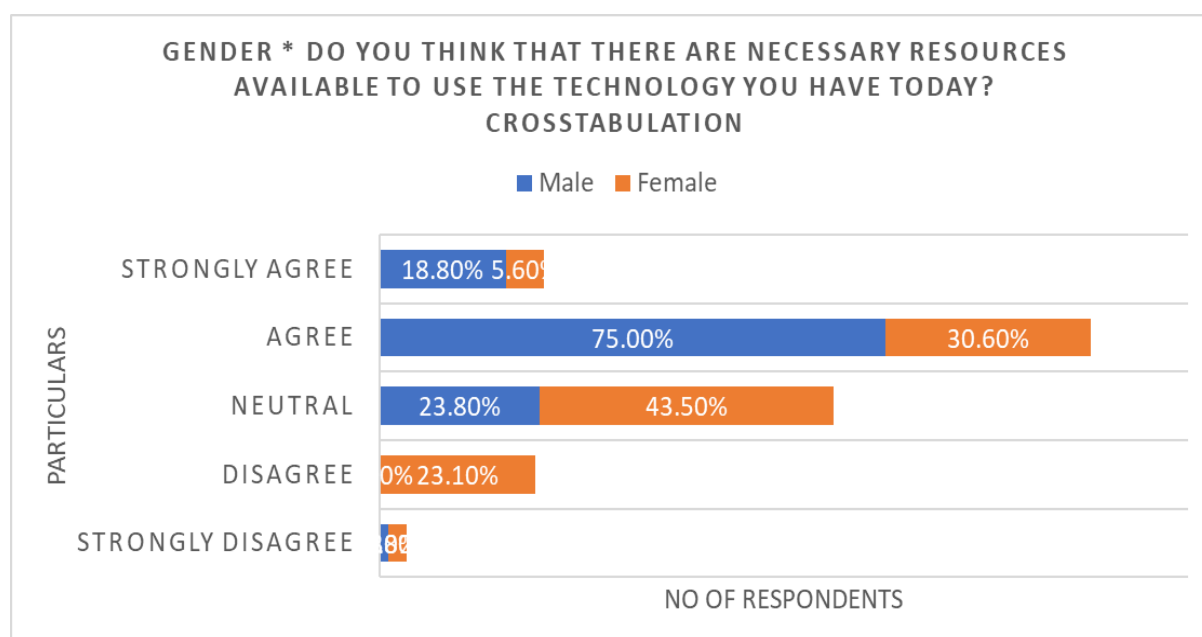


Chart No. 4.2.44 Gender * Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the available necessary resources to use the technology you have today. It was observed that 19% male and 6% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed that a majority of 75% of male and 31% female stated agree. 24% of the male respondent and 44% female stated a neutral opinion. Around 0% male and 24% of female stated disagree and 0% male and 0% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree for available necessary resources to use the technology you have today.

**Table No. 4.2.45 - Gender * Do You Think That Technology Is Compatible With
The Work You Do? Crosstabulation**

Particulars			Do You Think That Technology Is Compatible With The Work You Do?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	0	3	1	20	56	80
		%	0.0%	3.8%	1.3%	25.0%	70.0%	100.0%
	Female	Count	9	1	29	47	22	108
		%	8.3%	0.9%	26.9%	43.5%	20.4%	100.0%
Total		Count	9	4	30	67	78	188
		%	4.8%	2.1%	16.0%	35.6%	41.5%	100.0%

Source: Field Survey

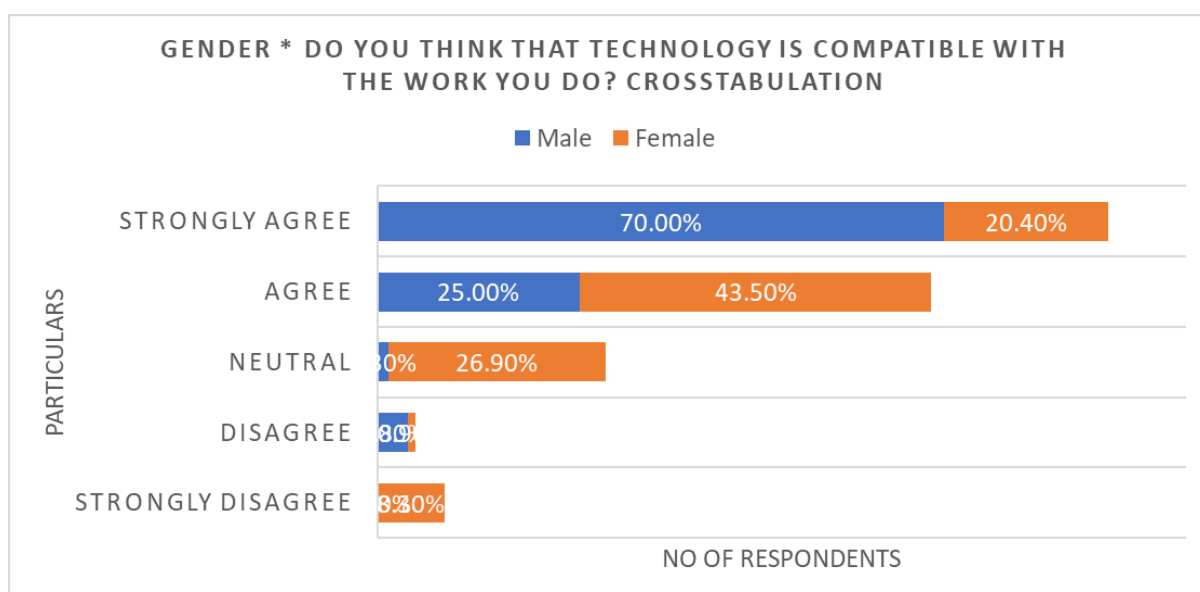


**Chart No. 4.2.45 - Gender * Do You Think That Technology Is Compatible With
The Work You Do? Crosstabulation**

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about due to the technology is compatible with the work in teaching learning. It was observed that a majority of 70% male and 20% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 25% of male and 44% female stated agree. 1% of the male respondent and 27% female stated a neutral opinion. Around 0% male and 0% of female stated disagree and 0% male and 8% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created for due to the technology is compatible with the work in teaching learning.

**Table No. 4.2.46 - Gender * Do You Think Technology Determines / Influences
How You Should Do Your Work? Crosstabulation**

Particulars			Do You Think Technology Determines / Influences How You Should Do Your Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	0	0	10	36	34	80
		%	0.0%	0.0%	12.5%	45.0%	42.5%	100.0%
	Female	Count	4	15	24	54	11	108
		%	3.7%	13.9%	22.2%	50.0%	10.2%	100.0%
Total		Count	4	15	34	90	45	188
		%	2.1%	8.0%	18.1%	47.9%	23.9%	100.0%

Source: Field Survey

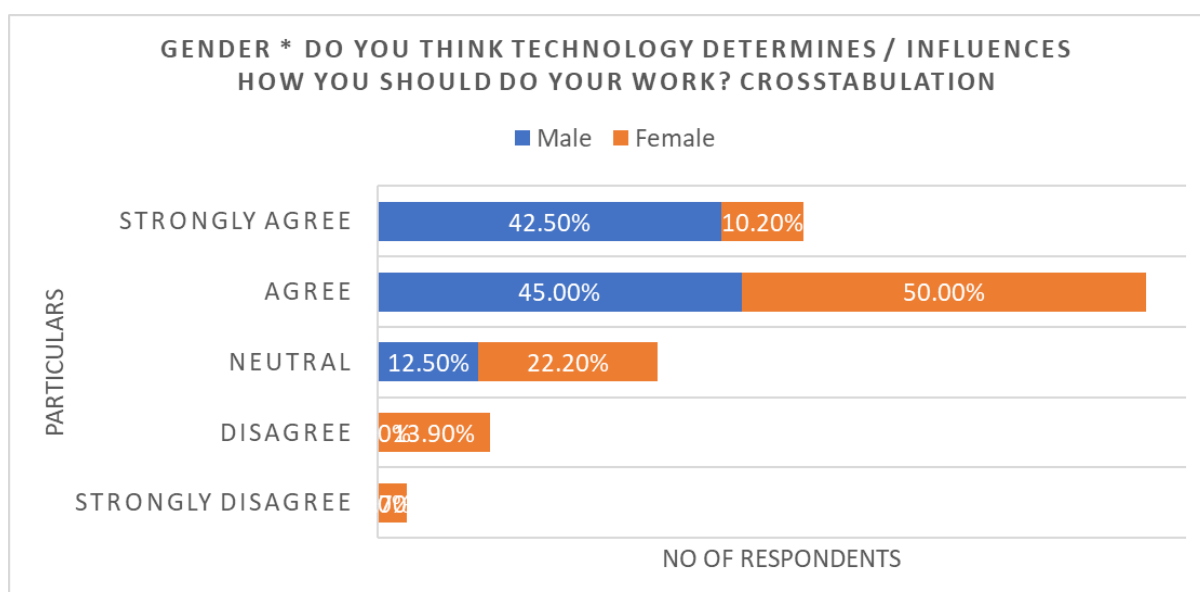


**Chart No. 4.2.46 - Gender * Do You Think Technology Determines / Influences
How You Should Do Your Work? Crosstabulation**

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the technology is compatible with the work in teaching learning. It was observed that a majority of 43% male and 10% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 45% of male and 50% female stated agree. 13% of the male respondent and 22% female stated a neutral opinion. Around 0% male and 14% of female stated disagree and 0% male and 0% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the technology is compatible with the work in teaching learning.

Table No. 4.2.47 - Gender * Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?

Crosstabulation

Particulars			Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	3	21	22	25	9	80
		%	3.8%	26.3%	27.5%	31.3%	11.3%	100.0%
	Female	Count	4	8	25	30	41	108
		%	3.7%	7.4%	23.1%	27.8%	38.0%	100.0%
Total		Count	7	29	47	55	50	188
		%	3.7%	15.4%	25.0%	29.3%	26.6%	100.0%

Source: Field Survey

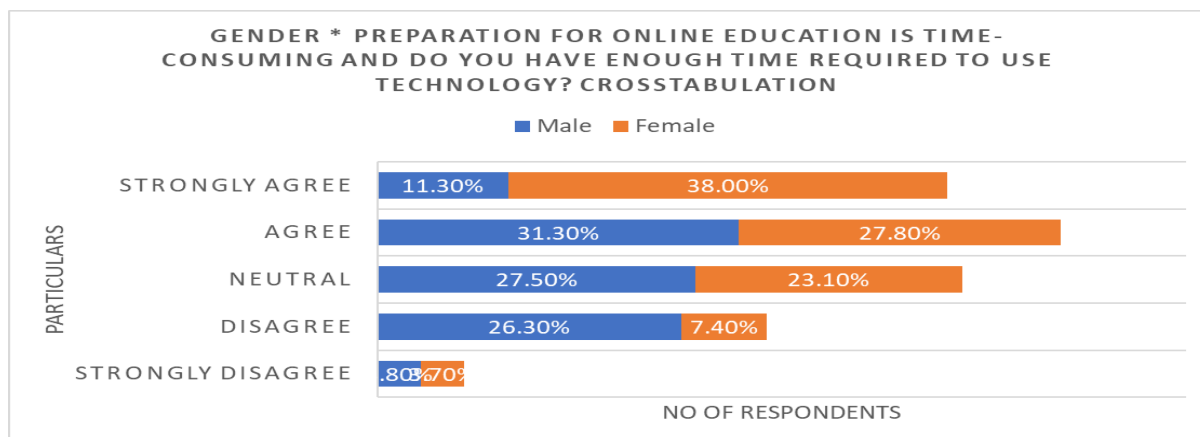


Chart No. 4.2.47 - Gender * Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?

Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the technology use for preparation for online education is time-consuming and do you have enough time required to use technology. It was observed that a majority of 11% male and 38% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 31% of male and 28% female stated agree. 28% of the male respondent and 23% female stated a neutral opinion. Around 26% male and 7% of female stated disagree and 1% male and 1% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the technology is used preparation for online education is time-consuming and do you have enough time required to use technology.

Table No. 4.2.48 - Gender * Are You Using Technology For Teaching And In Your Work Since A Long Time? Crosstabulation

Particulars			Are You Using Technology For Teaching And In Your Work Since A Long Time?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	10	0	4	35	31	80
		%	12.5%	0.0%	5.0%	43.8%	38.8%	100.0%
	Female	Count	12	16	24	14	42	108
		%	11.1%	14.8%	22.2%	13.0%	38.9%	100.0%
Total		Count	22	16	28	49	73	188
		%	11.7%	8.5%	14.9%	26.1%	38.8%	100.0%

Source: Field Survey

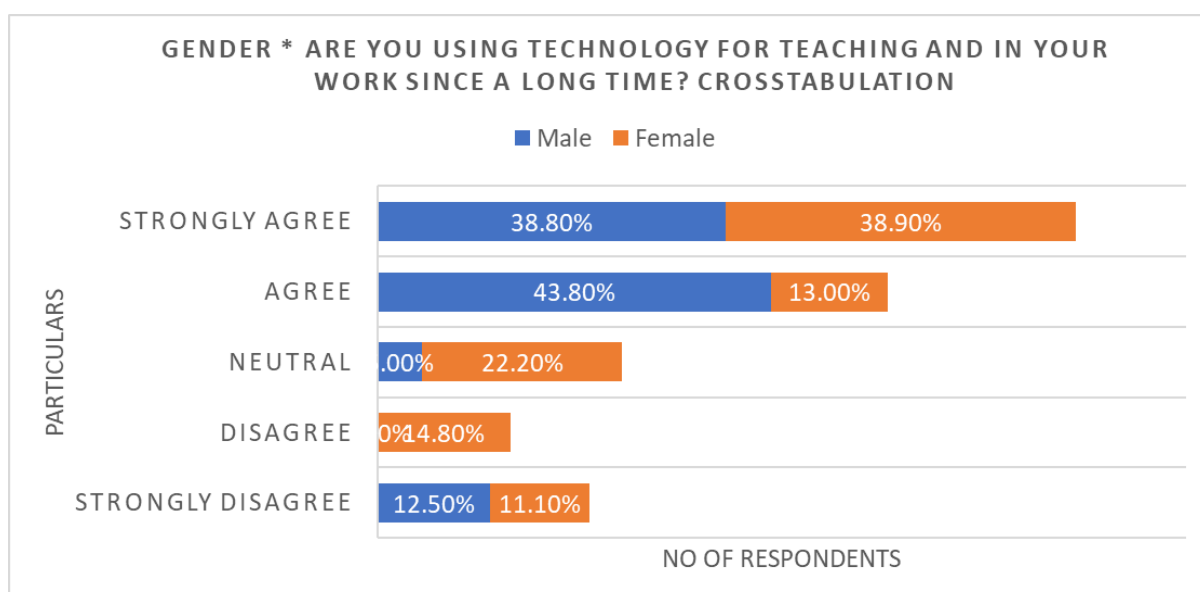


Chart No. 4.2.48 - Gender * Are You Using Technology For Teaching And In Your Work Since A Long Time? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the technology use for teaching and in your work since a long time. It was observed that a majority of 39% male and 39% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 44% of male and 13% female stated agree. 1% of the male respondent and 22% female stated a neutral opinion. Around 1% male and 5% of female stated disagree and 0% male and 5% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the technology is used teaching and in your work since a long time.

Table No. 4.2.49 - Gender * Do You Use Technology At Home And In Your Free Time? Crosstabulation

Particulars			Do You Use Technology At Home And In Your Free Time?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	4	0	0	13	63	80
		%	5.0%	0.0%	0.0%	16.3%	78.8%	100.0%
	Female	Count	4	15	13	40	36	108
		%	3.7%	13.9%	12.0%	37.0%	33.3%	100.0%
Total		Count	8	15	13	53	99	188
		%	4.3%	8.0%	6.9%	28.2%	52.7%	100.0%

Source: Field Survey

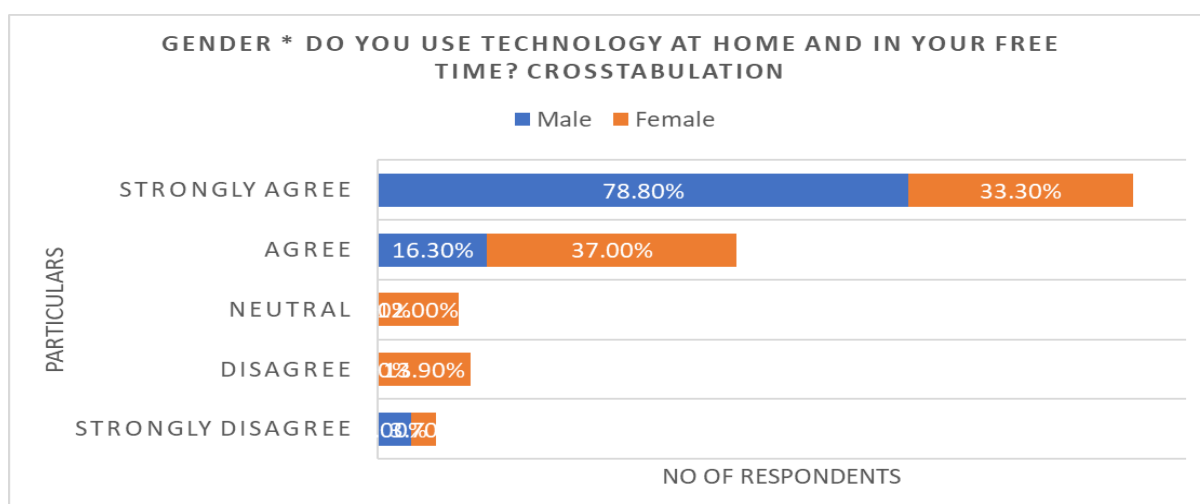


Chart No. 4.20.49 - Gender * Do You Use Technology At Home And In Your Free Time? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the technology at home and in your free time. It was observed that a majority of 79% male and 33% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 16% of male and 37% female stated agree. 0% of the male respondent and 2% female stated a neutral opinion. Around 0% male and 14% of female stated disagree and 5% male and 4% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to the technology at home and in your free time.

Table No. 4.2.50 - Gender * Do You Have An Obligation To Use Technology For Work? Crosstabulation

Particulars			Do You Have An Obligation To Use Technology For Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	12	36	4	13	15	80
		%	15.0%	45.0%	5.0%	16.3%	18.8%	100.0%
	Female	Count	0	21	44	43	0	108
		%	0.0%	19.4%	40.7%	39.8%	0.0%	100.0%
Total		Count	12	57	48	56	15	188
		%	6.4%	30.3%	25.5%	29.8%	8.0%	100.0%

Source: Field Survey

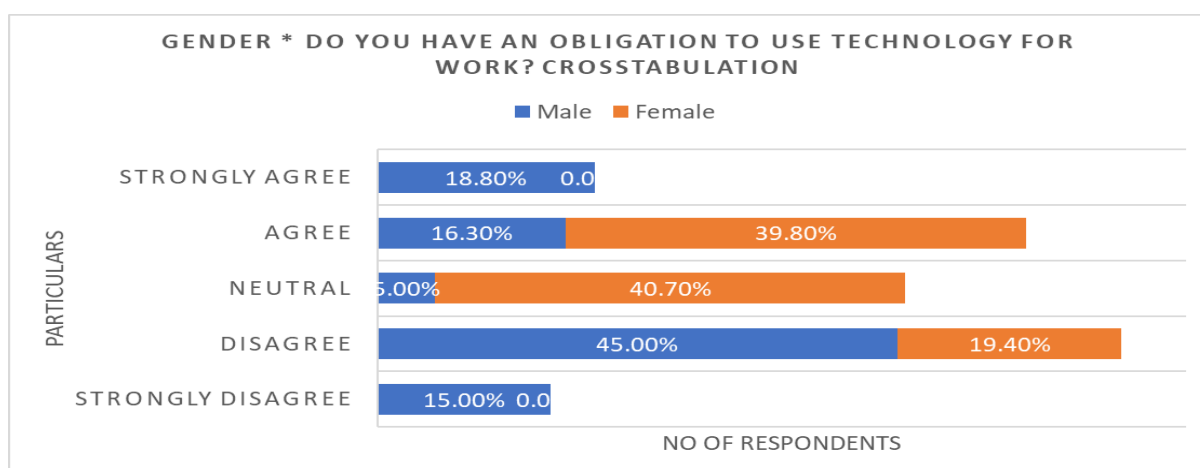


Chart No. 4.2.50 - Gender * Do You Have An Obligation To Use Technology For Work? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were obligation to use technology for work. It was observed that a majority of 19% male and 0% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 16% of male and 38% female stated agree. 5% of the male respondent and 41% female stated a neutral opinion. Around 45% male and 19% of female stated disagree and 15% male and 0% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to obligation to use technology for work.

Table No. 4.2.51 - Gender * Do You Technology In A Different Manner Than What Is Requested? Crosstabulation

Particulars			Do You Technology In A Different Manner Than What Is Requested?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	3	30	34	4	9	80
		%	3.8%	37.5%	42.5%	5.0%	11.3%	100.0%
	Female	Count	10	3	25	60	10	108
		%	9.3%	2.8%	23.1%	55.6%	9.3%	100.0%
Total		Count	13	33	59	64	19	188
		%	6.9%	17.6%	31.4%	34.0%	10.1%	100.0%

Source: Field Survey

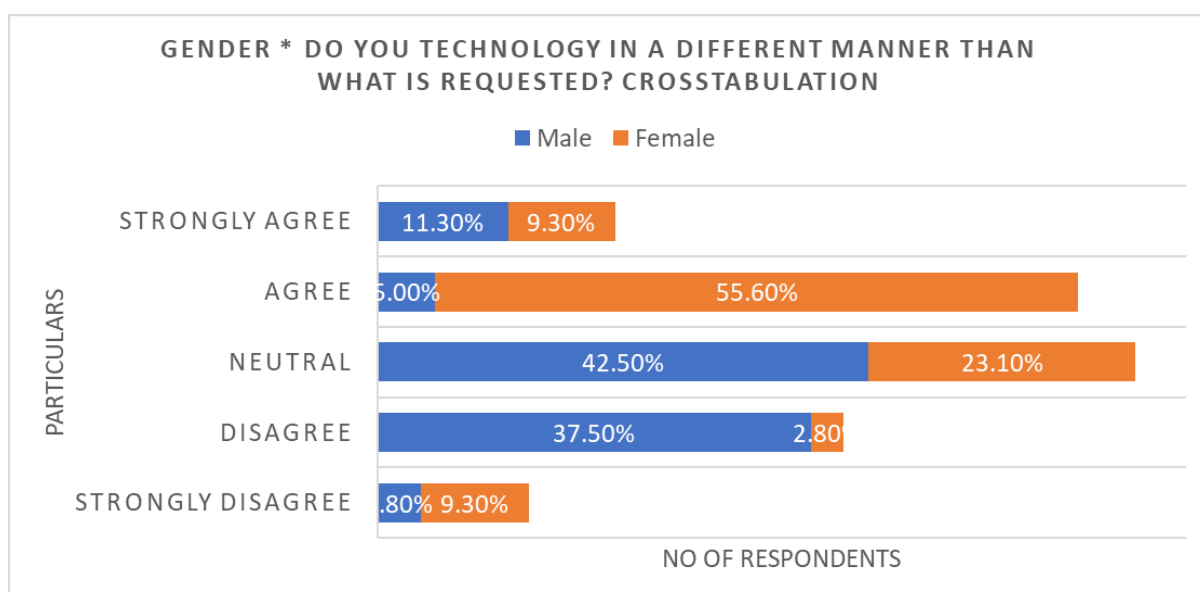


Chart No. 4.2.51 - Gender * Do You Technology In A Different Manner Than What Is Requested? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the use of technology in a different manner than what is requested. It was observed that a majority of 11% male and 9% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 5% of male and 56% female stated agree. 42% of the male respondent and 23% female stated a neutral opinion. Around 45% male and 19% of female stated disagree and 38% male and 3% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to use of technology in a different manner than what is requested.

Table No. 4.2.52 - Gender * Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties? Crosstabulation

Particulars			Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	7	2	22	36	13	80
		%	8.8%	2.5%	27.5%	45.0%	16.3%	100.0%
	Female	Count	0	8	28	54	18	108
		%	0.0%	7.4%	25.9%	50.0%	16.7%	100.0%
Total		Count	7	10	50	90	31	188
		%	3.7%	5.3%	26.6%	47.9%	16.5%	100.0%

Source: Field Survey

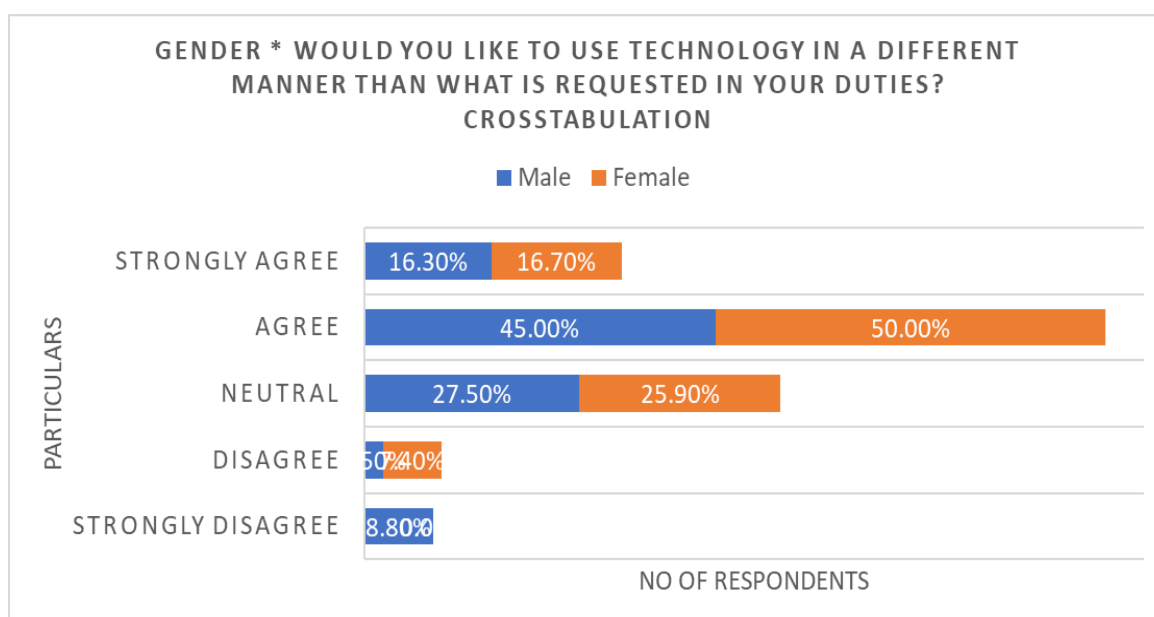


Chart No. 4.2.52 - Gender * Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties? Crosstabulation

Interpretation:

- To get to know more about the faculty respondents based on gender differences and various parameters related to the social influence where in the respondents were asked about the use of technology in a different manner than what is requested. It was observed that a majority of 16% male and 17% female strongly agree to the influential people and their attitude towards using technology. Likewise, it is observed 45% of male and 50% female stated agree. 28% of the male respondent and 26% female stated a neutral opinion. Around 3% male and 7% of female stated disagree and 9% male and 0% female stated strongly disagree to the influence created due to the attitude towards using technology. Thus, it is observed that both male and female agree to the influence created due to use of technology in a different manner than what is requested.

Table No. 4.2.53 - Age (in Year) * Do You Think Technology Is Very Useful

When You Do Your Work? Crosstabulation

Particulars			Do You Think Technology Is Very Useful When You Do Your Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	0	0	0	20	20
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	31 - 35	Count	1	3	1	5	41	51
		%	2.0%	5.9%	2.0%	9.8%	80.4%	100.0%
	36 - 40	Count	0	0	0	4	36	40
		%	0.0%	0.0%	0.0%	10.0%	90.0%	100.0%
	41 - 45	Count	0	0	1	4	29	34
		%	0.0%	0.0%	2.9%	11.8%	85.3%	100.0%
	46 - 50	Count	2	5	0	4	22	33
		%	6.1%	15.2%	0.0%	12.1%	66.7%	100.0%
	50 - 55	Count	1	3	0	0	4	8
		%	12.5%	37.5%	0.0%	0.0%	50.0%	100.0%
	56 - 60	Count	0	1	0	0	1	2
		%	0.0%	50.0%	0.0%	0.0%	50.0%	100.0%
Total		Count	4	12	2	17	153	188
		%	2.1%	6.4%	1.1%	9.0%	81.4%	100.0%

Source: Field Survey

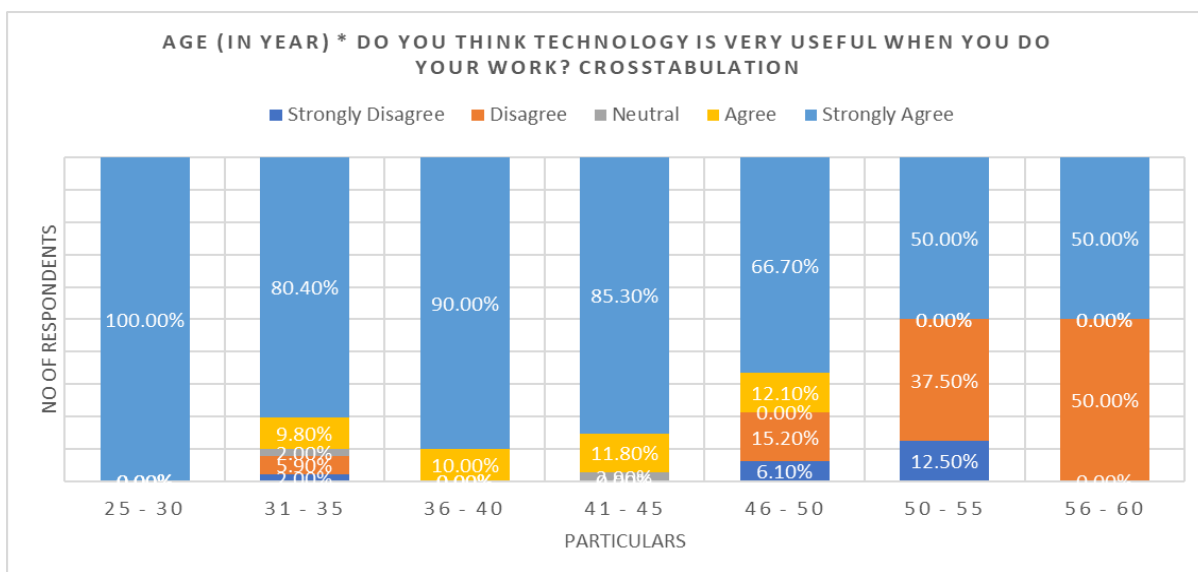


Chart No. 4.2.53 - Age (in Year) * Do You Think Technology Is Very Useful When You Do Your Work? Crosstabulation

Interpretation:

- To understand more about the faculty respondents performance expectancy in usefulness of technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 100% of the faculty respondents stated strongly agree to the usefulness of technology. Under the age group of 31 to 35, around 80% strongly agree, 10% agreed, 2% had a neutral opinion, 6% disagree and 2% strongly disagree to the usefulness of technology. When the faculty under the age group of 36 to 40 were asked about the usefulness of technology around 90% strongly agreed and 10% agreed. Under the age group of 41 to 45 it was observed that 85% strongly agreed, 12% agreed and 3% had a neutral opinion. In the age group of 46 to 50, it was observed that 67% strongly agreed, 12% agreed, 15% disagreed and 6% strongly disagreed to the usefulness of the technology in teaching learning. in the age group of 51 to 55 it was observed that 50% strongly agreed and 38% disagreed to it and 13% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 50% of the faculty respondents stated strongly agree, 50% disagreed to it.
- Thus, from the above cross table between age and usefulness clearly states that as the age increases the usefulness of the technology seems reduced.

Table No. 4.2.54 - Age (in Year) * Do You Find Technology To Be Supportive While Working? Crosstabulation

Particulars			Do You Find Technology To Be Supportive While Working?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	1	0	2	17	20
		%	0.0%	5.0%	0.0%	10.0%	85.0%	100.0%
	31 - 35	Count	3	2	0	6	40	51
		%	5.9%	3.9%	0.0%	11.8%	78.4%	100.0%
	36 - 40	Count	0	0	7	12	21	40
		%	0.0%	0.0%	17.5%	30.0%	52.5%	100.0%
	41 - 45	Count	0	0	2	6	26	34
		%	0.0%	0.0%	5.9%	17.6%	76.5%	100.0%
	46 - 50	Count	3	1	14	4	11	33
		%	9.1%	3.0%	42.4%	12.1%	33.3%	100.0%
	50 - 55	Count	1	1	0	3	3	8
		%	12.5%	12.5%	0.0%	37.5%	37.5%	100.0%
	56 - 60	Count	1	0	0	1	0	2
		%	50.0%	0.0%	0.0%	50.0%	0.0%	100.0%
Total		Count	8	5	23	34	118	188
		%	4.3%	2.7%	12.2%	18.1%	62.8%	100.0%

Source: Field Survey

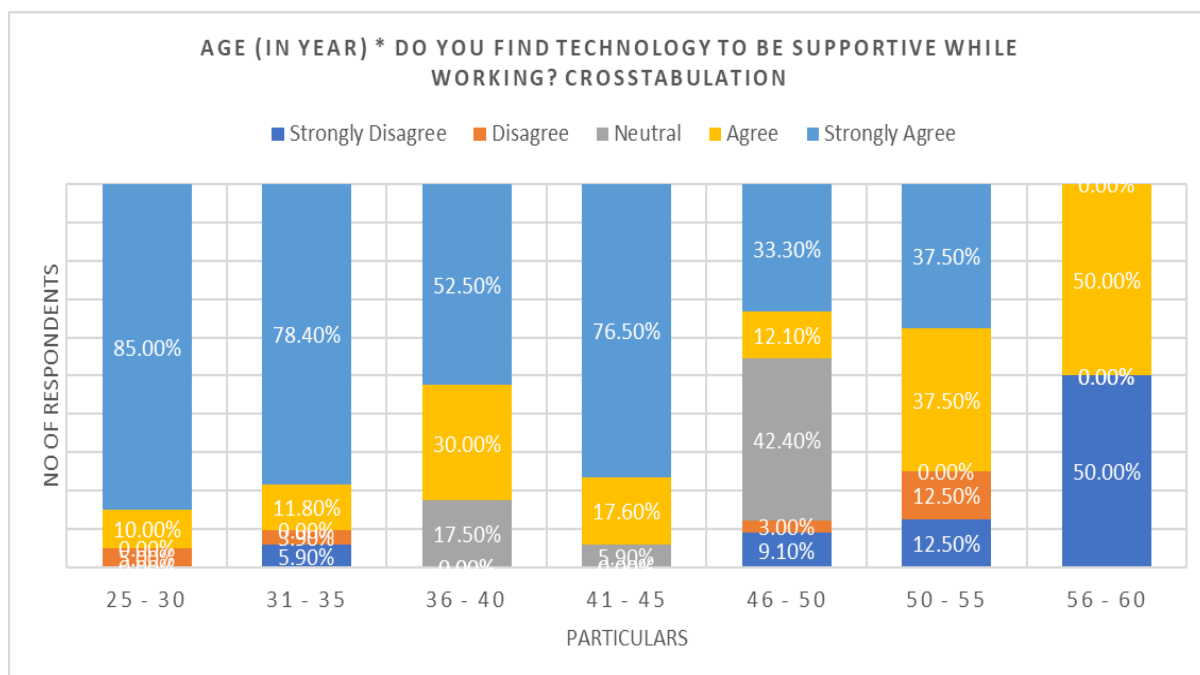


Chart No. 4.2.54- Age (in Year) * Do You Find Technology To Be Supportive While Working? Crosstabulation

Interpretation:

- To understand more about the faculty respondents performance expectancy in Supportiveness of technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 85% of the faculty respondents stated strongly agree, 10% agreed and only 5% disagreed to the Supportiveness of technology. Under the age group of 31 to 35, around 78% strongly agree, 12% agreed, 4% disagree and 6% strongly disagree to the Supportiveness of technology. When the faculty under the age group of 36 to 40 were asked about the Supportiveness of technology around 53% strongly agreed and 30% agreed and 18% had a neutral opinion. Under the age group of 41 to 45 it was observed that 77% strongly agreed, 18% agreed and 6% had a neutral opinion. In the age group of 46 to 50, it was observed that 33% strongly agreed, 12% agreed, 42% had a neutral opinion, 3% disagreed and 9% strongly disagreed to the Supportiveness of the technology in teaching learning. In the age group of 51 to 55 it was observed that 38% strongly agreed and 13% disagreed to it and 13% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 50% of the faculty respondents stated agree, 50% strongly disagreed to it.

- Thus, from the above cross table between age and supportiveness of technology clearly states that as the age increases the Supportiveness of the technology seems reduced to the faculties.

Table No. 4.2.55 - Age (in Year) * Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching? Crosstabulation

Particulars			Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	0	4	8	8	20
		%	0.0%	0.0%	20.0%	40.0%	40.0%	100.0%
	31 - 35	Count	0	1	5	18	27	51
		%	0.0%	2.0%	9.8%	35.3%	52.9%	100.0%
	36 - 40	Count	0	4	4	11	21	40
		%	0.0%	10.0%	10.0%	27.5%	52.5%	100.0%
	41 - 45	Count	3	2	2	12	15	34
		%	8.8%	5.9%	5.9%	35.3%	44.1%	100.0%
	46 - 50	Count	3	2	13	1	14	33
		%	9.1%	6.1%	39.4%	3.0%	42.4%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	56 - 60	Count	0	0	0	0	2	2
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total		Count	6	9	28	50	95	188
		%	3.2%	4.8%	14.9%	26.6%	50.5%	100.0%

Source: Field Survey

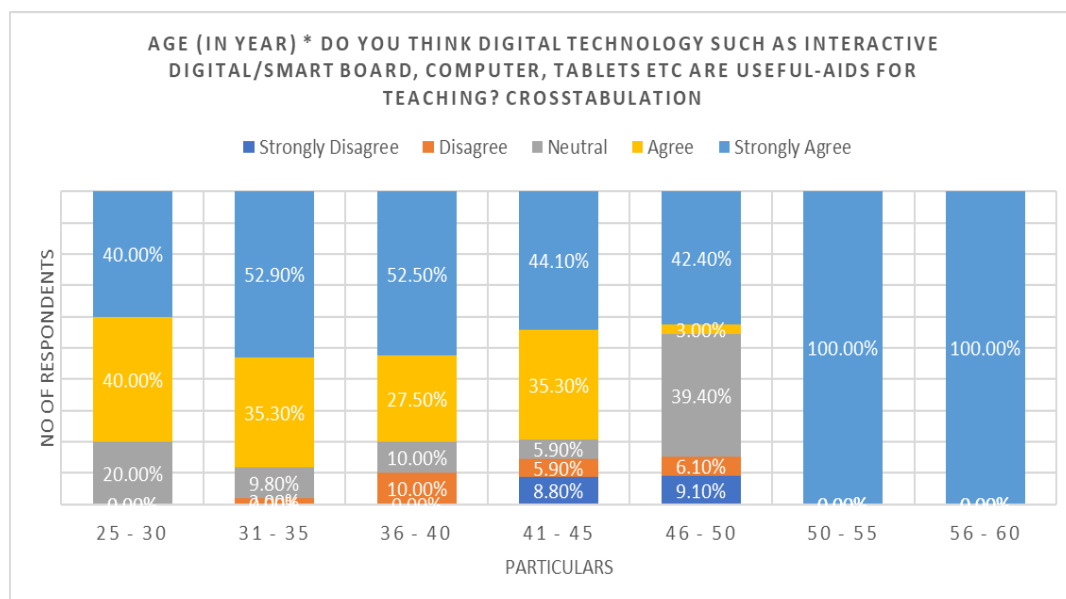


Chart No. 4.2.55 - Age (in Year) * Do You Think Digital Technology Such As Interactive Digital/Smart Board, Computer, Tablets Etc Are Useful-Aids For Teaching? Crosstabulation

Interpretation:

- To understand more about the faculty respondents performance expectancy through interactive through digital smart boards, computer, tablets being useful aids for teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 40% of the faculty respondents stated strongly agree, 40% agreed, 20% had a neutral opinion to the interactive technology. Under the age group of 31 to 35, around 53% strongly agree, 35% agreed, 10% had a neutral opinion, 2% disagree to the usefulness of interactive technology. When the faculty under the age group of 36 to 40 were asked about the interactive technology around 53% strongly agreed and 28% agreed, 10% disagreed and 10% had a neutral opinion. Under the age group of 41 to 45 it was observed that 44% strongly agreed, 35% agreed and 6% had a neutral opinion and 6% disagreed to it. In the age group of 46 to 50, it was observed that 42% strongly agreed, 3% agreed, 39% had a neutral opinion, 6% disagreed and 9% strongly disagreed to the interactive technology in teaching learning. in the age group of 51 to 55 it was observed that 100% strongly agreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agree to it.

- Thus, from the above cross table between age and instructiveness through digital smart boards, computer, tablets being useful aids for teaching learning interactive states a mixed opinion from in youngsters whereas seniors were found to be positive towards digital smart boards and computers.

Table No. 4.2.56 - Age (in Year) * As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now? Crosstabulation

Particulars			As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	2	0	10	8	20
		%	0.0%	10.0%	0.0%	50.0%	40.0%	100.0%
	31 - 35	Count	10	4	12	24	1	51
		%	19.6%	7.8%	23.5%	47.1%	2.0%	100.0%
	36 - 40	Count	0	1	8	11	20	40
		%	0.0%	2.5%	20.0%	27.5%	50.0%	100.0%
	41 - 45	Count	3	1	16	6	8	34
		%	8.8%	2.9%	47.1%	17.6%	23.5%	100.0%
	46 - 50	Count	6	6	11	0	10	33
		%	18.2%	18.2%	33.3%	0.0%	30.3%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
56 - 60	Count	2	0	0	0	0	2	
	%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Total		Count	21	14	47	51	55	188
		%	11.2%	7.4%	25.0%	27.1%	29.3%	100.0%

Source: Field Survey

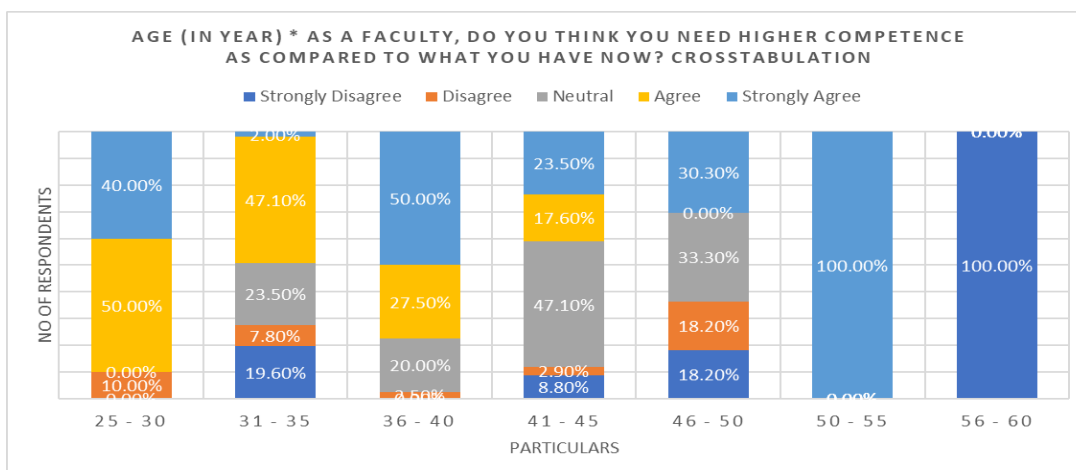


Chart No. 4.2.56 - Age (in Year) * As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's performance expectancy in higher competence for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 40% of the faculty respondents stated strongly agree, 50% agree and 10% disagree to the higher competence of technology. Under the age group of 31 to 35, around 2% strongly agree, 47% agreed, 24% had a neutral opinion, 8% disagree and 20% strongly disagree to the higher competence of technology. When the faculty under the age group of 36 to 40 were asked about the higher competence of technology, around 50% strongly agreed and 28% agreed, 20% gave a neutral opinion and 3% disagreed. Under the age group of 41 to 45 it was observed that 24% strongly agreed, 18% agreed and 47% had a neutral opinion, 3% disagreed and 9% strongly disagreed to it. In the age group of 46 to 50, it was observed that 30% strongly agreed, 33% had a neutral opinion, 18% disagreed and 18% strongly disagreed to the higher competence of the technology in teaching learning in the age group of 51 to 55 it was observed that 100% strongly agreed. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly disagree to it.
- Thus from the above cross table between age and higher competence clearly a mixed opinion among the faculty members of different ages can be observed. Where in juniors agreed or had a neutral, opinion and seniors strongly agreed to the need of higher competence to what they have now.

**Table No. 4.2 .57 - Age (in Year) * Do You Think It Is Easy For You To Learn
And Become Proficient In Using The Technology You Have Today?**

Crosstabulation

Particulars			Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	2	1	0	11	6	20
		%	10.0%	5.0%	0.0%	55.0%	30.0%	100.0%
	31 - 35	Count	5	2	0	24	20	51
		%	9.8%	3.9%	0.0%	47.1%	39.2%	100.0%
	36 - 40	Count	9	12	4	3	12	40
		%	22.5%	30.0%	10.0%	7.5%	30.0%	100.0%
	41 - 45	Count	10	1	2	5	16	34
		%	29.4%	2.9%	5.9%	14.7%	47.1%	100.0%
	46 - 50	Count	4	0	14	5	10	33
		%	12.1%	0.0%	42.4%	15.2%	30.3%	100.0%
	50 - 55	Count	2	3	0	1	2	8
		%	25.0%	37.5%	0.0%	12.5%	25.0%	100.0%
	56 - 60	Count	0	1	0	0	1	2
		%	0.0%	50.0%	0.0%	0.0%	50.0%	100.0%
Total		Count	32	20	20	49	67	188
		%	17.0%	10.6%	10.6%	26.1%	35.6%	100.0%

Source: Field Survey

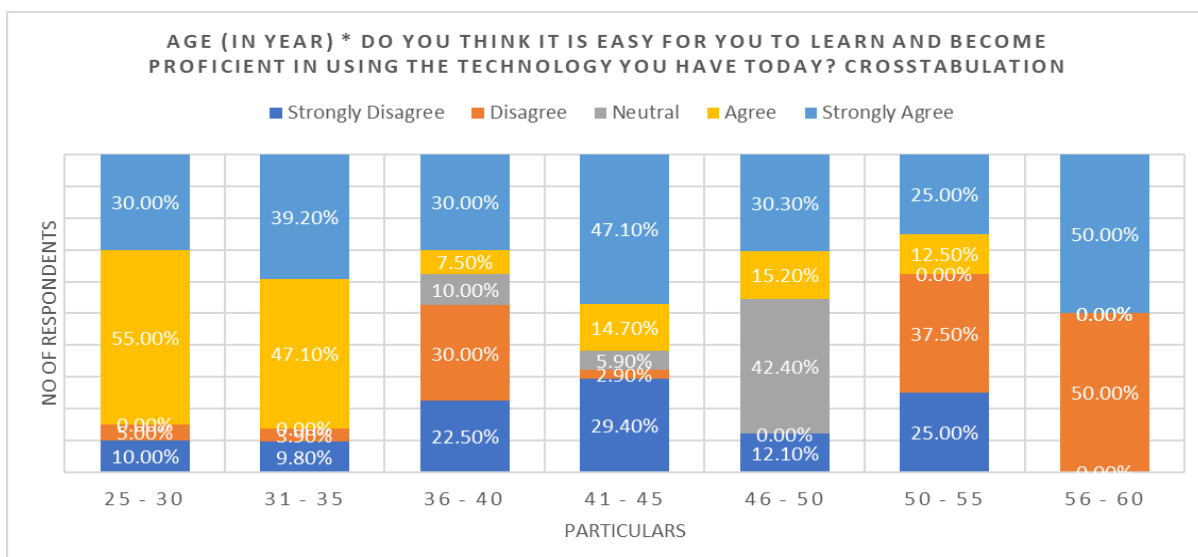


Chart No. 4.2.57 - Age (in Year) * Do You Think It Is Easy For You To Learn And Become Proficient In Using The Technology You Have Today? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's effort expectancy to learn and become more proficient in using technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 30% of the faculty respondents stated strongly agree, 55% agree and 5% disagree and 10% strongly disagreed to the proficiency in using technology. Under the age group of 31 to 35, around 39% strongly agree, 47% agreed, 4% disagree and 10% strongly disagree to the proficiency in using technology. When the faculty under the age group of 36 to 40 were asked about the proficiency in using technology, around 30% strongly agreed and 8% agreed, 10% gave a neutral opinion and 30% disagreed and 23% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 47% strongly agreed, 15% agreed, 6% had a neutral opinion, 3% disagreed and 29% strongly disagreed to it. In the age group of 46 to 50, it was observed that 30% strongly agreed, 15% agreed, 42% had a neutral opinion and 12% strongly disagreed to the proficiency in using technology in teaching learning in the age group of 51 to 55 it was observed that 25% strongly agreed, 13% agreed, 38% disagreed, 25% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 50% of the faculty respondents stated strongly disagree to it and 50% strongly disagreed to it.

- Thus, from the above cross table between age and proficiency in using technology clearly a mixed opinion among the faculty members of different ages can be observed. Where in juniors agreed for proficiency in using technology, a considerable number of seniors disagreed to the need of proficiency in using technology.

Table No. 4.2.58 Age (in Year) * Is Technology Difficulty For You To Use?

Crosstabulation

Particulars			Is Technology Difficulty For You To Use?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	4	0	0	8	8	20
		%	20.0%	0.0%	0.0%	40.0%	40.0%	100.0%
	31 - 35	Count	10	14	14	13	0	51
		%	19.6%	27.5%	27.5%	25.5%	0.0%	100.0%
	36 - 40	Count	5	22	5	0	8	40
		%	12.5%	55.0%	12.5%	0.0%	20.0%	100.0%
	41 - 45	Count	12	1	10	9	2	34
		%	35.3%	2.9%	29.4%	26.5%	5.9%	100.0%
	46 - 50	Count	15	1	8	9	0	33
		%	45.5%	3.0%	24.2%	27.3%	0.0%	100.0%
	50 - 55	Count	5	0	0	3	0	8
		%	62.5%	0.0%	0.0%	37.5%	0.0%	100.0%
	56 - 60	Count	2	0	0	0	0	2
		%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	53	38	37	42	18	188
		%	28.2%	20.2%	19.7%	22.3%	9.6%	100.0%

Source: Field Survey

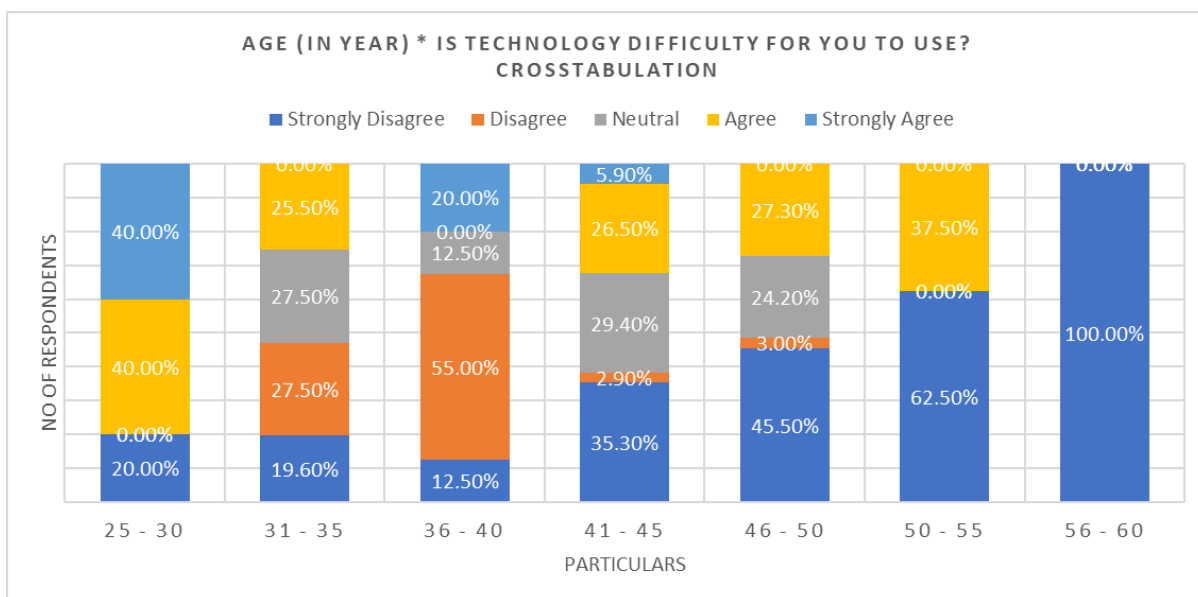


Chart No. 4.2.58 - Age (in Year) * Is Technology Difficulty For You To Use?
Crosstabulation

Interpretation:

- To understand more about the faculty respondent's effort expectancy to understand the difficulty level in using technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 40% of the faculty respondents stated strongly agree, 40% agree and 20% strongly disagreed to the difficulty level. Under the age group of 31 to 35, around 26% stated agree, 28% had a neutral opinion, 28% disagree and 20% strongly disagree to the difficulty level in using technology. When the faculty under the age group of 36 to 40 were asked about the difficulty level in using technology, around 20% strongly agreed, 13% gave a neutral opinion and 55% disagreed and 13% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 6% strongly agreed, 27% agreed, 29% had a neutral opinion, 3% disagreed and 35% strongly disagreed to it. In the age group of 46 to 50, it was observed that 27% agreed, 24% had a neutral opinion and 3% disagreed and 46% strongly disagreed to the difficulty level in using technology in teaching learning in the age group of 51 to 55 it was observed that 38% agreed and 63% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly disagree.

- Thus, from the above cross table between age and difficulty level considerable number of faculty respondents from 25-30 stated strongly agree, apart from that it was observed that other age groups agreed, and seniors stated strongly disagree to the above question. As the age is increases the disagree part is also increasing.

Table No. 4.2.59- Age (in Year) * Do You Believe That You Are Competent And Skilled At Using Technology In General? Crosstabulation

Particulars			Do You Believe That You Are Competent And Skilled At Using Technology In General?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	1	16	0	3	20
		%	0.0%	5.0%	80.0%	0.0%	15.0%	100.0%
	31 - 35	Count	4	6	4	18	19	51
		%	7.8%	11.8%	7.8%	35.3%	37.3%	100.0%
	36 - 40	Count	4	4	7	12	13	40
		%	10.0%	10.0%	17.5%	30.0%	32.5%	100.0%
	41 - 45	Count	3	2	4	9	16	34
		%	8.8%	5.9%	11.8%	26.5%	47.1%	100.0%
	46 - 50	Count	1	2	18	2	10	33
		%	3.0%	6.1%	54.5%	6.1%	30.3%	100.0%
	50 - 55	Count	0	0	0	8	0	8
		%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	56 - 60	Count	1	0	0	0	1	2
		%	50.0%	0.0%	0.0%	0.0%	50.0%	100.0%
Total		Count	13	15	49	49	62	188
		%	6.9%	8.0%	26.1%	26.1%	33.0%	100.0%

Source: Field Survey

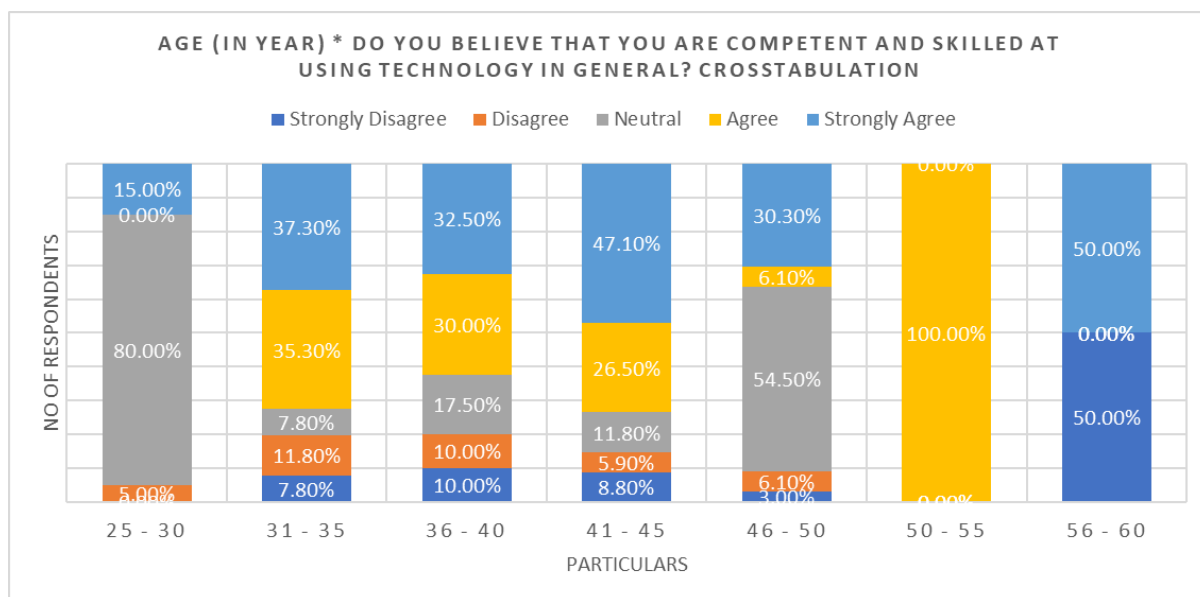


Chart No. 4.2.59 - Age (in Year) * Do You Believe That You Are Competent And Skilled At Using Technology In General? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's effort expectancy to understand the competency and skill at using technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 15% of the faculty respondents stated strongly agree, 80% had a neutral opinion and 5% strongly disagreed to the competency and skill at using technology. Under the age group of 31 to 35, around 37% stated agree, 35% agreed, 8% had a neutral opinion, 12% disagree and 8% strongly disagree to the competency and skill at using technology. When the faculty under the age group of 36 to 40 were asked about the competency and skill at using technology, around 33% strongly agreed, 30% agreed, 18% gave a neutral opinion and 10% disagreed and 10% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 47% strongly agreed, 27% agreed, 12% had a neutral opinion, 6% disagreed and 9% strongly disagreed to it. In the age group of 46 to 50, it was observed that 30% strongly agreed, 6% agreed, 55% had a neutral opinion and 6% disagreed and 3% strongly disagreed to the competency and skill at using technology in teaching learning. In the age group of 51 to 55 it was observed that 100% agreed. In the final category of age group from 56 to 60, it was observed that 50% of the faculty respondents stated strongly agreed and 50% strongly disagreed to it.

- Thus, from the above table it can be observed that a mixed kind of opinion is observed in all the age category about the competency and skill at using technology.

Table No. 4.2.60 - Age (in Year) * Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?

Crosstabulation

Particulars			Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	4	0	7	7	2	20
		%	20.0%	0.0%	35.0%	35.0%	10.0%	100.0%
	31 - 35	Count	9	3	8	15	16	51
		%	17.6%	5.9%	15.7%	29.4%	31.4%	100.0%
	36 - 40	Count	8	1	2	11	18	40
		%	20.0%	2.5%	5.0%	27.5%	45.0%	100.0%
	41 - 45	Count	11	3	4	12	4	34
		%	32.4%	8.8%	11.8%	35.3%	11.8%	100.0%
	46 - 50	Count	4	3	4	11	11	33
		%	12.1%	9.1%	12.1%	33.3%	33.3%	100.0%
	50 - 55	Count	4	0	0	0	4	8
		%	50.0%	0.0%	0.0%	0.0%	50.0%	100.0%
56 - 60	Count	0	0	0	0	2	2	
	%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	
Total		Count	40	10	25	56	57	188
		%	21.3%	5.3%	13.3%	29.8%	30.3%	100.0%

Source: Field Survey

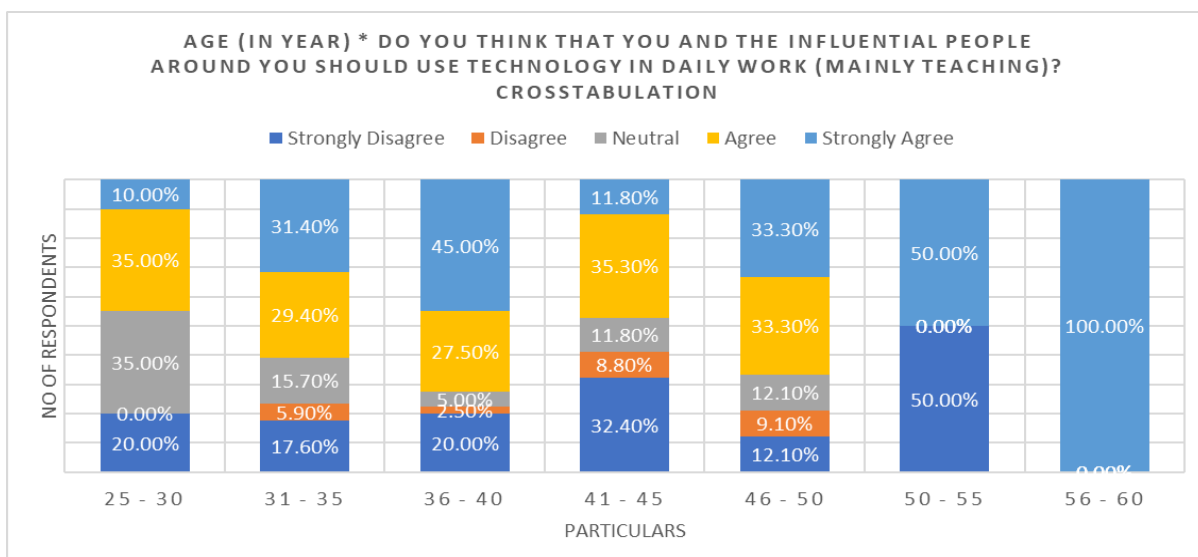


Chart No. 4.2.60 - Age (in Year) * Do You Think That You And The Influential People Around You Should Use Technology In Daily Work (Mainly Teaching)?
Crosstabulation

Interpretation:

- To understand more about the faculty respondent's social influence to understand the necessity of using technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 10% of the faculty respondents stated strongly agree, 35% stated agree, 35% had a neutral opinion and 20% strongly disagreed to the necessity of using technology. Under the age group of 31 to 35, around 31% stated strongly agree, 29% agreed, 16% had a neutral opinion, 6% disagree and 18% strongly disagree to the competency and skill at using technology. When the faculty under the age group of 36 to 40 were asked about the competency and skill at using technology, around 45% strongly agreed, 28% agreed, 5% gave a neutral opinion and 3% disagreed and 20% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 12% strongly agreed, 35% agreed, 12% had a neutral opinion, 9% disagreed and 32% strongly disagreed to it. In the age group of 46 to 50, it was observed that 33% strongly agreed, 33% agreed, 12% had a neutral opinion and 9% disagreed and 12% strongly disagreed to the competency and skill at using technology in teaching learning. In the age group of 51 to 55 it was observed that 50% strongly agreed and 50% agreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agreed.

- Thus, from the above table it can be observed that faculty respondents feel the necessity of using technology for digitalization of teaching learning.

Table No. 4.2.61 - Age (in Year) * Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching? Crosstabulation

Particulars			Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	1	2	2	7	8	20
		%	5.0%	10.0%	10.0%	35.0%	40.0%	100.0%
	31 - 35	Count	16	0	0	34	1	51
		%	31.4%	0.0%	0.0%	66.7%	2.0%	100.0%
	36 - 40	Count	4	4	4	24	4	40
		%	10.0%	10.0%	10.0%	60.0%	10.0%	100.0%
	41 - 45	Count	4	0	2	19	9	34
		%	11.8%	0.0%	5.9%	55.9%	26.5%	100.0%
	46 - 50	Count	0	6	11	11	5	33
		%	0.0%	18.2%	33.3%	33.3%	15.2%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	56 - 60	Count	0	0	0	0	2	2
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total		Count	25	12	19	95	37	188
		%	13.3%	6.4%	10.1%	50.5%	19.7%	100.0%

Source: Field Survey

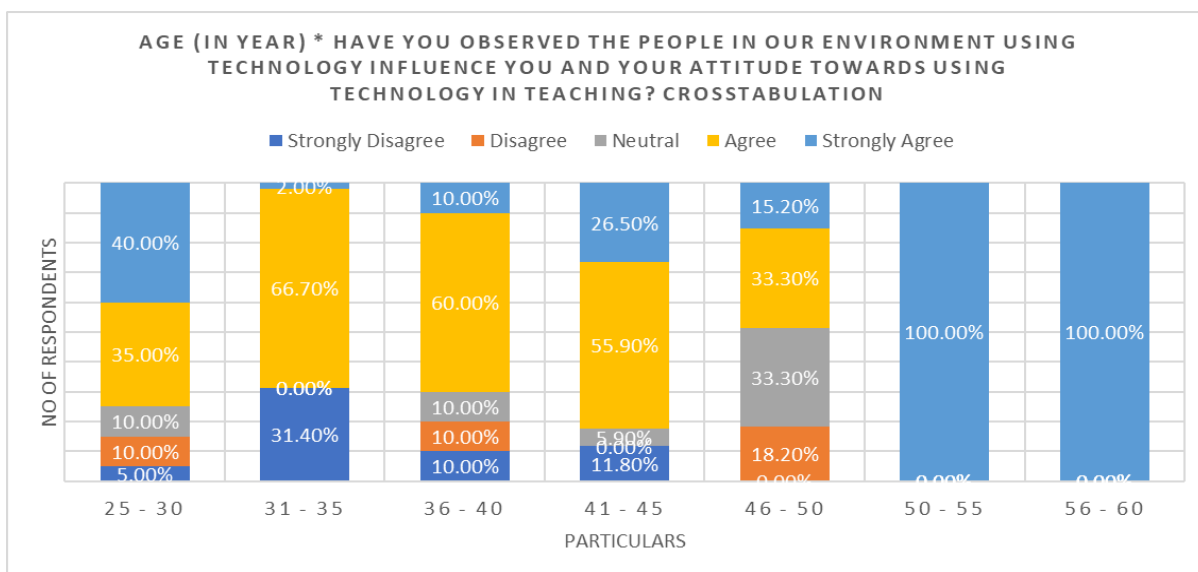


Chart No. 4.2.61 - Age (in Year) * Have You Observed The People In Our Environment Using Technology Influence You And Your Attitude Towards Using Technology In Teaching? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's social influence and to understand the influence created by people and kind of attitude possessed towards technology in teaching learning. It was observed that in age group of 25 to 30, almost 40% of the faculty respondents stated strongly agree, 35% stated agree, 10% had a neutral opinion and 10% disagreed and 5% strongly disagreed to the attitude towards influence created due to use of technology. Under the age group of 31 to 35, around 2% stated strongly agree, 67% agreed, and 31% strongly disagree to the attitude towards influence created due to use of technology. When the faculty under the age group of 36 to 40 were asked about the the attitude towards influence created due to use of technology, around 10% strongly agreed, 60% agreed, 10% gave a neutral opinion and 10% disagreed and 10% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 27% strongly agreed, 56% agreed, 6% had a neutral opinion and 12% strongly disagreed to it. In the age group of 46 to 50, it was observed that 15% strongly agreed, 33% agreed, 33% had a neutral opinion and 18% strongly disagreed to the attitude towards influence created due to use of technology in teaching learning. In the age group of 51 to 55 it was observed that 100% strongly agreed. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agreed.

- Thus, from the above table it can be observed that majority of the faculty respondents agree or strongly agree towards the change in attitude and influence created due to use of technology in teaching learning.

Table No. 4.2.62 - Age (in Year) * Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher? Crosstabulation

Particulars			Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	4	0	8	4	4	20
		%	20.0%	0.0%	40.0%	20.0%	20.0%	100.0%
	31 - 35	Count	31	4	3	12	1	51
		%	60.8%	7.8%	5.9%	23.5%	2.0%	100.0%
	36 - 40	Count	25	8	0	5	2	40
		%	62.5%	20.0%	0.0%	12.5%	5.0%	100.0%
	41 - 45	Count	11	15	0	4	4	34
		%	32.4%	44.1%	0.0%	11.8%	11.8%	100.0%
	46 - 50	Count	10	13	4	2	4	33
		%	30.3%	39.4%	12.1%	6.1%	12.1%	100.0%
	50 - 55	Count	4	0	0	0	4	8
		%	50.0%	0.0%	0.0%	0.0%	50.0%	100.0%
	56 - 60	Count	0	0	0	0	2	2
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total		Count	85	40	15	27	21	188
		%	45.2%	21.3%	8.0%	14.4%	11.2%	100.0%

Source: Field Survey

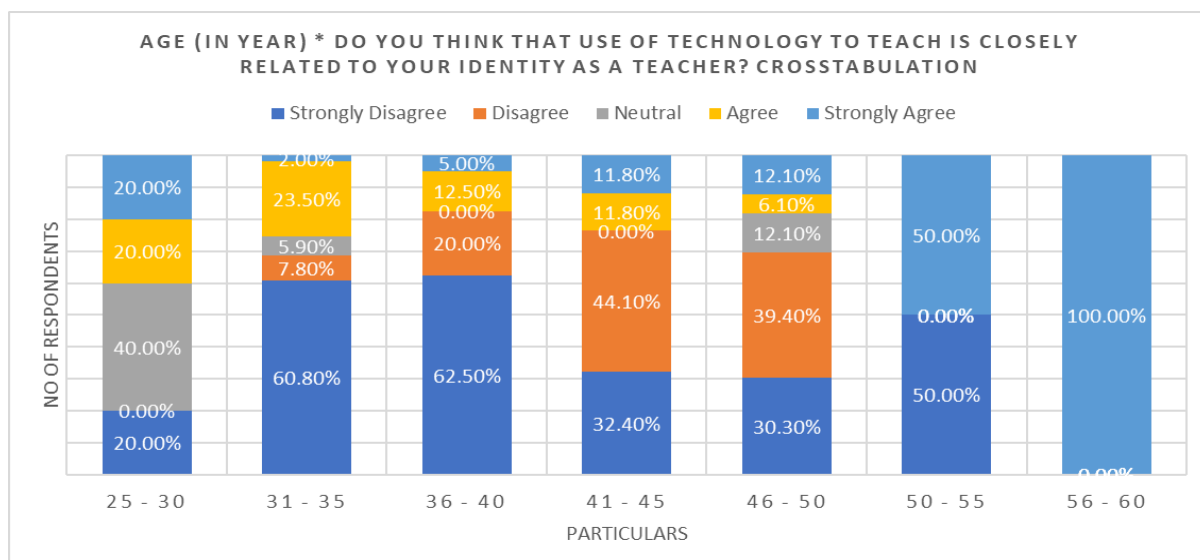


Chart No. 4.2.62 - Age (in Year) * Do You Think That Use Of Technology To Teach Is Closely Related To Your Identity As A Teacher? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's social influence to understand the role of using technology to teach and its relation to your identity as a teacher, a cross table was formulated between age and the above stated factor of social influence. It was observed that in age group of 25 to 30, almost 20% of the faculty respondents stated strongly agree, 20% agreed, 40% had a neutral opinion and 20% strongly disagreed to connect the role of using technology and identity as teacher. Under the age group of 31 to 35, around 2% stated strongly agree, 24% agreed, 6% had a neutral opinion, 8% disagree and 61% strongly disagree to the to connect the role of using technology and identity as teacher. When the faculty under the age group of 36 to 40 were asked about the connect obtained through the role of using technology and identity as teacher, around 5% strongly agreed, 13% agreed, 20% disagreed and 63% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 12% strongly agreed, 12% agreed, 44% disagreed and 32% strongly disagreed to it. In the age group of 46 to 50, it was observed that 12% strongly agreed, 6% agreed, 12% had a neutral opinion and 39% disagreed and 30% strongly disagreed to the to connect the role of using technology and identity as teacher. In the age group of 51 to 55 it was observed that 50% strongly agreed and 50% strongly disagreed. In the final category of age group from 56 to 60, it

was observed that 100% of the faculty respondents stated strongly agreed to connect the role of using technology and identity as teacher.

- Thus, from the above table it can be observed that a mixed kind of opinion is observed wherein a majority of the faculty respondent's state no connect between the use of technology and identity as teacher and many have vice versa opinion.

**Table No. 4.2.63 - Age (in Year) * Do You Think That There Are Necessary
Resources Available To Use The Technology You Have Today? Crosstabulation**

Particulars			Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	2	0	6	12	20
		%	0.0%	10.0%	0.0%	30.0%	60.0%	100.0%
	31 - 35	Count	0	0	1	25	25	51
		%	0.0%	0.0%	2.0%	49.0%	49.0%	100.0%
	36 - 40	Count	0	1	4	26	9	40
		%	0.0%	2.5%	10.0%	65.0%	22.5%	100.0%
	41 - 45	Count	0	1	2	8	23	34
		%	0.0%	2.9%	5.9%	23.5%	67.6%	100.0%
	46 - 50	Count	0	0	18	1	14	33
		%	0.0%	0.0%	54.5%	3.0%	42.4%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	56 - 60	Count	0	0	0	0	2	2
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total		Count	0	0	25	66	93	188
		%	0.0%	0.0%	13.3%	35.1%	49.5%	100.0%

Source: Field Survey

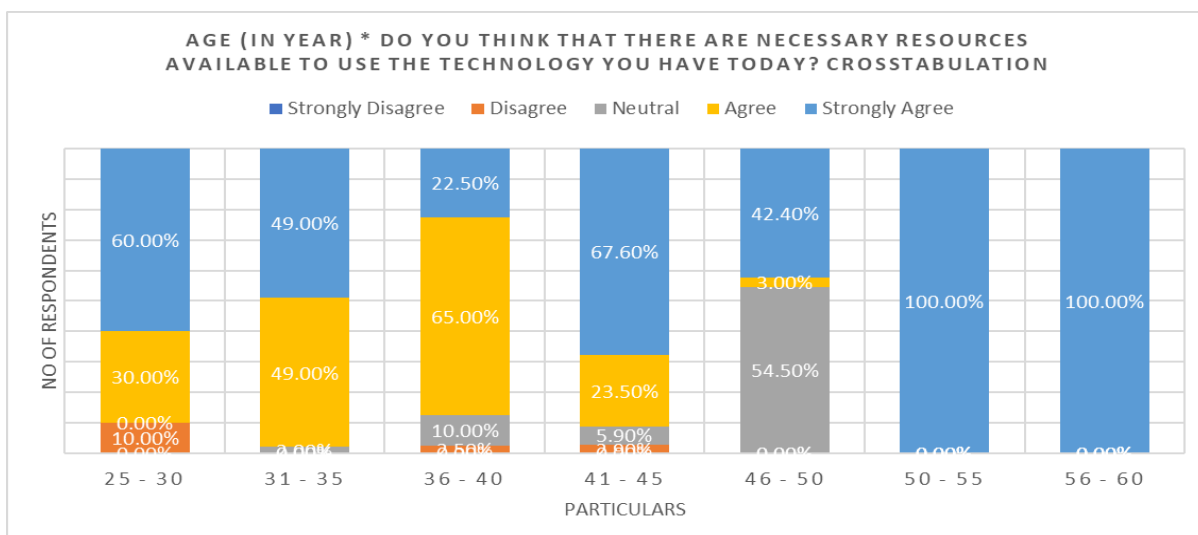


Chart No. 4.2.63- Age (in Year) * Do You Think That There Are Necessary Resources Available To Use The Technology You Have Today? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's facilitating conditions, to understand the availability of necessary resources to use technology for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 60% of the faculty respondents stated strongly agree, 30% agree and 10% strongly disagreed to the availability of necessary resources to use technology. Under the age group of 31 to 35, around 49% stated agree, 49% agreed and 2% had a neutral opinion availability of necessary resources to use technology. When the faculty under the age group of 36 to 40 were asked about the availability of necessary resources to use technology, around 23% strongly agreed, 65% agreed, 10% gave a neutral opinion and 3% disagreed. Under the age group of 41 to 45 it was observed that 68% strongly agreed, 24% agreed, 6% had a neutral opinion and 3% disagreed. In the age group of 46 to 50, it was observed that 42% strongly agreed, 3% agreed, 55% had a neutral opinion availability of necessary resources to use technology. In the age group of 51 to 55 it was observed that 100% agreed. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agreed.
- Thus, from the above table it can be observed that majority of the faculty respondents agree to the availability of necessary resources to use technology.

**Table No. 4.2.64 - Age (in Year) * Do You Think That Technology Is Compatible
With The Work You Do? Crosstabulation**

Particulars			Do You Think That Technology Is Compatible With The Work You Do?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	0	0	8	12	20
		%	0.0%	0.0%	0.0%	40.0%	60.0%	100.0%
	31 - 35	Count	1	0	6	23	21	51
		%	2.0%	0.0%	11.8%	45.1%	41.2%	100.0%
	36 - 40	Count	2	2	6	25	5	40
		%	5.0%	5.0%	15.0%	62.5%	12.5%	100.0%
	41 - 45	Count	1	2	5	8	18	34
		%	2.9%	5.9%	14.7%	23.5%	52.9%	100.0%
	46 - 50	Count	5	0	13	2	13	33
		%	15.2%	0.0%	39.4%	6.1%	39.4%	100.0%
	50 - 55	Count	0	0	0	1	7	8
		%	0.0%	0.0%	0.0%	12.5%	87.5%	100.0%
	56 - 60	Count	0	0	0	0	2	2
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total		Count	9	4	30	67	78	188
		%	4.8%	2.1%	16.0%	35.6%	41.5%	100.0%

Source: Field Survey

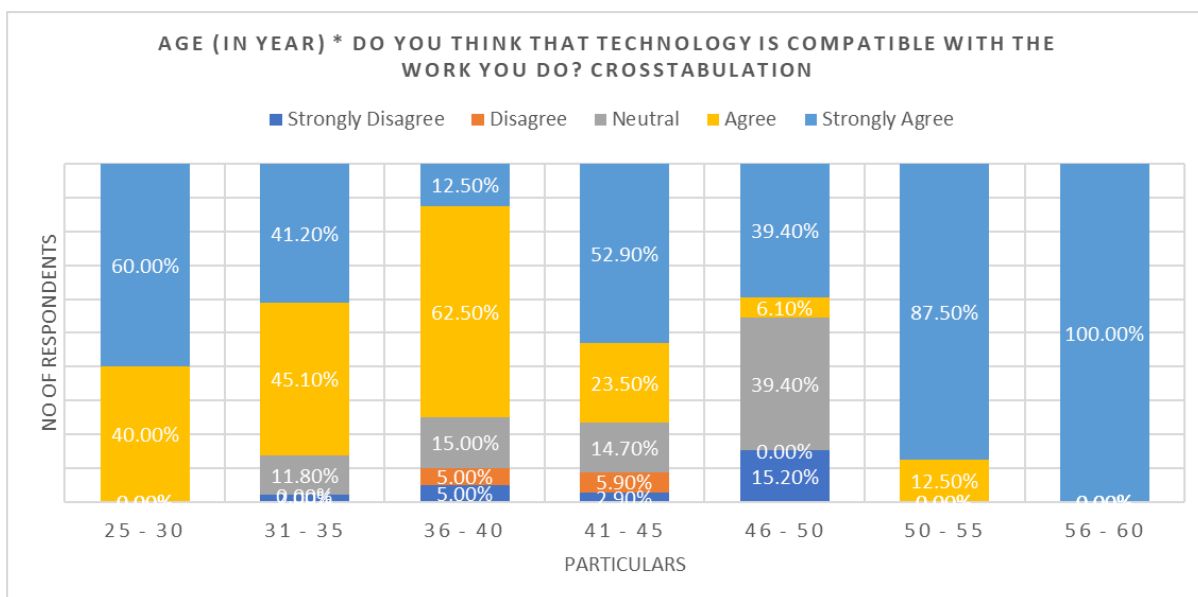


Chart No. 4.2.64 - Age (in Year) * Do You Think That Technology Is Compatible With The Work You Do? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's facilitating conditions, to understand the compatibility in using the technology with the work faculties perform for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 60% of the faculty respondents stated strongly agree, 40% agree to the compatibility in using the technology with the work faculties perform. Under the age group of 31 to 35, around 41% stated strongly agree, 45% agreed and 12% had a neutral opinion for compatibility in using the technology with the work faculties perform. When the faculty under the age group of 36 to 40 were asked about the availability of necessary resources to use technology, around 13% strongly agreed, 63% agreed, 15% gave a neutral opinion and 5% disagreed and 5% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 53% strongly agreed, 24% agreed, 15% had a neutral opinion and 6% disagreed and 3% strongly disagreed to it. In the age group of 46 to 50, it was observed that 39% strongly agreed, 6% agreed, 39% had a neutral opinion and 15% strongly disagreed to compatibility in using the technology with the work faculties perform. In the age group of 51 to 55 it was observed that 88% strongly agreed and 13% agreed to it. In the final category of age group from 56 to 60, it was

observed that 100% of the faculty respondents stated strongly agreed to compatibility in using the technology with the work faculties perform.

- Thus, from the above table it can be observed that majority of the faculty respondents agree to the compatibility in using the technology with the work faculties perform.

Table No. 4.2.65 - Age (in Year) * Do You Think Technology Determines / Influences How You Should Do Your Work? Crosstabulation

Particulars			Do You Think Technology Determines / Influences How You Should Do Your Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	0	12	4	4	20
		%	0.0%	0.0%	60.0%	20.0%	20.0%	100.0%
	31 - 35	Count	0	8	0	41	2	51
		%	0.0%	15.7%	0.0%	80.4%	3.9%	100.0%
	36 - 40	Count	4	0	4	17	15	40
		%	10.0%	0.0%	10.0%	42.5%	37.5%	100.0%
	41 - 45	Count	0	3	4	18	9	34
		%	0.0%	8.8%	11.8%	52.9%	26.5%	100.0%
	46 - 50	Count	0	4	14	10	5	33
		%	0.0%	12.1%	42.4%	30.3%	15.2%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
56 - 60	Count	0	0	0	0	2	2	
	%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	
Total		Count	4	15	34	90	45	188
		%	2.1%	8.0%	18.1%	47.9%	23.9%	100.0%

Source: Field Survey

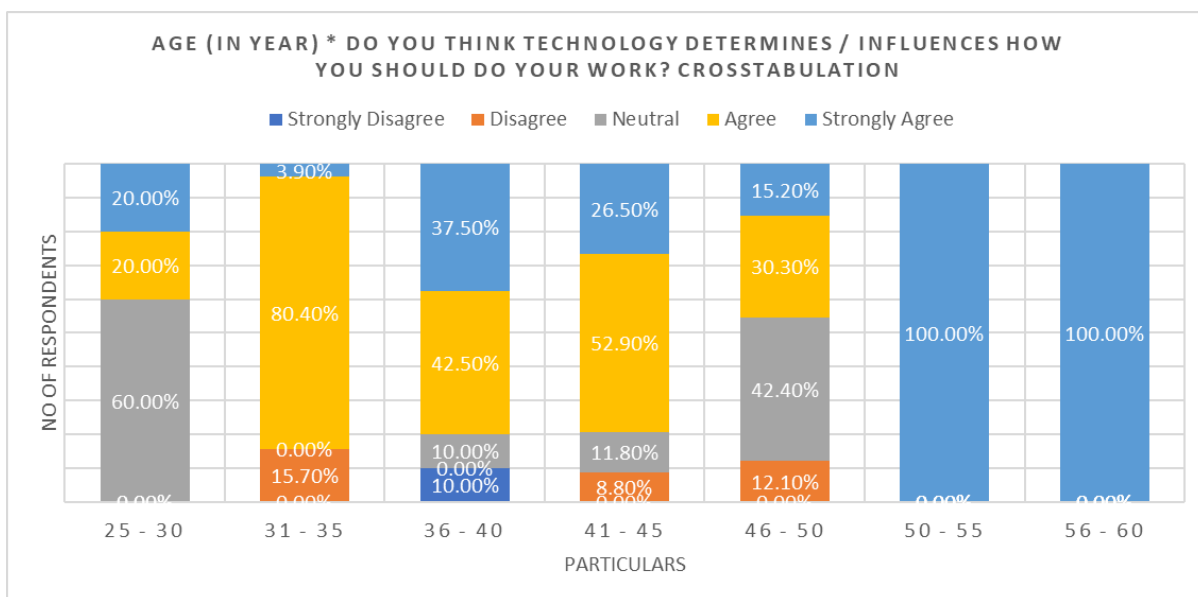


Chart No. 4.2.65 - Age (in Year) * Do You Think Technology Determines / Influences How You Should Do Your Work? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's facilitating conditions, to understand the technology determining how a faculty should work to implement effective for digitalization of teaching learning, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 20% of the faculty respondents stated strongly agree, 20% agree and 60% had a neutral opinion towards the technology determining how a faculty should work to implement effective for digitalization of teaching learning. Under the age group of 31 to 35, around 4% stated strongly agree, 80% agreed and 16% disagree towards the technology determining how a faculty should work to implement effective for digitalization of teaching learning. When the faculty under the age group of 36 to 40 were asked about the availability of necessary resources to use technology, around 38% strongly agreed, 43% agreed, 10% gave a neutral opinion and 10% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 27% strongly agreed, 53% agreed, 12% had a neutral opinion and 9% disagreed to it. In the age group of 46 to 50, it was observed that 15% strongly agreed, 30% agreed, 42% had a neutral opinion and 12% disagreed to the technology determining how a faculty should work to implement effective for digitalization of teaching learning. In the age group of 51 to 55 it was observed that 100% strongly agreed to it. In the final category of

age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agreed to the technology determining how a faculty should work to implement effective for digitalization of teaching learning.

- Thus, from the above table it can be observed that majority of the faculty respondents agree to the technology determining how a faculty should work to implement effective for digitalization of teaching learning.

Table No. 4.2.66 - Age (in Year) * Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?

Crosstabulation

Particulars			Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	4	5	0	11	20
		%	0.0%	20.0%	25.0%	0.0%	55.0%	100.0%
	31 - 35	Count	1	11	2	20	17	51
		%	2.0%	21.6%	3.9%	39.2%	33.3%	100.0%
	36 - 40	Count	3	1	19	3	14	40
		%	7.5%	2.5%	47.5%	7.5%	35.0%	100.0%
	41 - 45	Count	3	8	10	10	3	34
		%	8.8%	23.5%	29.4%	29.4%	8.8%	100.0%
	46 - 50	Count	0	3	11	15	4	33
		%	0.0%	9.1%	33.3%	45.5%	12.1%	100.0%
	50 - 55	Count	0	0	0	7	1	8
		%	0.0%	0.0%	0.0%	87.5%	12.5%	100.0%
	56 - 60	Count	0	2	0	0	0	2
		%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	7	29	47	55	50	188
		%	3.7%	15.4%	25.0%	29.3%	26.6%	100.0%

Source: Field Survey

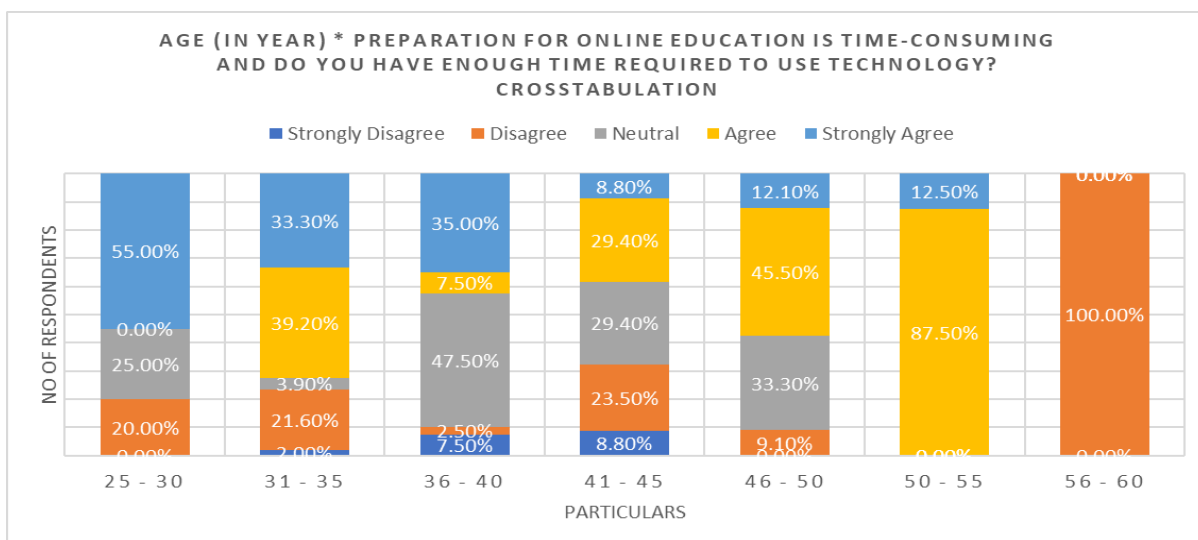


Chart No. 4.2.66 - Age (in Year) * Preparation For Online Education Is Time-Consuming And Do You Have Enough Time Required To Use Technology?
Crosstabulation

Interpretation:

- To understand more about the faculty respondent's experience conditions, to understand the time consumed and availability of enough time for preparing content based on technology, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 55% of the faculty respondents stated strongly agree, 25% had a neutral opinion and 20% disagreed to the time consumed and availability of enough time for preparing content based on technology. Under the age group of 31 to 35, around 33% stated strongly agree, 39% agreed and 4% had a neutral opinion, 22% disagree and 2% strongly disagreed to understand the time consumed and availability of enough time for preparing content based on technology. When the faculty under the age group of 36 to 40 were asked about the time consumed and availability of enough time for preparing content based on technology, around 35% strongly agreed, 8% agreed, 48% gave a neutral opinion, 3% disagreed and 8% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 9% strongly agreed, 29% agreed, 29% had a neutral opinion and 24% disagreed and 9% strongly disagreed to it. In the age group of 46 to 50, it was observed that 12% strongly agreed, 46% agreed, 33% had a neutral opinion and 9% disagreed to understand the time consumed and availability of enough time for preparing content based on technology. In the age group of 51 to 55 it was observed that 13% strongly agreed

and 88% agreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated disagreed to understand the time consumed and availability of enough time for preparing content based on technology.

- Thus, from the above table it can be observed that majority of the faculty respondents disagree to the time consumed and availability of enough time for preparing content based on technology.

Table No. 4.2.67 - Age (in Year) * Are You Using Technology For Teaching And In Your Work Since A Long Time? Crosstabulation

Particulars			Are You Using Technology For Teaching And In Your Work Since A Long Time?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	2	0	8	4	6	20
		%	10.0%	0.0%	40.0%	20.0%	30.0%	100.0%
	31 - 35	Count	11	0	0	9	31	51
		%	21.6%	0.0%	0.0%	17.6%	60.8%	100.0%
	36 - 40	Count	4	11	4	11	10	40
		%	10.0%	27.5%	10.0%	27.5%	25.0%	100.0%
	41 - 45	Count	1	1	2	18	12	34
		%	2.9%	2.9%	5.9%	52.9%	35.3%	100.0%
	46 - 50	Count	1	4	14	5	9	33
		%	3.0%	12.1%	42.4%	15.2%	27.3%	100.0%
	50 - 55	Count	3	0	0	0	5	8
		%	37.5%	0.0%	0.0%	0.0%	62.5%	100.0%
	56 - 60	Count	0	0	0	2	0	2
		%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Total		Count	22	16	28	49	73	188
		%	11.7%	8.5%	14.9%	26.1%	38.8%	100.0%

Source: Field Survey

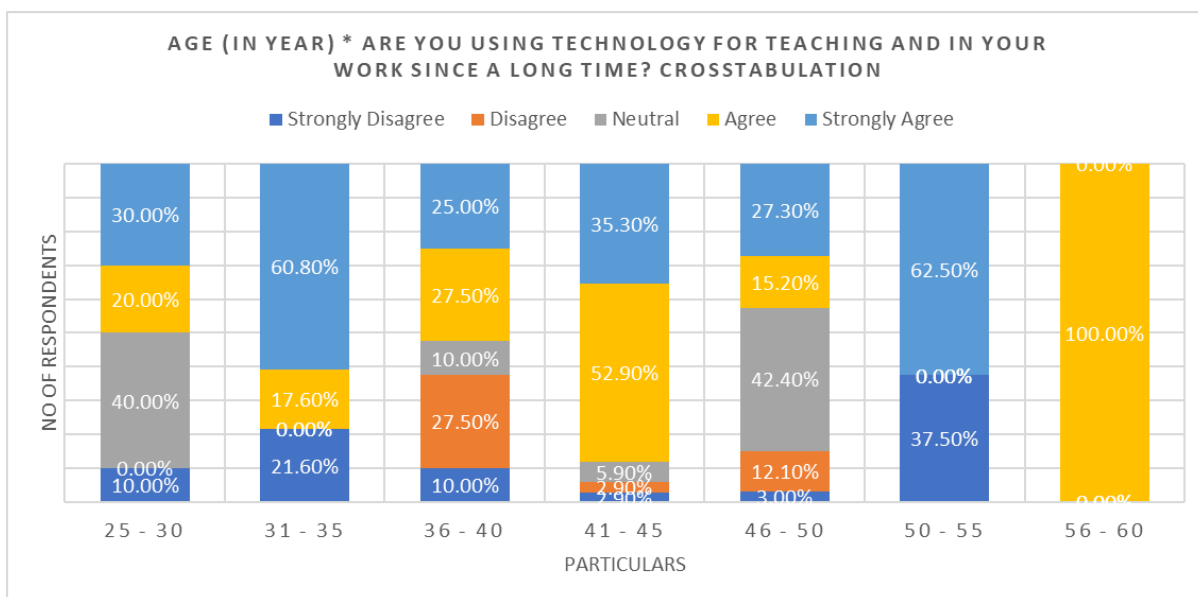


Chart No. 4.2.67- Age (in Year) * Are You Using Technology For Teaching And In Your Work Since A Long Time? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's experience conditions, to understand using technology for teaching for long time, a cross table was formulated between age and the various factors. It was observed that in age group of 25 to 30, almost 30% of the faculty respondents stated strongly agree, 20% agreed, 40% had a neutral opinion and 10% strongly disagreed to using technology for teaching for long time. Under the age group of 31 to 35, around 61% stated strongly agree, 18% agreed and 22% strongly disagreed to using technology for teaching for long time. When the faculty under the age group of 36 to 40 were asked about the using technology for teaching for long time, around 25% strongly agreed, 28% agreed, 10% gave a neutral opinion, 28% disagreed and 10% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 35% strongly agreed, 53% agreed, 6% had a neutral opinion and 3% disagreed and 3% strongly disagreed to it. In the age group of 46 to 50, it was observed that 27% strongly agreed, 15% agreed, 42% had a neutral opinion, 12% disagreed and 3% strongly disagreed using technology for teaching for long time. In the age group of 51 to 55 it was observed that 63% strongly agreed and 38% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated agreed to understand using technology for teaching for long time.

- Thus, from the above table it can be observed that majority of the faculty respondents agreed using technology since teaching for long time.

Table No. 4.2.68 - Age (in Year) * Do You Use Technology At Home And In Your Free Time? Crosstabulation

Particulars			Do You Use Technology At Home And In Your Free Time?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	2	0	0	4	14	20
		%	10.0%	0.0%	0.0%	20.0%	70.0%	100.0%
	31 - 35	Count	2	1	0	23	25	51
		%	3.9%	2.0%	0.0%	45.1%	49.0%	100.0%
	36 - 40	Count	2	10	2	8	18	40
		%	5.0%	25.0%	5.0%	20.0%	45.0%	100.0%
	41 - 45	Count	2	0	2	6	24	34
		%	5.9%	0.0%	5.9%	17.6%	70.6%	100.0%
	46 - 50	Count	0	4	9	10	10	33
		%	0.0%	12.1%	27.3%	30.3%	30.3%	100.0%
	50 - 55	Count	0	0	0	0	8	8
		%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	56 - 60	Count	0	0	0	2	0	2
		%	0.0%	0.0%	0.0%	100.0 %	0.0%	100.0%
Total		Count	8	15	13	53	99	188
		%	4.3%	8.0%	6.9%	28.2%	52.7%	100.0%

Source: Field Survey

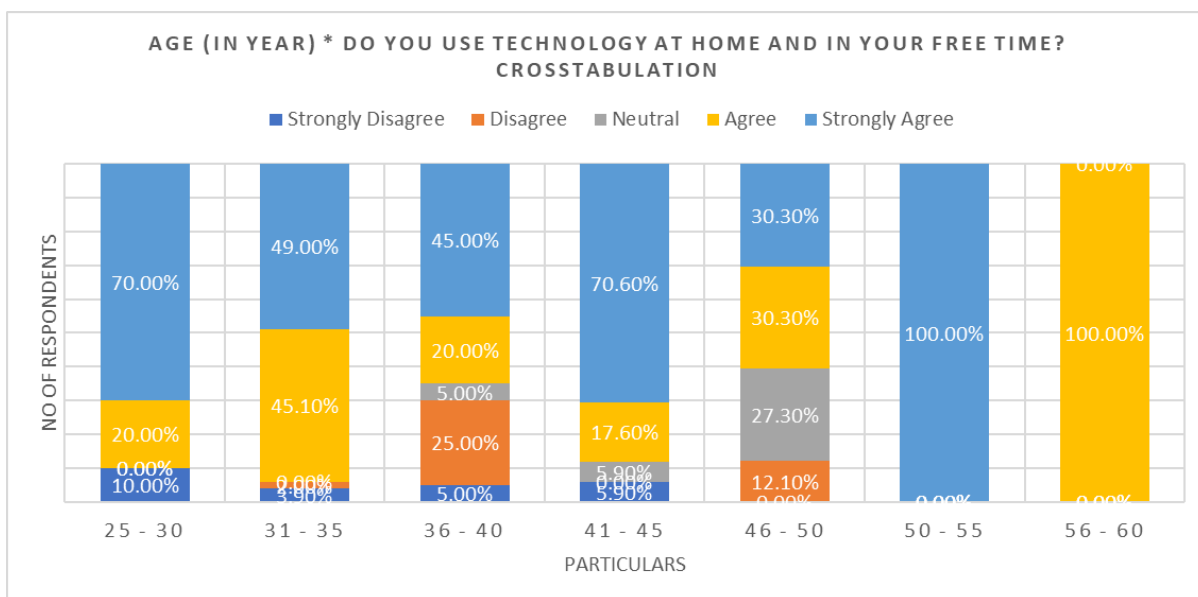


**Chart No. 4.2.68 - Age (in Year) * Do You Use Technology At Home And In
Your Free Time? Crosstabulation**

Interpretation:

- To understand more about the faculty respondent's voluntariness factor, they were put forth with a question stating whether they use technology at home and in your free time. It was observed that in age group of 25 to 30, almost 70% of the faculty respondents stated strongly agree, 20% agreed and 10% strongly disagreed to question stating whether they use technology at home and in your free time. Under the age group of 31 to 35, around 49% stated strongly agree, 45% agreed and 2% disagree and 4% strongly disagreed question stating whether they use technology at home and in your free time. When the faculty under the age group of 36 to 40 were asked about the using technology for teaching for long time, around 45% strongly agreed, 20% agreed, 5% gave a neutral opinion, 25% disagreed and 5% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 71% strongly agreed, 18% agreed, 6% had a neutral opinion and 6% strongly disagreed to it. In the age group of 46 to 50, it was observed that 30% strongly agreed, 30% agreed, 27% had a neutral opinion, 12% disagreed question stating whether they use technology at home and in your free time. In the age group of 51 to 55 it was observed that 100% strongly agreed. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated agreed to question stating whether they use technology at home and in your free time.

- Thus, from the above table it can be observed that majority of the faculty respondents agreed using technology at home and in your free time.

**Table No. 4.2.69 - Age (in Year) * Do You Have An Obligation To Use
Technology For Work? Crosstabulation**

Particulars			Do You Have An Obligation To Use Technology For Work?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	8	4	4	4	20
		%	0.0%	40.0%	20.0%	20.0%	20.0%	100.0%
	31 - 35	Count	0	25	5	21	0	51
		%	0.0%	49.0%	9.8%	41.2%	0.0%	100.0%
	36 - 40	Count	0	20	17	3	0	40
		%	0.0%	50.0%	42.5%	7.5%	0.0%	100.0%
	41 - 45	Count	6	3	4	10	11	34
		%	17.6%	8.8%	11.8%	29.4%	32.4%	100.0%
	46 - 50	Count	4	1	18	10	0	33
		%	12.1%	3.0%	54.5%	30.3%	0.0%	100.0%
	50 - 55	Count	0	0	0	8	0	8
		%	0.0%	0.0%	0.0%	100.0 %	0.0%	100.0%
	56 - 60	Count	2	0	0	0	0	2
		%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	12	57	48	56	15	188
		%	6.4%	30.3%	25.5%	29.8%	8.0%	100.0%

Source: Field Survey

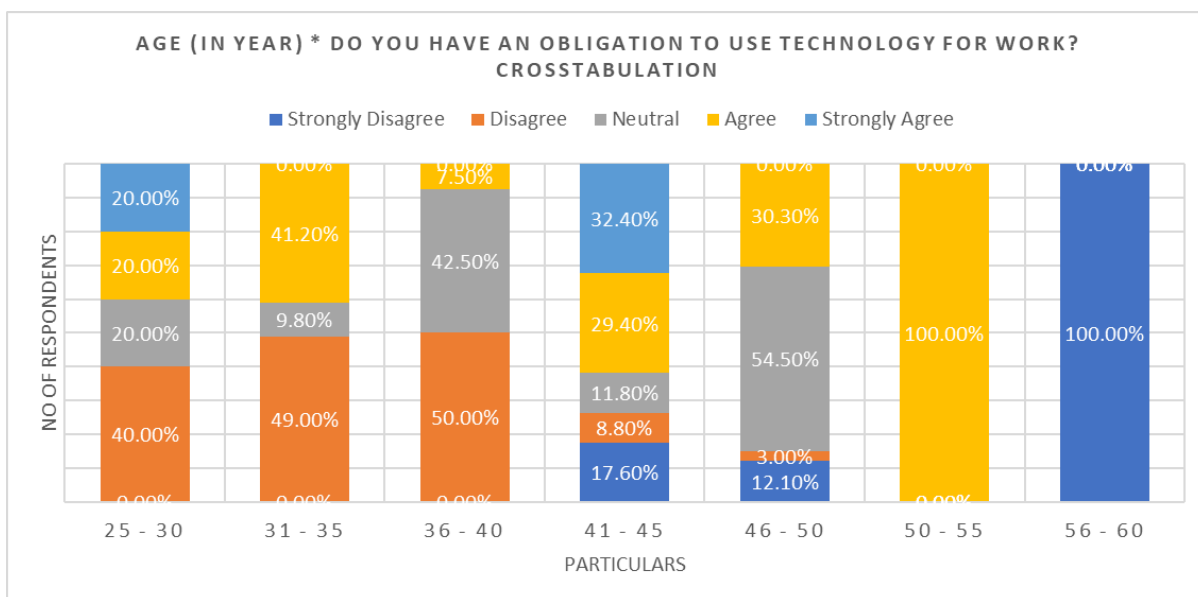


**Chart No. 4.2.69 - Age (in Year) * Do You Have An Obligation To Use
Technology For Work? Crosstabulation**

Interpretation:

- To understand more about the faculty respondent's voluntariness factor, they were put forth with a question stating whether there is any obligation to use technology at work. It was observed that in age group of 25 to 30, almost 20% of the faculty respondents stated strongly agree, 20% agreed 20% stated neutral opinion and 40% disagreed to question stating obligation to use technology at work. Under the age group of 31 to 35, around 41% agreed and 10% had a neutral opinion obligation to use technology at work. When the faculty under the age group of 36 to 40 were asked about the obligation to use technology at work, around 8% agreed, 43% gave a neutral opinion, 50% disagreed to it. Under the age group of 41 to 45 it was observed that 32% strongly agreed, 29% agreed, 12% had a neutral opinion and 9% disagreed and 18% strongly disagreed to it. In the age group of 46 to 50, it was observed that 30% agreed, 55% had a neutral opinion, 3% disagreed and 12% strongly disagreed to question stating obligation to use technology at work. In the age group of 51 to 55 it was observed that 100% agreed. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated disagreed to question stating obligation to use technology at work.
- Thus, from the above table it can be observed that a mixed opinion towards agree and disagree can be observed for obligation to use technology at work.

**Table No. 4.2.70 - Age (in Year) * Do You Technology In A Different Manner
Than What Is Requested? Crosstabulation**

Particulars			Do You Technology In A Different Manner Than What Is Requested?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	0	0	8	8	4	20
		%	0.0%	0.0%	40.0%	40.0%	20.0%	100.0%
	31 - 35	Count	0	21	5	25	0	51
		%	0.0%	41.2%	9.8%	49.0%	0.0%	100.0%
	36 - 40	Count	5	1	24	7	3	40
		%	12.5%	2.5%	60.0%	17.5%	7.5%	100.0%
	41 - 45	Count	2	4	11	10	7	34
		%	5.9%	11.8%	32.4%	29.4%	20.6%	100.0%
	46 - 50	Count	5	5	5	14	4	33
		%	15.2%	15.2%	15.2%	42.4%	12.1%	100.0%
	50 - 55	Count	1	0	6	0	1	8
		%	12.5%	0.0%	75.0%	0.0%	12.5%	100.0%
	56 - 60	Count	0	2	0	0	0	2
		%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Total		Count	13	33	59	64	19	188
		%	6.9%	17.6%	31.4%	34.0%	10.1%	100.0%

Source: Field Survey

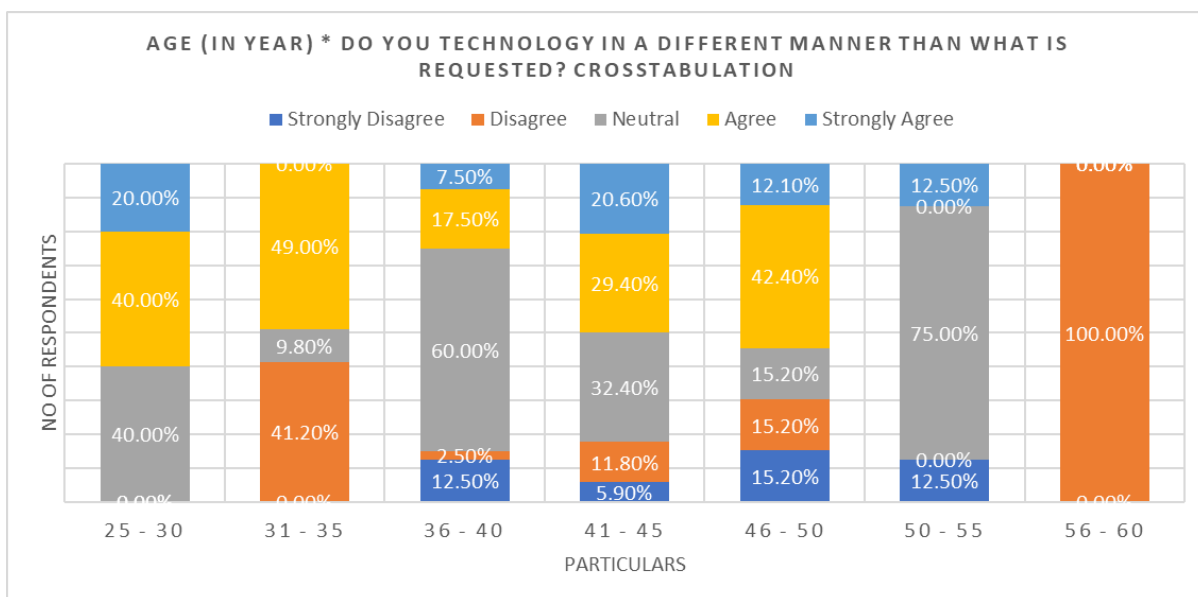


Chart No. 4.2.70 - Age (in Year) * Do You Technology In A Different Manner Than What Is Requested? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's voluntariness factor, they were put forth with a question stating whether they use technology in a different manner than it is requested. It was observed that in age group of 25 to 30, almost 20% of the faculty respondents stated strongly agree, 40% agreed 40% stated neutral opinion for use technology in a different manner. Under the age group of 31 to 35, around 49% agreed and 10% had a neutral opinion and 41% disagreed to use technology in a different manner. When the faculty under the age group of 36 to 40 were asked about the use technology in a different manner, around 8% strongly agreed, 18% agree, 60% gave a neutral opinion, 3% disagreed and 13% strongly disagreed to it. Under the age group of 41 to 45 it was observed that 21% strongly agreed, 29% agreed, 32% had a neutral opinion, 12% disagreed and 6% strongly disagreed to it. In the age group of 46 to 50, it was observed that 12% strongly agreed, 42% agreed, 15% had a neutral opinion, 15% disagreed and 15% strongly disagreed to question stating use technology in a different manner. In the age group of 51 to 55 it was observed that 13% strongly agreed 75% had a neutral opinion, 13% strongly disagreed to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated disagreed to question stating use technology in a different manner.

- Thus, from the above table it can be observed that younger faculties stated agree and older age group disagreed to use technology in a different manner.

Table No. 4.2.71 - Age (in Year) * Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties? Crosstabulation

Particulars			Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties?					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age (in Year)	25 - 30	Count	4	4	4	8	0	20
		%	20.0%	20.0%	20.0%	40.0%	0.0%	100.0%
	31 - 35	Count	0	0	16	28	7	51
		%	0.0%	0.0%	31.4%	54.9%	13.7%	100.0%
	36 - 40	Count	0	4	12	19	5	40
		%	0.0%	10.0%	30.0%	47.5%	12.5%	100.0%
	41 - 45	Count	3	2	1	21	7	34
		%	8.8%	5.9%	2.9%	61.8%	20.6%	100.0%
	46 - 50	Count	0	0	11	14	8	33
		%	0.0%	0.0%	33.3%	42.4%	24.2%	100.0%
	50 - 55	Count	0	0	6	0	2	8
		%	0.0%	0.0%	75.0%	0.0%	25.0%	100.0%
56 - 60	Count	0	0	0	0	2	2	
	%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	
Total		Count	7	10	50	90	31	188
		%	3.7%	5.3%	26.6%	47.9%	16.5%	100.0%

Source: Field Survey

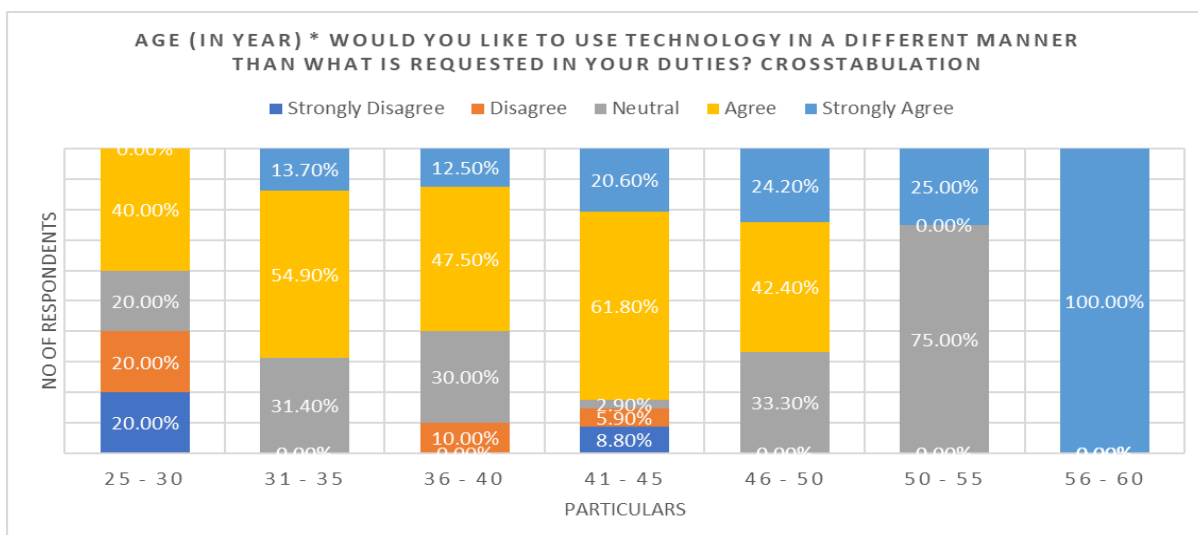


Chart No. 4.2.71 - Age (in Year) * Would You Like To Use Technology In A Different Manner Than What Is Requested In Your Duties? Crosstabulation

Interpretation:

- To understand more about the faculty respondent's voluntariness factor, they were put forth with a question stating whether they are interested in using technology in a different manner than it is requested. It was observed that in age group of 25 to 30, almost 40% of the faculty respondents stated agree, 20% stated neutral opinion, 20% disagreed and 20% strongly disagreed to interest in using technology in a different manner. Under the age group of 31 to 35, around 14% strongly agreed, 55% agreed and 31% had a neutral opinion to interest in using technology in a different manner. When the faculty under the age group of 36 to 40 were asked about the interest in using technology in a different manner, around 13% strongly agreed, 48% agree, 30% gave a neutral opinion, 10% disagreed to interest in using technology in a different manner. Under the age group of 41 to 45 it was observed that 21% strongly agreed, 62% agreed, 3% had a neutral opinion, 6% disagreed and 9% strongly disagreed to it. In the age group of 46 to 50, it was observed that 24% strongly agreed, 42% agreed, 33% had a neutral opinion to interest in using technology in a different manner. In the age group of 51 to 55 it was observed that 25% strongly agreed 75% had a neutral opinion to it. In the final category of age group from 56 to 60, it was observed that 100% of the faculty respondents stated strongly agreed to to interest in using technology in a different manner.

- Thus, from the above table it can be observed that younger faculties stated agree and older age group disagreed to interest in using technology in a different manner.

4.3 - Section II: Student Analysis

Table No 4.3.1 - Gender

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	191	54.9	54.9	54.9
	Female	157	45.1	45.1	100.0
	Total	348	100.0	100.0	

Source: Field Survey

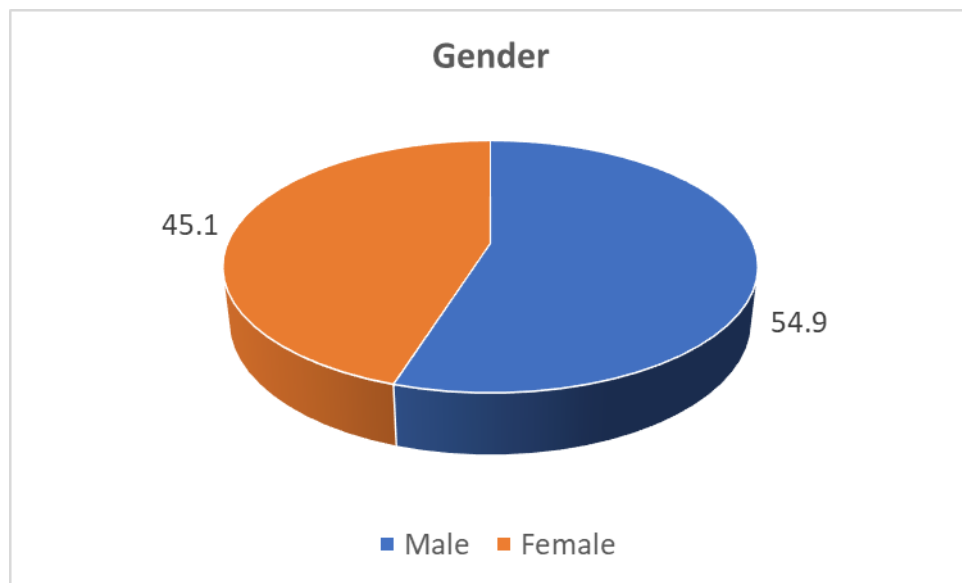


Chart No 4.3.1 - Gender.

Interpretation:

- The opinion of the student respondents is as seen in table no.... around 55% are male students who participated in the survey for understanding the effectiveness of digitalization in learning different concepts. 45% were female students who participated in the survey. Overall, it can be observed that opinion of both the gender is near to equal.

Table No 4.3.2 - Answering Questions Through Online Mode Is Preferred In Comparison To Books Or Paper.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	45	12.9	12.9	12.9
	Disagree	61	17.5	17.5	30.5
	Neutral	52	14.9	14.9	45.4
	Agree	118	33.9	33.9	79.3
	Strongly Agree	72	20.7	20.7	100.0
	Total	348	100.0	100.0	

Source: Field Survey

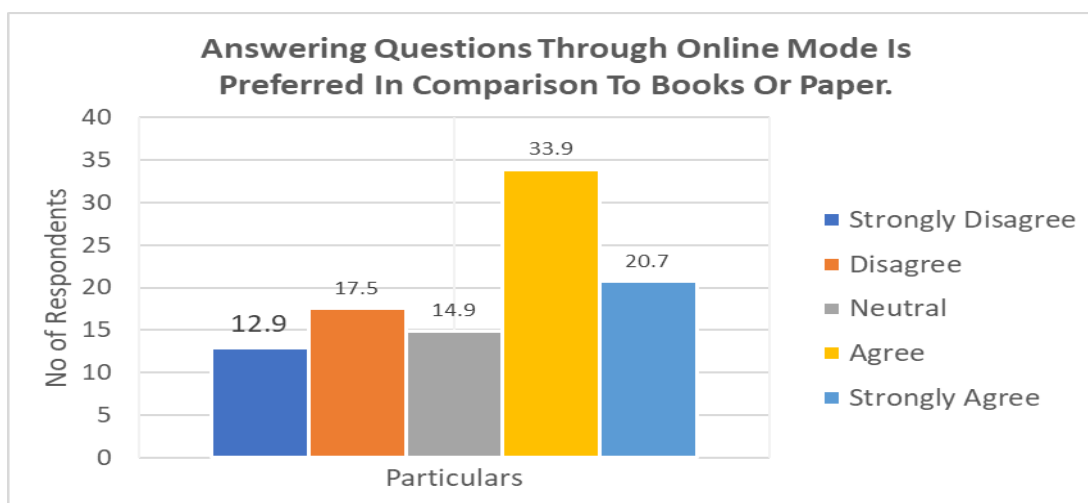


Chart No 4.3.2 - Answering Questions Through Online Mode Is Preferred In Comparison To Books Or Paper.

Interpretation:

- When the students respondents were asked about answering questions through online mode instead of physically through books and paper, it was observed that a majority of 34% stated agree, 21% stated strongly agree, 18% disagreed, 13% strongly disagreed, 15% stated neutral opinion for the same. We can thus interpret from the above table that online mode for answering questions is preferred by the students, but a considerable number of students have also stated a neutral opinion or disagreed to online modes effectiveness towards traditional way of using book and paper.

Table No 4.3.3 - For Learning In Future, Online Platforms Are Found To Be Interesting.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	32	9.2	9.2	9.2
	Disagree	63	18.1	18.1	27.3
	Neutral	70	20.1	20.1	47.4
	Agree	103	29.6	29.6	77.0
	Strongly Agree	80	23.0	23.0	100.0
	Total	348	100.0	100.0	

Source: Field Survey

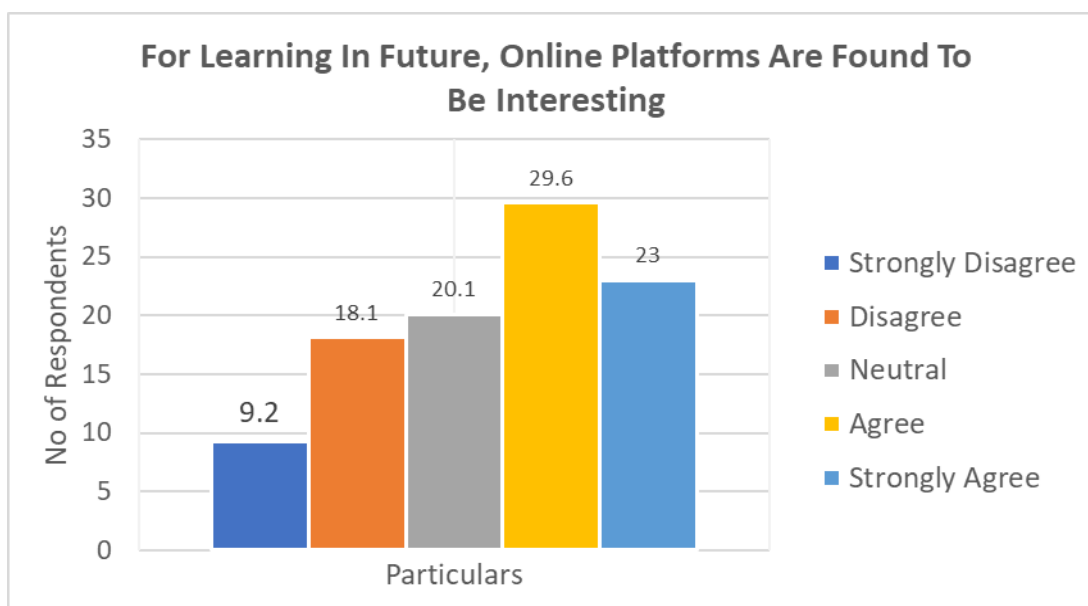


Chart No 4.3.3 - For Learning In Future, Online Platforms Are Found To Be Interesting.

Interpretation:

- When the student respondents were asked about interestingness of online platforms towards learning in future, around 30% of the students agreed, 23% stated strongly agreed, 20% had a neutral opinion, 18% disagreed and around 9% strongly disagreed to it. Thus, we can intrept from the above table that a mixed opinion can be observed stating that online platforms are found to be interesting.

**Table No 4.3.4 - Activities in physical mode Are Preferred Over The Quizzes
During Online Class**

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	2.6	2.6	2.6
	Disagree	23	6.6	6.6	9.2
	Neutral	49	14.1	14.1	23.3
	Agree	164	47.1	47.1	70.4
	Strongly Agree	103	29.6	29.6	100.0
	Total	348	100.0	100.0	

Source: Field Survey

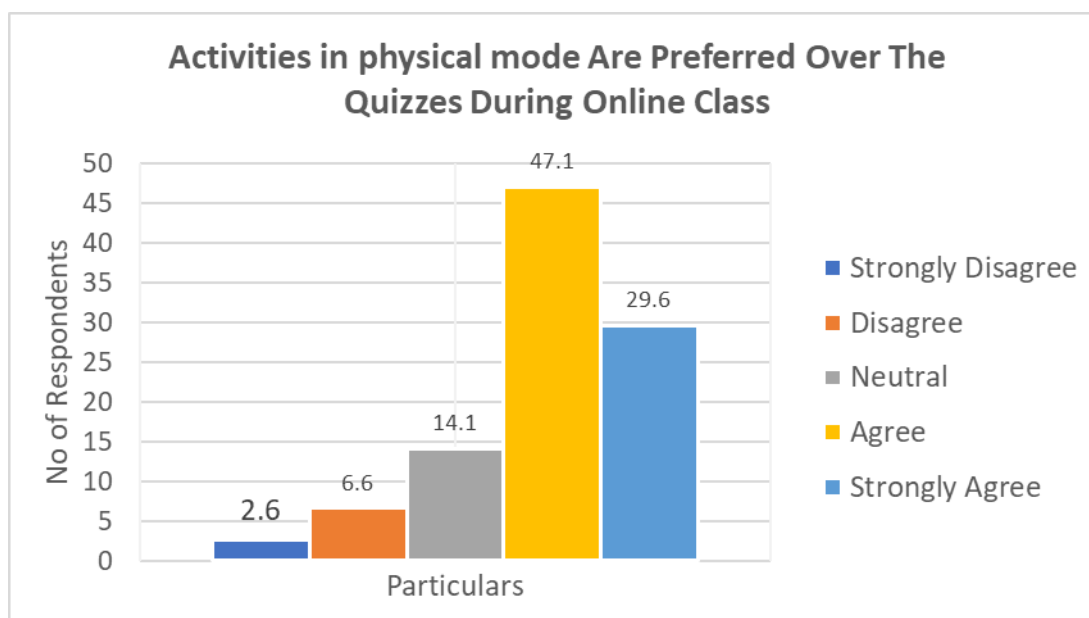


**Chart No 4.3.4 - Activities in physical mode Are Preferred Over The Quizzes
During Online Class**

Interpretation:

- When the students were asked about the activities in physical mode preferred in comparison to quizzes during online classes. It was observed that a majority of 47% stated agree, 30% stated strongly agree, 14% stated neutral, 7% stated disagree and 3% stated strongly disagree. Thus, from the above table it can be inferred that majority of the students believe that physical mode was preferred over online classes.

Table No 4.3.5 - Computer Games Are Preferable To Make The Subject More Interesting.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	4.9	4.9	4.9
	Disagree	32	9.2	9.2	14.1
	Neutral	83	23.9	23.9	37.9
	Agree	139	39.9	39.9	77.9
	Strongly Agree	77	22.1	22.1	100.0
	Total	348	100.0	100.0	

Source: Field Survey

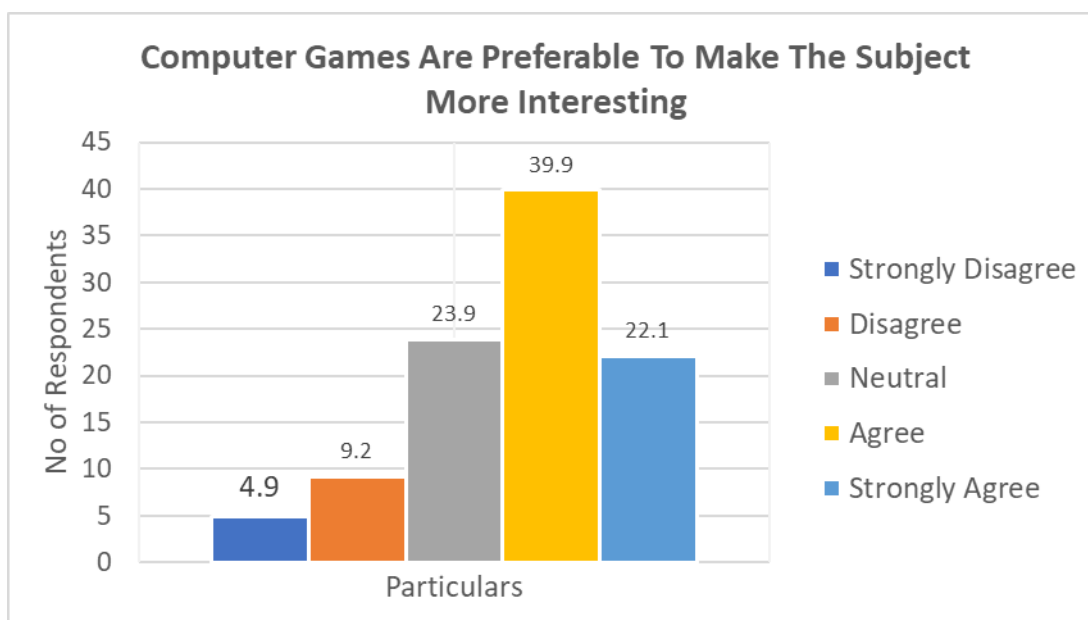


Chart No 4.3.5 - Computer Games Are Preferable To Make The Subject More Interesting

Interpretation:

- When the students respondents were asked about preference of computer games to make the subject more interesting, it was observed that around 40% of the students agreed to it, 22% strongly agreed, 24% had a neutral opinion, 9% stated disagree and 5% stated strongly disagreed to it.
- Thus, from the above table it can be inferred that still a considerable number of students don't prefer computer games to be the reason for making the subject more interesting can be observed.

Table No 4.3.6 - Online Platforms Help Me To Learn Better By Myself

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	35	10.06	10.06	10.06
	Disagree	43	12.36	12.36	22.96
	Neutral	74	21.26	21.26	42.22
	Agree	82	23.56	23.56	67.78
	Strongly Agree	114	32.76	32.76	32.76
	Total	348	100	100	

Source: Field Survey

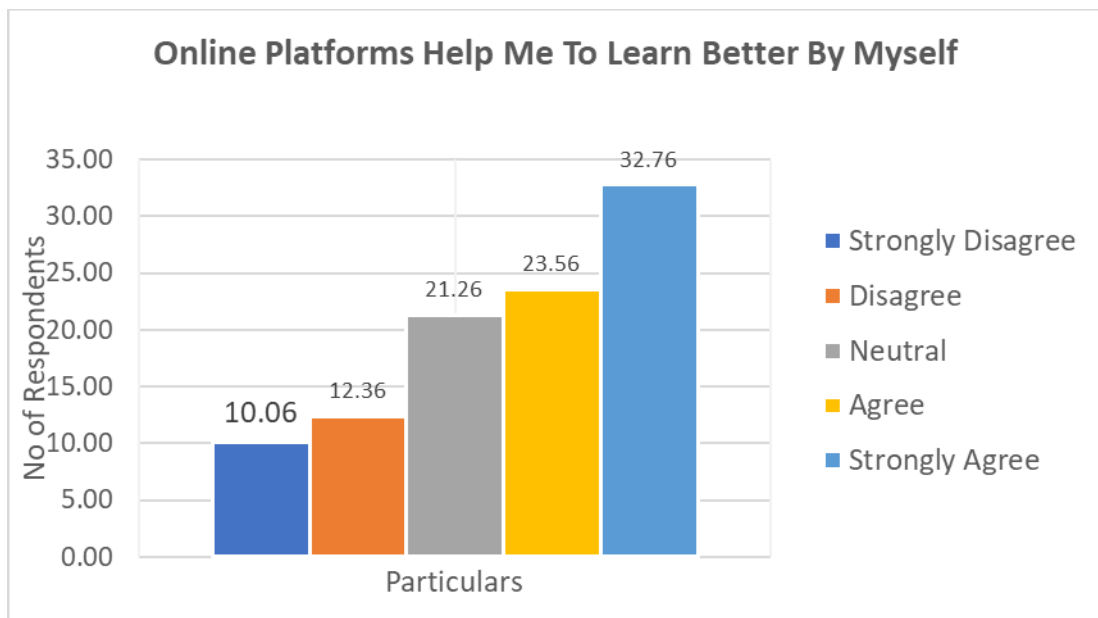


Chart No 4.3.6 - Online Platforms Help Me To Learn Better By Myself

Interpretation:

- From the above table it can be inferred that 33% of the respondent's state strongly agree, 24% stated agree and 21 have a neutral opinion. Around 12% stated disagree and 10% strongly disagree. Thus, we can infer from the above table that a mixed opinion can be observed where in all categories have been more or less equally preferred.

Table No 4.3.7 - Learning At Own Pace And Sequence Is Easier Due To Online Learning

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	48	13.79	13.79	13.76
	Disagree	32	9.20	9.20	22.96
	Neutral	67	19.25	19.25	42.21
	Agree	132	37.93	37.93	80.14
	Strongly Agree	69	19.83	19.83	100.0
	Total	348	100.0	100.0	

Source: Field Survey

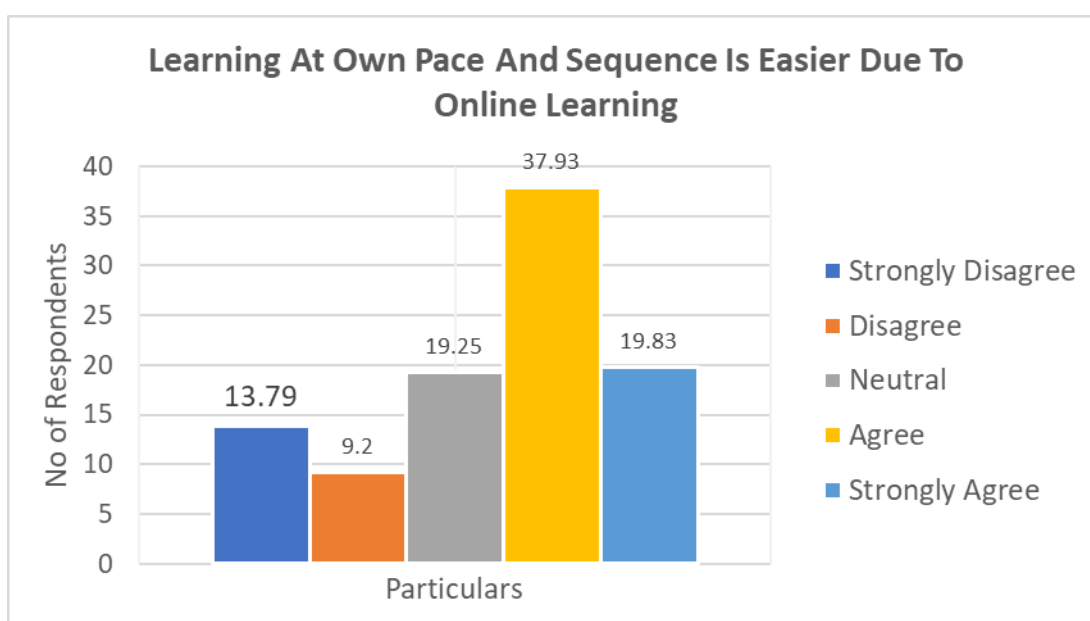


Chart No 4.3.7 - Learning At Own Pace And Sequence Is Easier Due To Online Learning

Interpretation:

- When the student respondents were asked about learning at own pace and sequence is easier due to online learning, it was observed that around 38% of the respondents stated agree, 20% stated strongly agree, 19% had a neutral opinion for the same. 9% disagreed and 14% stated strongly disagreed to it, thus we can observe from the above table that majority of the students feel positive about learning at own pace, but a considerable number of students also are not positive about this aspect.

Table No 4.3.8 - Studying Online Provides Me With Flexibility With Timings.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	3.4	3.4	3.4
	Disagree	9	2.6	2.6	6.0
	Neutral	41	11.8	11.8	17.8
	Agree	158	45.4	45.4	63.2
	Strongly Agree	128	36.8	36.8	100.0
	Total	348	100.0	100.0	

Source: Field Survey

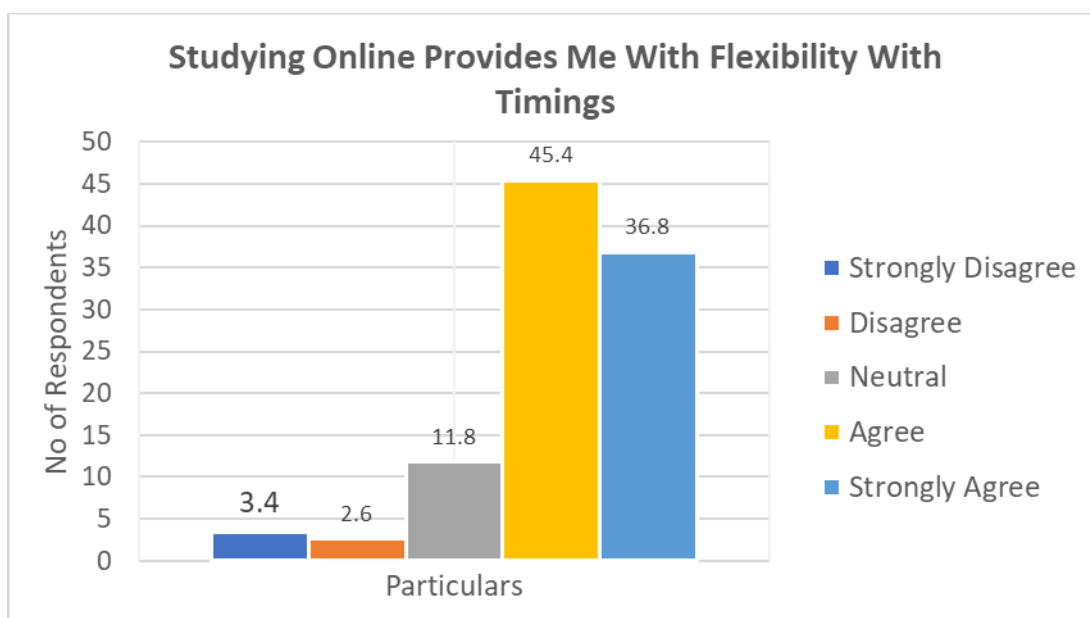


Chart No 4.3.8 - Studying Online Provides Me With Flexibility With Timings.

Interpretation:

- When the student respondents we asked about the flexibility of timings due to online mode, a majority of them 45% agreed to it, 37% stated strongly agree, 12% had a neutral opinion, 3% stated disagree and 3% stated strongly disagreed to it. Thus, we can observe from the above students opinion that due to online mode there is considerable amount if flexibility in timings in studying online.

Table No 4.3.9 - Learning In Online Mode Provides Me With The Flexibility To Choose The Place Of Learning.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	1.1	1.1	1.1
	Disagree	7	2.0	2.0	3.2
	Neutral	43	12.4	12.4	15.5
	Agree	134	38.5	38.5	54.0
	Strongly Agree	160	46.0	46.0	100.0
	Total	348	100.0	100.0	

Source: Field Survey

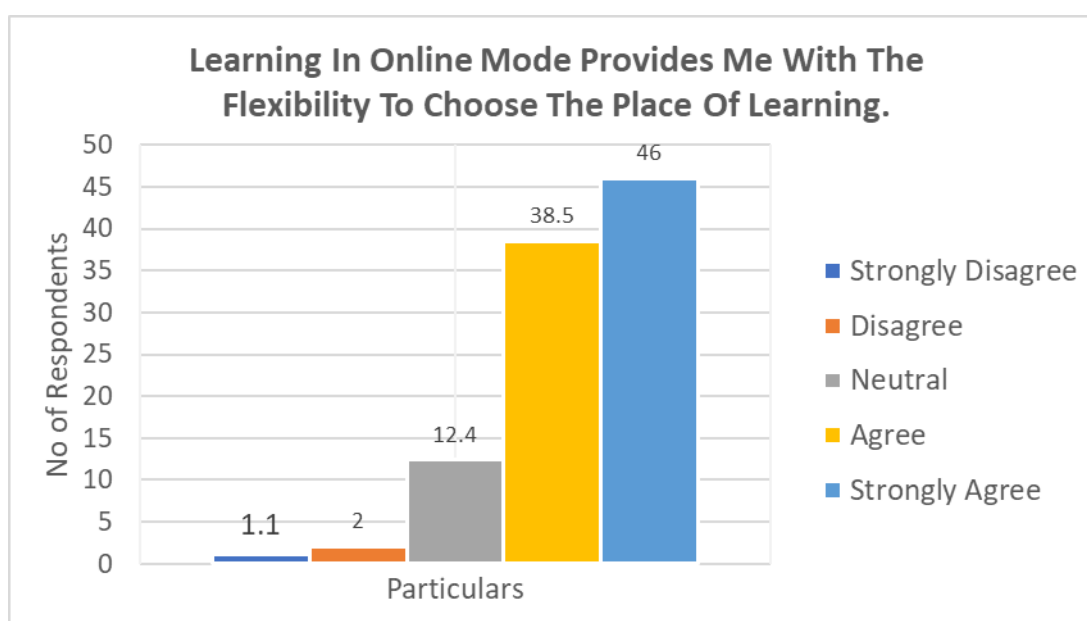


Chart No 4.3.9 - Learning In Online Mode Provides Me With The Flexibility To Choose The Place Of Learning

Interpretation:

- When the student respondents were asked about the liberty of choosing the place of learning in online mode, a majority of 46% stated strongly agreed, 39% stated agree, 12% stated neutral opinion, only 2% stated disagree, 1% stated strongly disagree. Thus, we can understand from the above table that there is unanimous opinion towards flexibility of timings in online mode.

Table No 4.3.10 - The Content Of Online Games And Exercises Matches My Subject And Syllabus.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	42	12.1	12.1	12.1
	Disagree	45	12.9	12.9	25.0
	Neutral	53	15.2	15.2	40.2
	Agree	74	21.3	21.3	61.8
	Strongly Agree	138	38.5	38.5	100.0
	Total	348	100.0	100.0	

Source: Field Survey

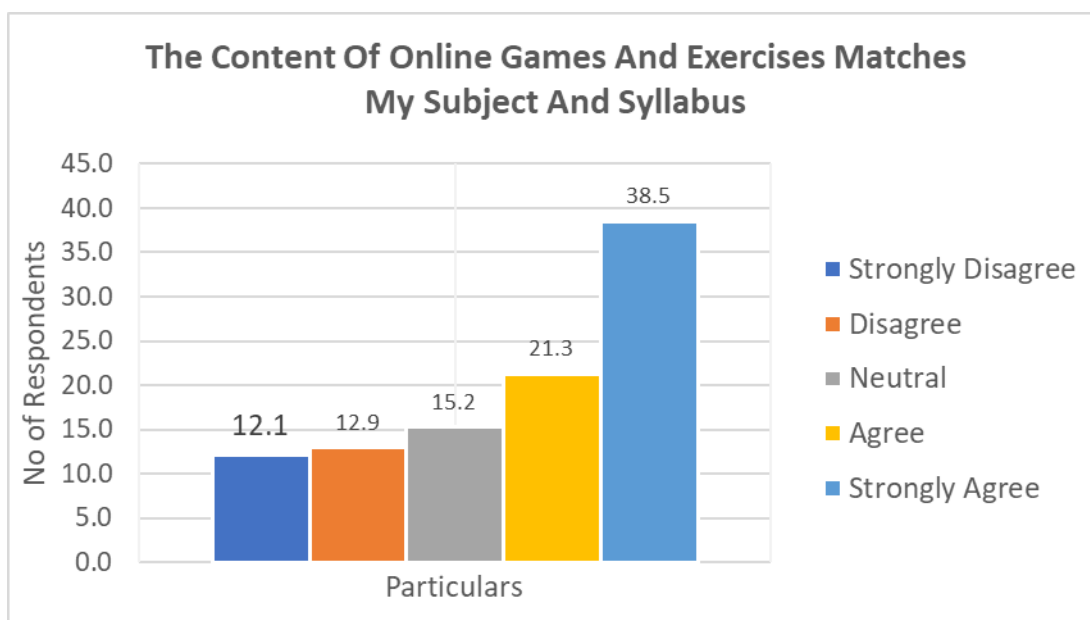


Chart No 4.3.10 - The Content Of Online Games And Exercises Matches My Subject And Syllabus.

Interpretation:

- When the student respondents were asked about the online content matching with the subject and syllabus, it was observed that a majority of 39% stated strongly agree, 2% stated agree, 15% had a neutral opinion for the same, 13% disagreed and 12% had strongly disagreed to it. Thus, from the above table it can be clearly inferred that even though a considerable number of students say yes, a good number of students can be seen in the other side where they feel the content doesn't match with the syllabus.

Table No 4.3.11 - Online Activities And Computer Games Help Me To Think Critically.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	31	8.9	8.9	8.9
	Disagree	46	13.2	13.2	22.1
	Neutral	87	25.0	25.0	47.1
	Agree	91	26.1	26.1	73.3
	Strongly Agree	93	26.7	26.7	100.0
	Total	348	100.0	100.0	

Source: Field Survey

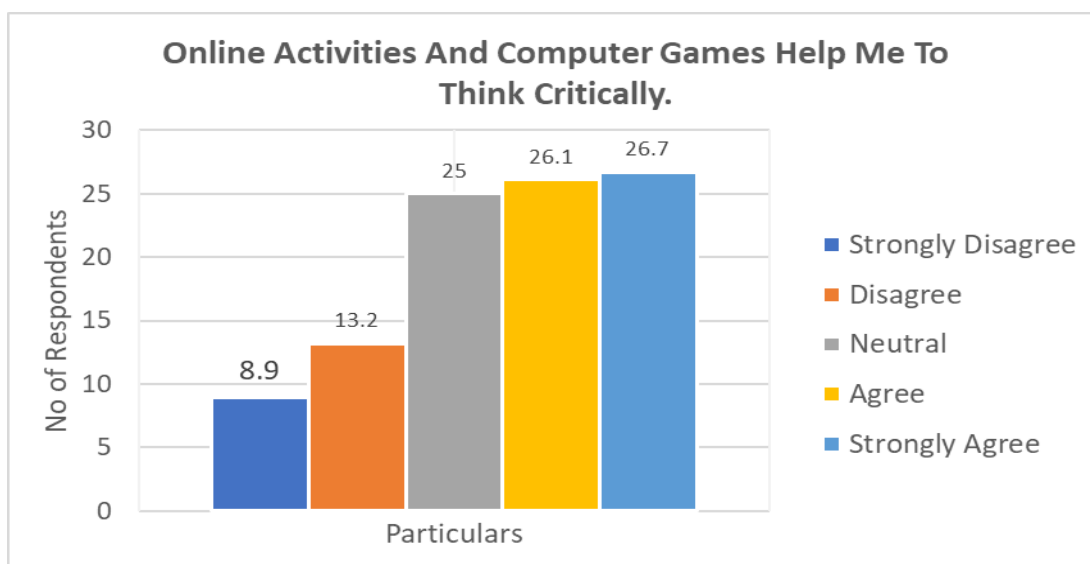


Chart No 4.3.11 - Online Activities And Computer Games Help Me To Think Critically.

Interpretation:

- When the student respondents were put forth with a question stating online activities and computer games triggering the critical thinking of the respondents. It was observed that a majority of only 27% strongly agreed, 26% agreed and 25% had a neutral opinion on the same. Whereas 13% stated disagree and 9% stated strongly disagreed to it. Thus, from the above table it can be observed that respondents feel positive towards online activities boosting their critical thinking ability.

Table No 4.3.12 - Online Puzzles And Problems Are Very Interesting

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.4	1.4	1.4
	Disagree	8	2.3	2.3	3.7
	Neutral	55	15.8	15.8	19.5
	Agree	163	46.8	46.8	66.4
	Strongly Agree	117	33.6	33.6	100.0
	Total	348	100.0	100.0	

Source: Field Survey

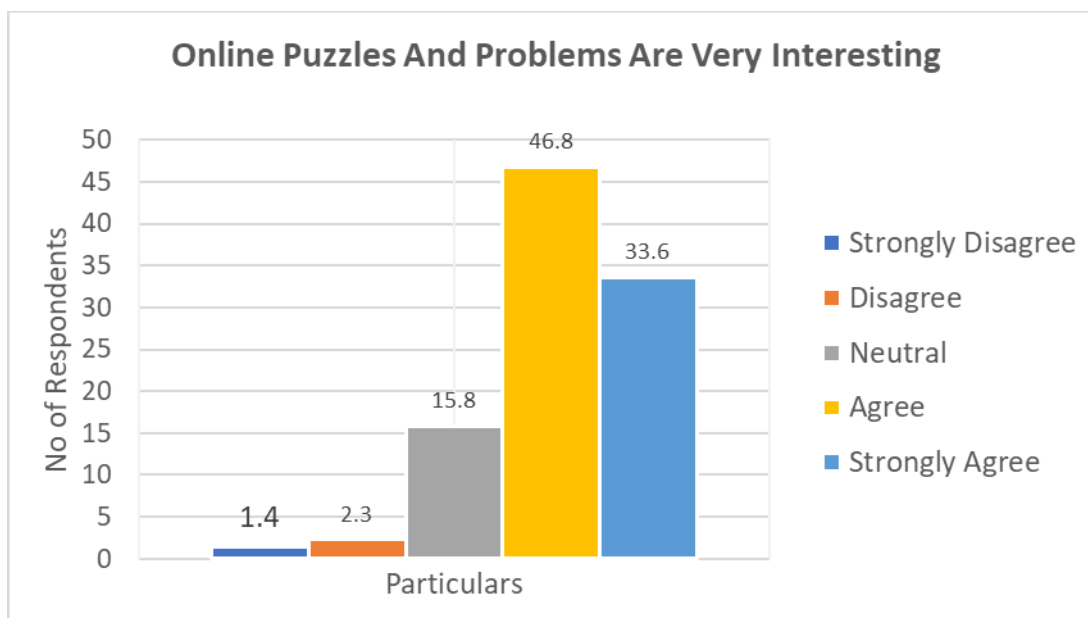


Chart No 4.3.12 - Online Puzzles And Problems Are Very Interesting

Interpretation:

- When the student respondents were asked about interestingness of only puzzles and problems. It was observed that a majority of 47% stated agree, 34% stated strongly agree, 16% stated neutral opinion. 2% stated disagree and 1% strongly disagree to it. Thus, it can be observed that online games and puzzles are effective in creating interestingness in students towards learning.

Table No 4.3.13 - It Is Worth To Try Using Online Interactive Games And Videos For Learning In Future.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	1.7	1.7	1.7
	Disagree	3	.9	.9	2.6
	Neutral	66	19.0	19.0	21.6
	Agree	154	44.3	44.3	65.8
	Strongly Agree	119	34.2	34.2	100.0
	Total	348	100.0	100.0	

Source: Field Survey

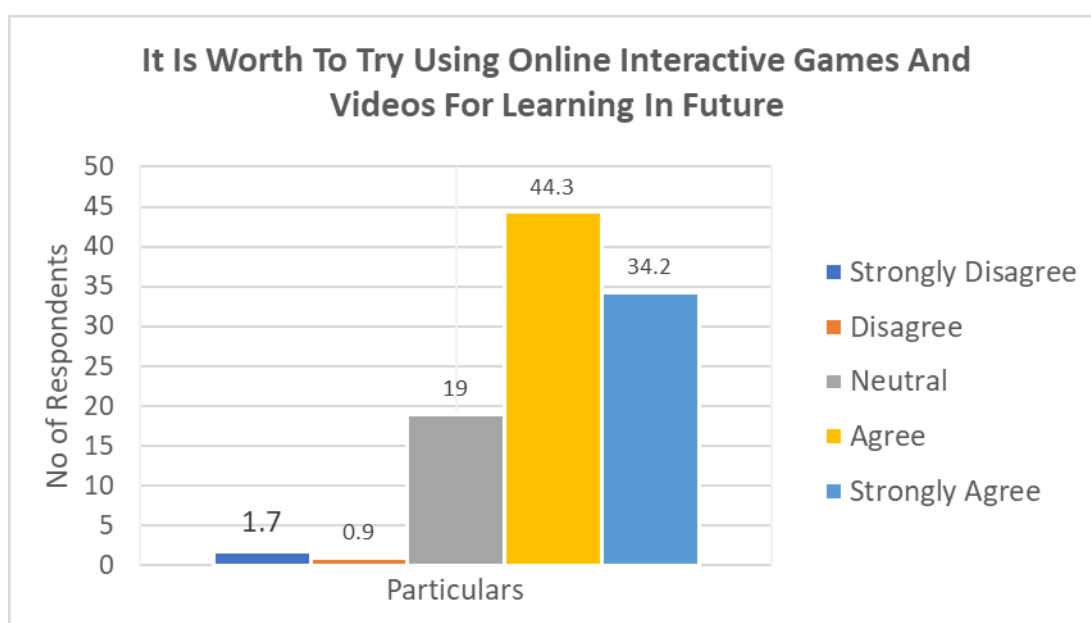


Chart No 4.3.13 - It Is Worth To Try Using Online Interactive Games And Videos For Learning In Future

Interpretation:

- The respondents were asked about using interactive games and videos for learning in future, it was observed that around 44% of the student respondents were agreeing, 34% were strongly agreeing to it. 19% had a neutral opinion for the same and only less than 1% disagree and 2% strongly disagree to it. Thus, it can be observed that student respondents are positive towards using online interactive materials towards effective learning can be observed.

Table No 4.3.14 - Assignments And Projects Can Be Completed Online And These Are Encouraging Activities.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	24	6.9	6.9	6.9
	Disagree	74	21.3	21.3	28.2
	Neutral	62	17.8	17.8	46
	Agree	102	29.3	29.3	75.3
	Strongly Agree	86	24.7	24.7	24.7
	Total	348	100.0	100.0	

Source: Field Survey

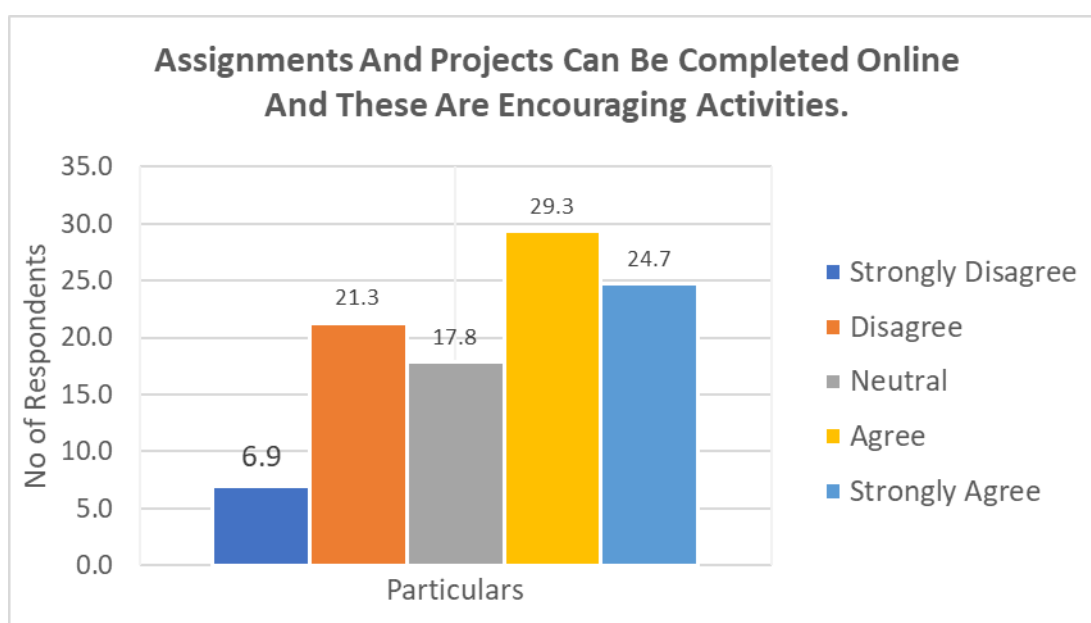


Chart No 4.3.14 - Assignments And Projects Can Be Completed Online And These Are Encouraging Activities.

Interpretation:

- When the student respondents were asked about the assignments and projects completion through online mode to be an encouraging activity. It was observed that a mixed opinion was observed with 29% stating agree, 25% stating strongly agree, 18% stating neutral opinion, 21% stated disagree and 7% stated strongly disagree to it. Thus, it can be observed that a not everyone is happy with assignments and projects completion through online mode.

Table No 4.3.15 - The Understanding Of The Subject Is Challenged By Online Simulations.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.4	1.4	1.4
	Disagree	40	11.5	11.5	12.9
	Neutral	75	21.6	21.6	34.5
	Agree	151	43.4	43.4	77.9
	Strongly Agree	77	22.1	22.1	100.0
	Total	348	100.0	100.0	

Source: Field Survey

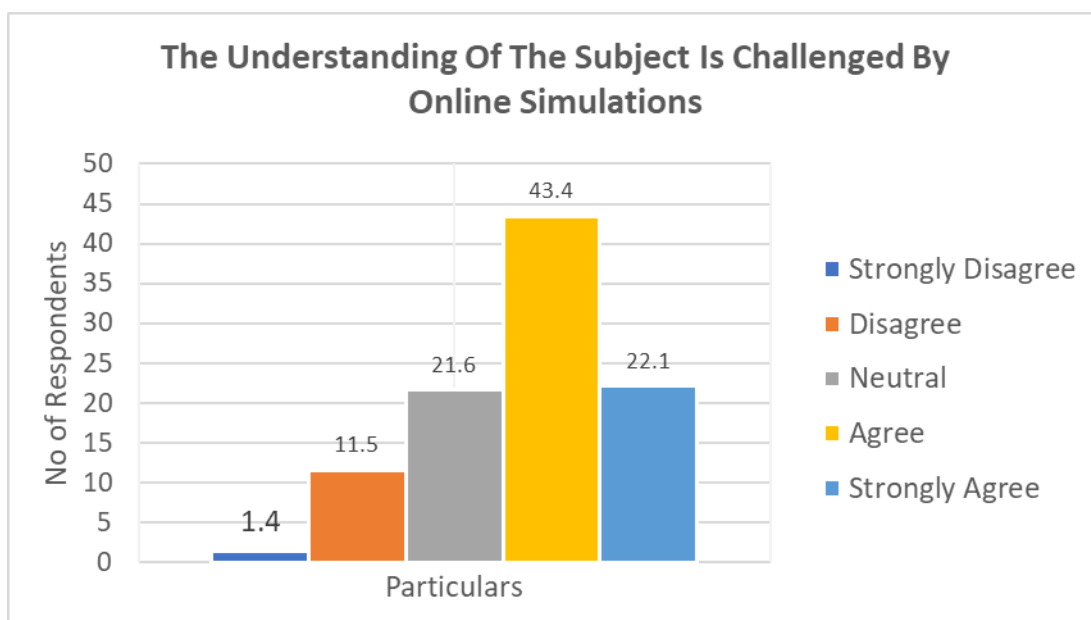


Chart No 4.3.15 - The Understanding Of The Subject Is Challenged By Online Simulations.

Interpretation:

- When the student respondents were put forth with a question stating understanding of the subject challenged by online simulations, a majority of 43% stated agree, 22% stated strongly agree, 22% stated neutral opinion, 12% stated disagree, 1% strongly disagreed to it. Thus, from the above table it can be observed that somewhere students feel online mode to be more interesting and understanding.

Table No 4.3.16 - The Multimedia Elements In The Online Games And Platforms Are Interesting

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	2.3	2.3	2.3
	Disagree	9	2.6	2.6	4.9
	Neutral	74	21.3	21.3	26.1
	Agree	171	49.1	49.1	75.3
	Strongly Agree	86	24.7	24.7	100.0
	Total	348	100.0	100.0	

Source: Field Survey

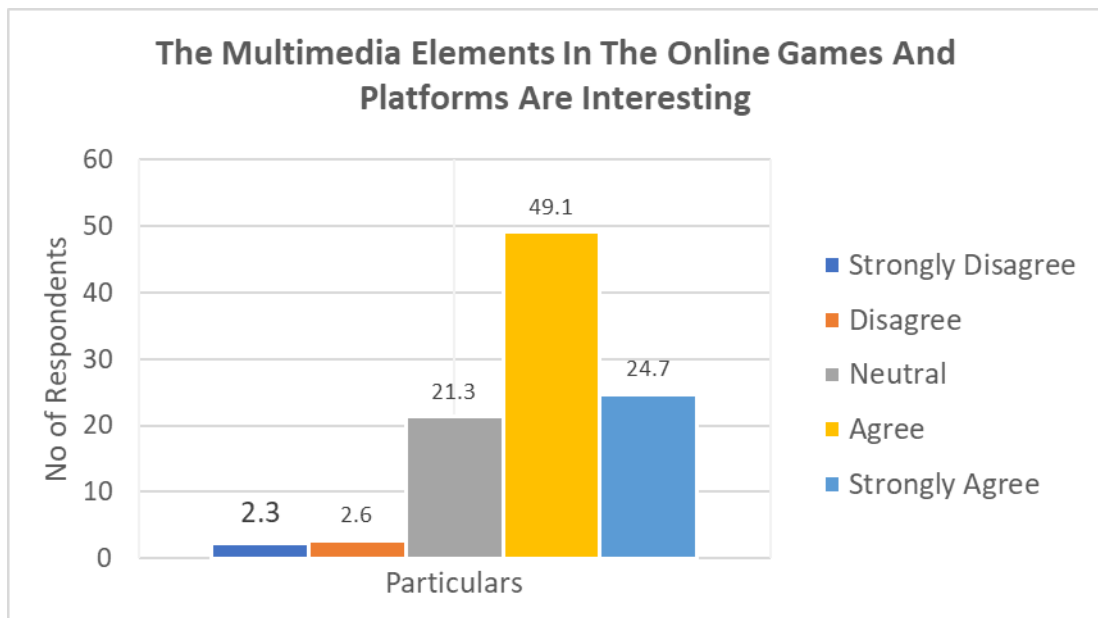


Chart No 4.3.16 - The Multimedia Elements In The Online Games And Platforms Are Interesting

Interpretation:

- When the student respondents were asked about the multimedia elements in online games and platforms are interesting, it was observed that a majority of 49% stated agree, 25% stated strongly agree, 21% stated neutral opinion. Only 3% stated disagree and 2% stated strongly disagreed to it. Thus, it can be observed that online games and platforms are interesting to use.

**Table No 4.3.17 - As Per My Need Studying And Understanding The Concepts
Online Requires A Shorter Time Span**

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.2	3.2	3.2
	Disagree	40	11.5	11.5	14.7
	Neutral	81	23.3	23.3	37.9
	Agree	156	44.8	44.8	82.8
	Strongly Agree	60	17.2	17.2	100.0
	Total	348	100.0	100.0	

Source: Field Survey

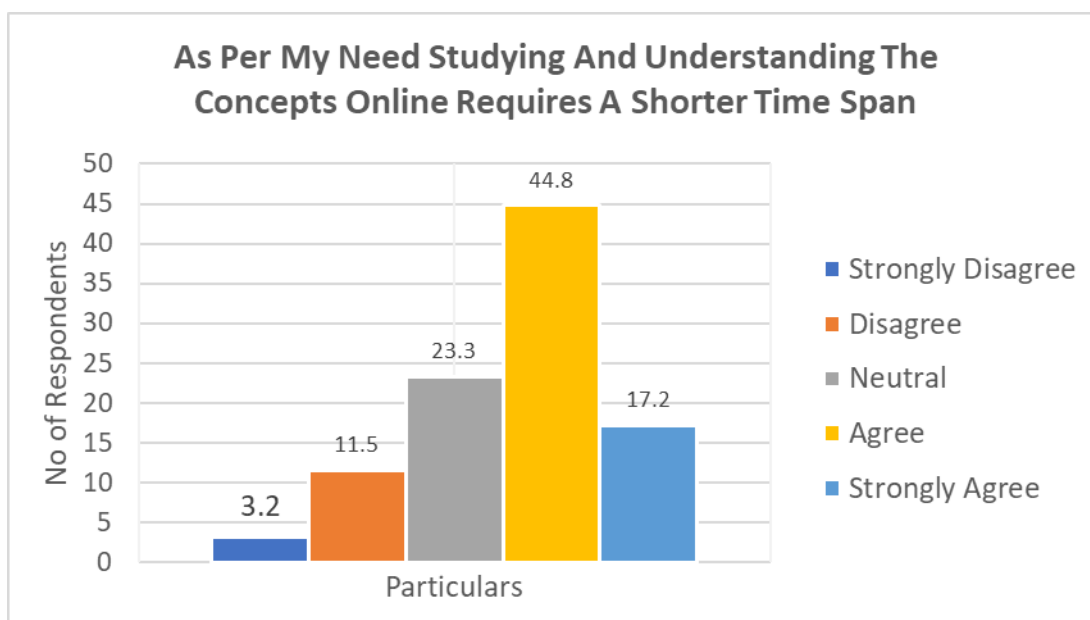


**Chart No 4.3.17 - As Per My Need Studying And Understanding The Concepts
Online Requires A Shorter Time Span**

Interpretation:

- When the student respondents were asked about the need of studying and understanding the concepts online requiring shorter time span, it was observed that a majority of 45% stated agree, 17% stated strongly agree, 23% stated neutral opinion, 12% stated disagree and 3% stated strongly disagree to it. Thus, it can be observed that students feel spending shorter time and understanding the concepts by the students.

Table No 4.3.18 - The Use Of Colour, Design, Layout And The Games/Videos Are Interesting

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	1.4	1.4	1.4
	Disagree	16	4.6	4.6	6.0
	Neutral	48	13.8	13.8	19.8
	Agree	177	50.9	50.9	70.7
	Strongly Agree	102	29.3	29.3	100.0
	Total	348	100.0	100.0	

Source: Field Survey

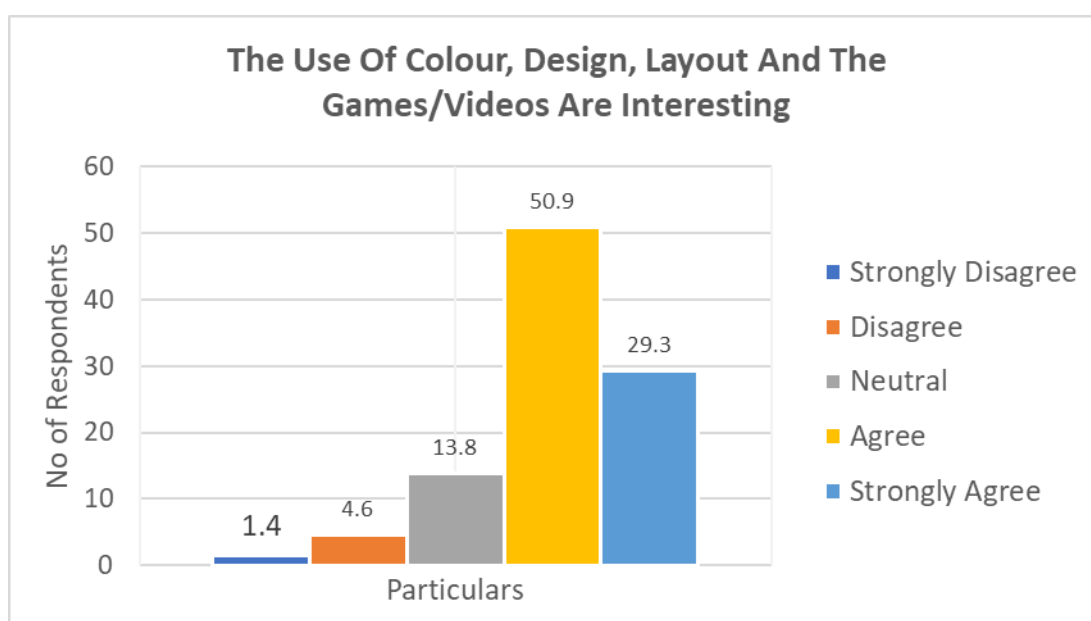


Chart No 4.3.18 - The Use Of Colour, Design, Layout And The Games/Videos Are Interesting

Interpretation:

- When the student respondents were about the interestingness of the online mode due to presence of colour, design, layout, and games. It was observed that a majority of 51% stated agree, 29% stated strongly agree, 14% stated neutral opinion, 5% stated disagree and 1% stated strongly disagreed. Thus, we can observe that interestingness towards online mode is due to the appearance of the content.

Table No 4.3.19 - The Scores And The Progress Of The Online Exercises/Games Provide Motivation.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.2	3.2	3.2
	Disagree	19	5.5	5.5	8.6
	Neutral	50	14.4	14.4	23.0
	Agree	152	43.7	43.7	66.7
	Strongly Agree	116	33.3	33.3	100.0
	Total	348	100.0	100.0	

Source: Field Survey

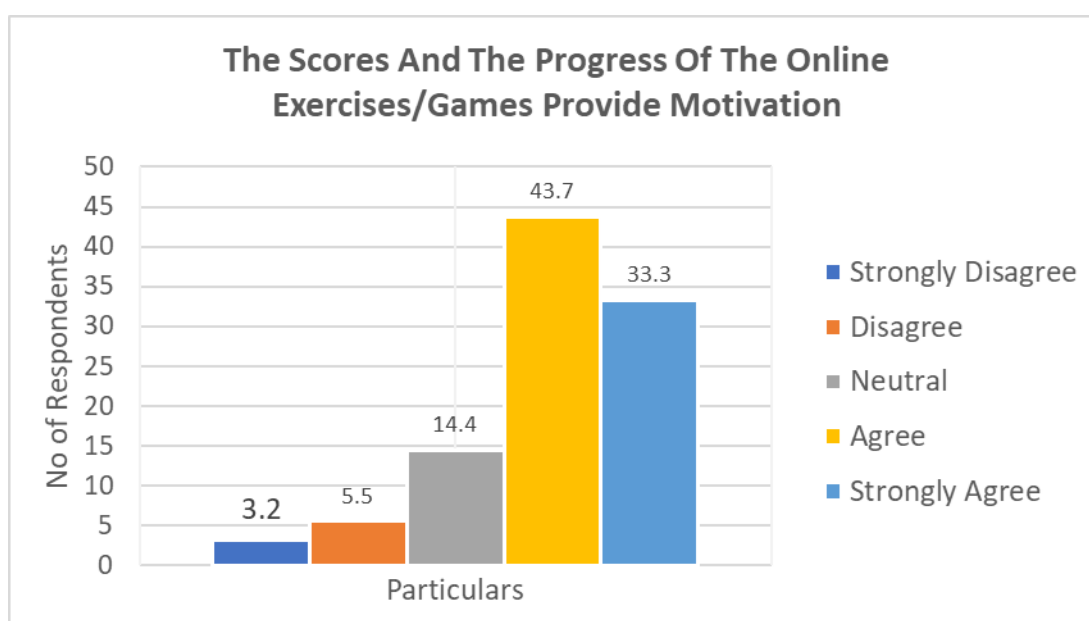


Chart No 4.3.19 - The Scores And The Progress Of The Online Exercises/Games Provide Motivation.

Interpretation:

- When the respondents were asked about the motivation of scores and the progress through online exercise it was observed that 44% stated agree, 33% stated strongly agree, 14% stated neutral, only around 6% stated disagree and 3% stated strongly disagree for the above question. Thus, we can observe from the above table that online exercise helps them in motivation towards scoring well.

Table No 4.3.20- Understanding The Basic And Advanced Concepts Clearly Is Easier Due Through Online Exercises.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	3.2	3.2	3.2
	Disagree	28	8.0	8.0	11.2
	Neutral	84	24.1	24.1	35.3
	Agree	133	38.2	38.2	73.6
	Strongly Agree	92	26.4	26.4	100.0
	Total	348	100.0	100.0	

Source: Field Survey

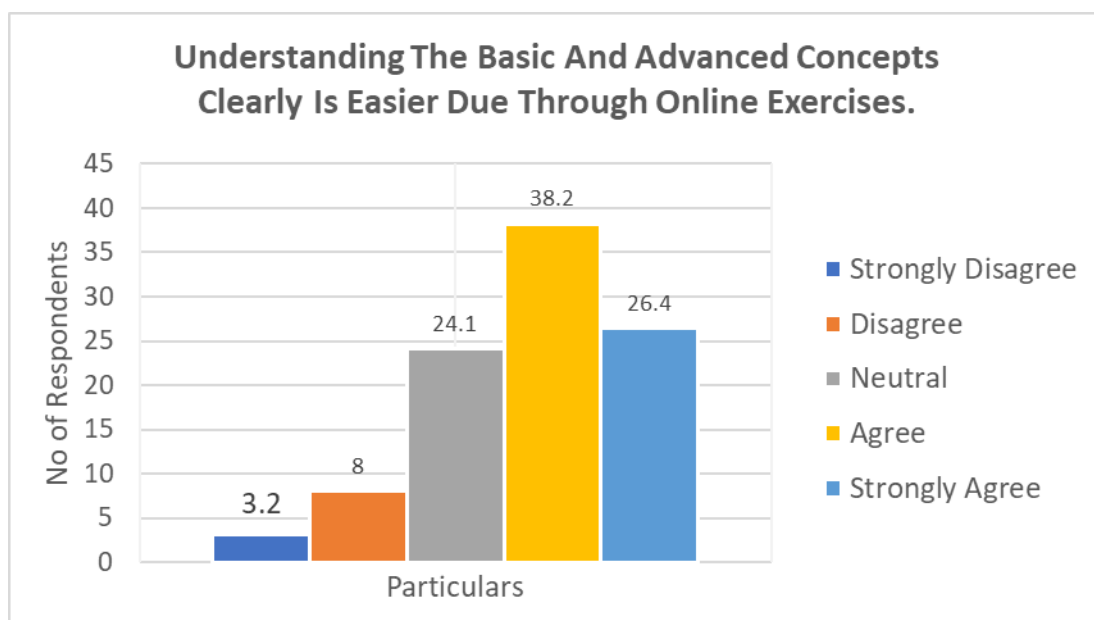


Chart No 4.3.20 - Understanding The Basic And Advanced Concepts Clearly Is Easier Due Through Online Exercises.

Interpretation:

- When the student respondents were asked about the understanding towards basic and advanced concepts clarity through online exercise, it was observed that around 38% stated agree, 26% stated strongly agree. Around 24% stated neutral opinion and 8% stated disagree and 3% stated strongly disagree to it. Thus, we can observe from the above table that a majority of student's respondents feel that online education makes it easier to understand the concepts.

Table No 4.3.21 - I Wish To Get More Learning Opportunities Through Online Approach.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	3.7	3.7	3.7
	Disagree	25	7.2	7.2	10.9
	Neutral	93	26.7	26.7	37.6
	Agree	129	37.1	37.1	74.7
	Strongly Agree	88	25.3	25.3	100.0
	Total	348	100.0	100.0	

Source: Field Survey

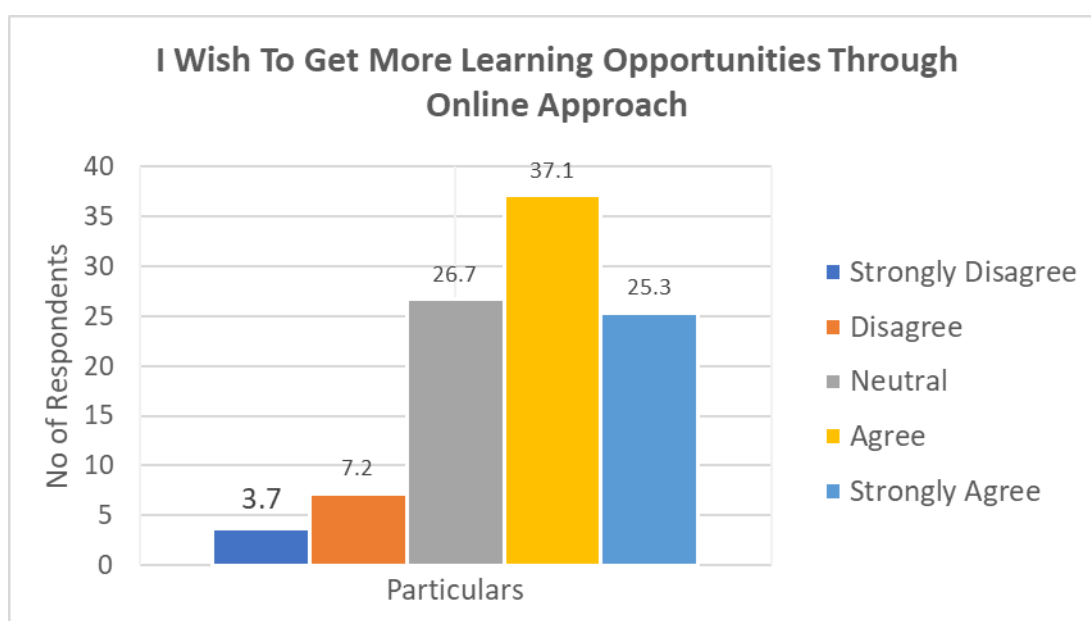


Chart No 4.3.21 - I Wish To Get More Learning Opportunities Through Online Approach.

Interpretation:

- When the student respondents were asked about the more learning opportunities through online approach, it was observed that a majority of 37% stated agree, 25% stated strongly agreed and 27% stated neutral opinion, 7% stated disagree and 4% stated strongly disagreed to it. Thus, we can observe that student respondents find learning opportunity through online approach.

Table No 4.3.22 - Learning Through Online Exercises/ Games Is Preferred Over Traditional Methods Of Learning In Class.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	26	7.5	7.5	7.5
	Disagree	56	16.1	16.1	23.6
	Neutral	75	21.6	21.6	45.1
	Agree	111	31.9	31.9	77.0
	Strongly Agree	80	23.0	23.0	100.0
	Total	348	100.0	100.0	

Source: Field Survey

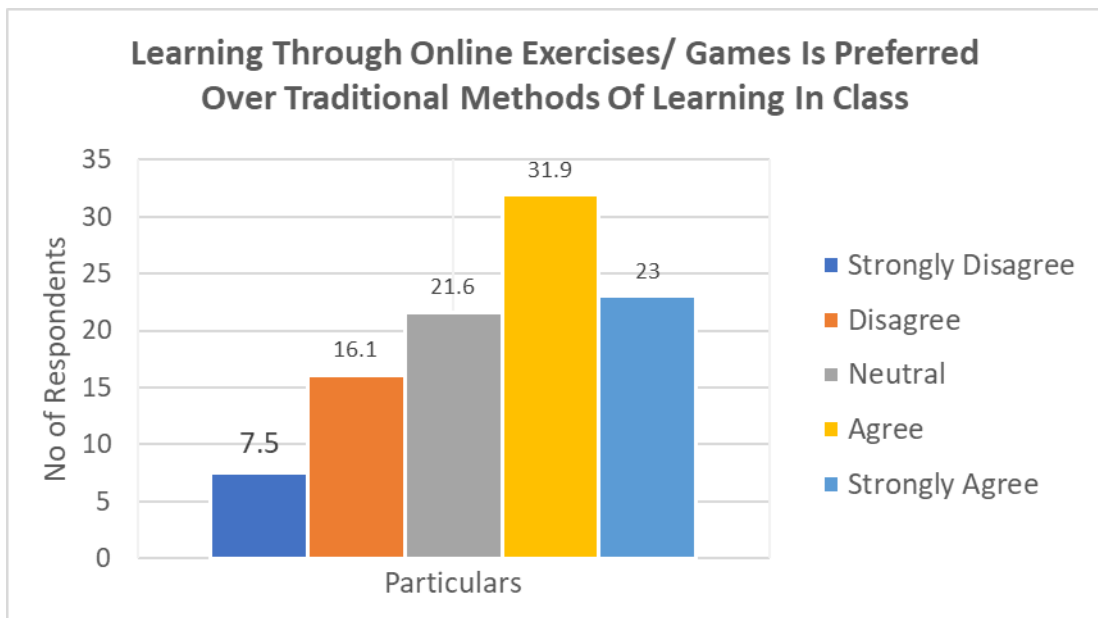


Chart No 4.3.22 - Learning Through Online Exercises/ Games Is Preferred Over Traditional Methods Of Learning In Class.

Interpretation:

- When the student respondents were asked about learning through online exercise/ games over traditional methods of learning in class. A mixed opinion was observed where 32% stated agree, 23% stated strongly agree, 22% had a neutral opinion, 16% stated disagree and 8% stated strongly disagreed to it. Thus, we can observe from the above table that some want online mode for learning, and some prefer traditional method for learning.

Table No 4.3.23 - I Prefer To Learn All Subjects Using Online Mode.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	24	6.9	6.9	6.9
	Disagree	74	21.3	21.3	28.2
	Neutral	86	24.7	24.7	52.9
	Agree	101	29.0	29.0	81.9
	Strongly Agree	63	18.1	18.1	100.0
	Total	348	100.0	100.0	

Source: Field Survey

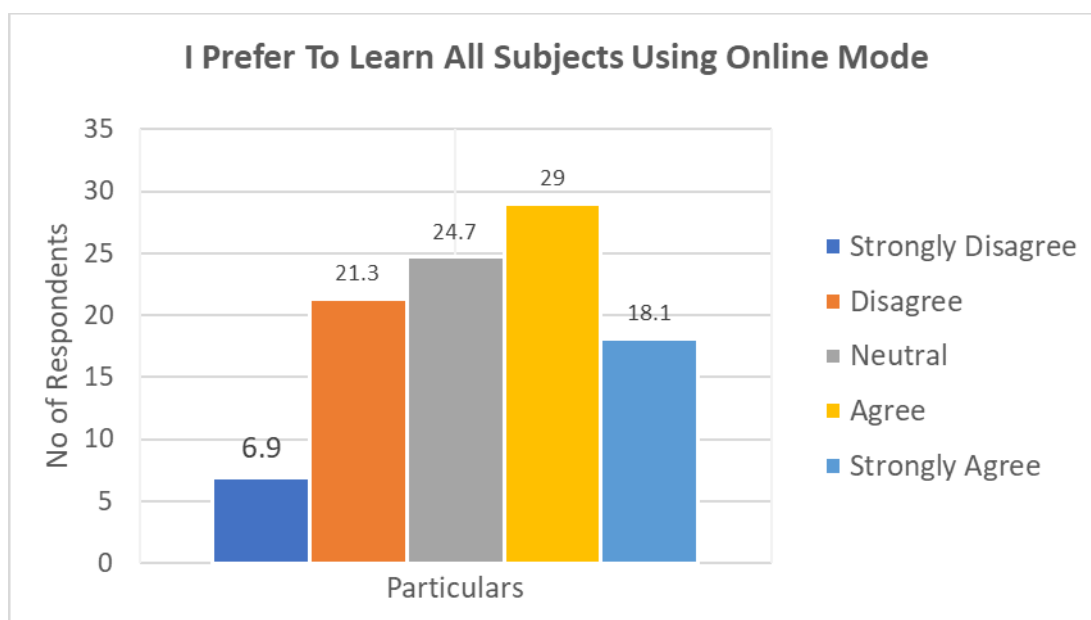


Chart No 4.3.23 - I Prefer To Learn All Subjects Using Online Mode.

Interpretation:

- When the respondents were asked about preferring to learn all the subjects using online mode. It was observed that there was a mixed opinion obtained wherein, 29% agreed, 18% strongly agreed to it. 25% had neutral opinion, 21% disagreed and 7% strongly disagreed to it. Thus, from the above table it can be inferred that students prefer to learn all subjects through online mode.

Table No 4.3.24 - I Wish Online Mode Will Be Available Forever.

Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	24	6.9	6.9	6.9
	Disagree	39	11.2	11.2	18.1
	Neutral	98	28.2	28.2	46.3
	Agree	107	30.7	30.7	77.0
	Strongly Agree	80	23.0	23.0	100.0
	Total	348	100.0	100.0	

Source: Field Survey

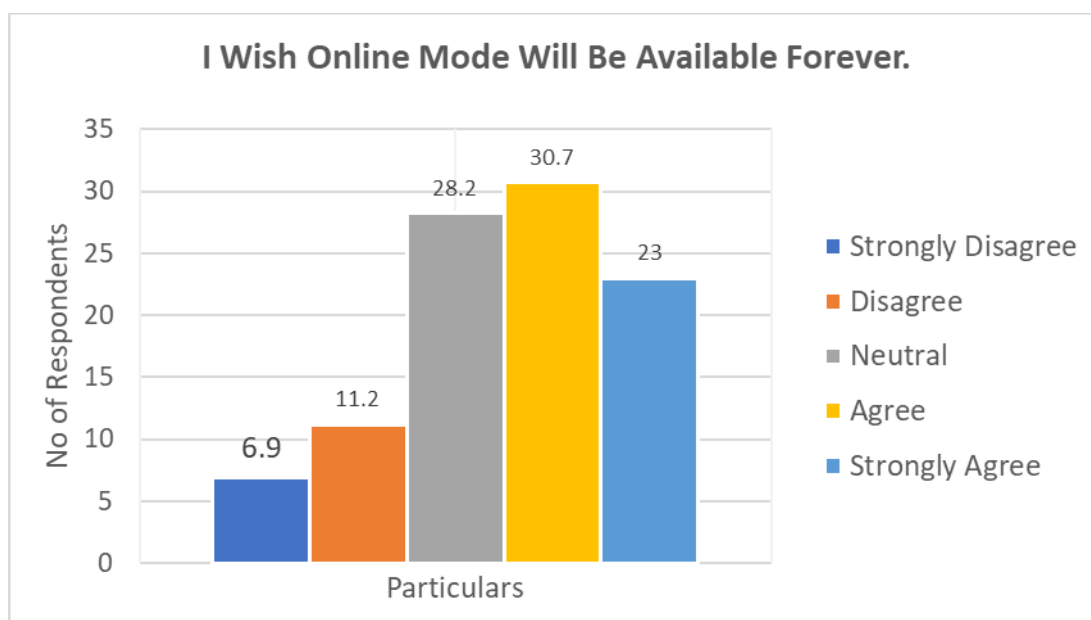


Chart No 4.3.24 - I Wish Online Mode Will Be Available Forever.

Interpretation:

- When the student respondents were asked about the online mode to be forever. It can be observed that 31% agreed, 23% strongly agreed. 28% had a neutral opinion for the same and 11% disagreed to it, 7% strongly disagreed to it. Thus, we can observe from the above table that a majority of students want online mode forever.

4.4 - Section III: Testing of Hypothesis

Hypothesis No – 1

Performance expectancy refers to an individual's perception of how well they believe they can perform a specific task using a particular technology or tool. In the context of teachers and teaching, it relates to their belief in their ability to effectively use teaching strategies, methods, and technologies to enhance student-learning outcomes. In this hypothesis this performance expectancy is cross tabulated with the teaching experience as it becomes the major reason for a teacher to incept various requirements in due course.

To analyses this hypothesis Kruskal Wallis Test is applied wherein it supports non-parametric statistical test used to determine if there are any significant differences between the mean of three or more independent groups. This test is an extension of the Mann-Whitney U test (Wilcoxon rank-sum test) for comparing two independent groups. The Kruskal-Wallis test is appropriate when the data do not meet the assumptions of normality or equal variance required for parametric tests like the one-way ANOVA.

The test works by ranking the data from all groups together, then calculating the sum of ranks for each group. It then compares the sums of ranks between the groups to assess if there are significant differences in the distributions. To prove the hypothesis with this test first the data is combined from all groups and ranking is given to them in ascending order. Later which ranks are assigned based on the data values, ignoring ties. Tied data points receive the average of the ranks they would have received if there were no ties. Later which Kruskal Wallis formula is applied to the data.

H₀ - There is no strong relationship between teaching experience and performance expectancy.

H₁ - There is strong relationship between teaching experience and performance expectancy.

Table No 4.4.1 - Ranks

Ranks			
Particulars	Teaching Experience	N	Mean Rank
Do You Think Technology Is Very Useful When You Do Your Work?	1	50	95.03
	2	96	103.05
	3	37	77.47
	4	1	112.00
	5	4	35.88
	Total	188	
Do You Find Technology To Be Supportive While Working?	1	50	109.12
	2	96	94.85
	3	37	83.34
	4	1	53.50
	5	4	16.75
	Total	188	
As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?	1	50	97.66
	2	96	91.26
	3	37	103.27
	4	1	161.00
	5	4	35.00
	Total	188	

Table No 4.4.2 - Chi-Square Test

	Do You Think Technology Is Very Useful When You Do Your Work?	Do You Find Technology To Be Supportive While Working?	As A Faculty, Do You Think You Need Higher Competence As Compared To What You Have Now?
Chi-Square	23.353	18.666	8.262
df	4	4	4
Asymp. Sig.	.000	.001	.082
a. Kruskal Wallis Test			
b. Grouping Variable: Teaching Experience			

After calculating through the statistical formula of the above stated test, we determine the critical Value. This critical value is obtained from the chi-square distribution table with degrees of freedom equal to $(k - 1)$, where k is the number of groups. Then we compare the test statistics and the critical value accordingly.

It is observed that for the first question on performance expectancy as. Do You Think Technology Is Very Useful When You Do Your Work, it is observed that the obtained value is smaller than the alpha value i.e. 0.05, we reject the null hypothesis. Stating that there is a significant difference in teaching experience and performance expectancy.

Likewise, for second question on performance expectancy to find technology to be supportive while working, it is observed that the obtained value is 0.001 which is far less than 0.05 the alpha value, so we reject the null hypothesis.

For the third question as faculty, the need and higher competence as compared to what they have at present. It is observed that the critical value obtained is 0.082, which is greater than the p-value 0.05, so it is accepted.

Thus, from the overall analysis of testing the three questions individually, two got rejected and only one got accepted. So overall, we reject the Null hypothesis. So alternative hypothesis is accepted.

Hypothesis No - 2

In the context of teaching and learning, a facilitating condition refers to any element or factor that enhances the effectiveness of the teaching and learning process. These conditions create a supportive and conducive environment for both teachers and students, allowing for better engagement, understanding, and retention of information. To understand the same this hypothesis was framed. Since gender wise many perceptions changes in the way one sees things. This hypothesis is particularly formulated with the understanding towards gender and facilitating conditions.

Ho- There is no significant difference between gender based on facilitating condition.

H1- There is significant difference between gender based on facilitating condition.

To prove the above hypothesis, firstly the opinion given for various facilitating conditions like technology influencing how one should work, enough time required to use technology, necessary resources available for using technology, and compatibility of the technology to work with depicting 1 strongly disagree, 2 is disagree, 3 is neutral and 4 is agree. The opinion given by the respondents their median values of opinion were identified. Based on the median value obtained Mann-Witneys test was applied to identify the relationship between the gender and the facilitating condition.

Table No 4.4.3 - Median Values for Facilitating Conditions

Median Values for Facilitating Conditions					
Particulars		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	1.1	1.1	1.1
	2.00	28	14.9	14.9	16.0
	3.00	78	41.5	41.5	57.4
	4.00	80	42.6	42.6	100.0
	Total	188	100.0	100.0	

Table No 4.4.4 - Ranks

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Median values	Male	80	124.80	9984.00
	Female	108	72.06	7782.00
	Total	188		

Table No 4.4.5 - Test Statistics^a

	Median values
Mann-Whitney U	1896.000
Wilcoxon W	7782.000
Z	-7.135
Asymp. Sig. (2-tailed)	.000
a. Grouping Variable: Gender	

The Mann-Whitney U test, also known as the Wilcoxon rank-sum test, is a non-parametric statistical test used to compare the distributions of two independent groups. The Mann-Whitney U test assesses whether there are differences in the medians of the two groups. Interpreting the results of the Mann-Whitney U test involves looking at the test statistic (U) and the associated p-value. It can be observed from the above test value, which is 1896, and the significance value 0.000, which is less than 0.05. So based on the test result conclude that there is a statistically significant difference between the distributions of the two groups.

Null Rejected and Alternate Accepted

Hypothesis No - 3

The degree of adaptation in students in teaching and learning can also vary widely depending on individual factors, such as their prior age, gender, experiences, motivation, learning style, and the learning environment they are in. Adaptation in students refers to their ability to adjust, engage, and thrive in different educational settings and situations. In this particular hypothesis degree of adaptation is analysed based on the gender of the respondent students to identify whether there is any relationship between the gender and the degree of adaptation.

Ho - There is no significant difference between gender and degree of adaptation for Digitalization in Teaching Learning

H1 - There is significant difference relationship between gender and degree of adaptation for Digitalization in Teaching Learning.

So, to prove the above stated hypothesis gender of the students were cross tabulated with five different questions to understand the adaptation of the students level was tabulated. The questions like whether the students understand the basics and advanced concepts easily through online questions, the second question put forth was about getting more learning opportunities through online approach, the third question that was put forth was about learning through online exercise over traditional methods of learning in class, the fourth question put forth was asked about the preference towards online mode, and the final question that was put forth was on wishing for online mode be there for ever. The opinion were cross-tabulated based on the gender of the student respondents.

After the cross table was formed the opinion bifurcated were put under chi square test with the help of SPSS software. The chi-square test is a statistical test used to determine if there is a significant association or relationship between two categorical variables. It compares the observed frequencies of the data with the expected frequencies under the assumption of independence between the variables. The test helps researchers understand whether the observed differences are due to chance or if they represent a true relationship between gender and degree of adaptation.

**Table No 4.4.6 - Gender * Understanding The Basic And Advanced Concepts
Clearly Is Easier Due Through Online Exercises.**

Particulars			Understanding The Basic And Advanced Concepts Clearly Is Easier Due Through Online Exercises.					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	3	13	44	77	54	191
		%	1.6%	6.8%	23.0%	40.3%	28.3%	100.0%
	Female	Count	8	15	40	56	38	157
		%	5.1%	9.6%	25.5%	35.7%	24.2%	100.0%
Total		Count	11	28	84	133	92	348
		%	3.2%	8.0%	24.1%	38.2%	26.4%	100.0%

Table No 4.4.7 - Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.434 ^a	4	.246
Likelihood Ratio	5.491	4	.241
Linear-by-Linear Association	4.141	1	.042
N of Valid Cases	348		
a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.96.			

Form the above table 4.4.4 representing the gender and understanding of basic and advanced concepts clearly through online mode, it was observed that the p-value (0.246) is greater than the significance level, (α), typically 0.05 the result is considered statistically insignificant. In this case, there is enough evidence to accept the null hypothesis, and the data do not provide strong support for an association between these variables.

Thus, we can come to conclusion that there is significance difference between gender and degree of adaptation for Digitalization in Teaching Learning

Null - Accepted

Table No 4.4.8 - Gender * I Wish To Get More Learning Opportunities Through Online Approach.

Particulars			I Wish To Get More Learning Opportunities Through Online Approach.					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	1	16	51	70	53	191
		%	.5%	8.4%	26.7%	36.6%	27.7%	100.0%
	Female	Count	12	9	42	59	35	157
		%	7.6%	5.7%	26.8%	37.6%	22.3%	100.0%
Total		Count	13	25	93	129	88	348
		%	3.7%	7.2%	26.7%	37.1%	25.3%	100.0%

Table No 4.4.9 - Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.566 ^a	4	.009
Likelihood Ratio	15.150	4	.004
Linear-by-Linear Association	3.736	1	.053
N of Valid Cases	348		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.29.			

For the second table representing the gender and understanding the need towards more learning opportunities through online approach, it was observed that the p-value (0.009) is smaller than the significance level, (α), i.e. 0.05 the result is not considered statistically significant. In this case, there is no evidence to accept the null hypothesis, and the data provides association between the variables.

Thus, we can come to conclusion that there is a significance difference between gender and degree of adaptation for Digitalization in Teaching Learning

Null - Rejected

Table No 4.4.10 - Gender * Learning Through Online Exercises/ Games Is Preferred Over Traditional Methods Of Learning In Class.

Particulars			Learning Through Online Exercises/ Games Is Preferred Over Traditional Methods Of Learning In Class.					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	8	29	46	55	53	191
		%	4.2%	15.2%	24.1%	28.8%	27.7%	100.0%
	Female	Count	18	27	29	56	27	157
		%	11.5%	17.2%	18.5%	35.7%	17.2%	100.0%
Total		Count	26	56	75	111	80	348
		%	7.5%	16.1%	21.6%	31.9%	23.0%	100.0%

Table No 4.4.11 - Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.032 ^a	4	.011
Likelihood Ratio	13.193	4	.010
Linear-by-Linear Association	5.510	1	.019
N of Valid Cases	348		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.03.			

For the third table representing the gender and understanding the learning through online exercise is preferred over traditional method of learning in class, it was observed that the p-value (0.011) is smaller than the significance level, (α), typically 0.05 the result is considered statistically significant. It indicates that there is evidence to reject the null hypothesis in favor of the alternative hypothesis.

Thus, we can come to a conclusion that there is no association between online exercise with that of preference over traditional methods in class with respect to gender is rejected. Thus, we can state that there is a significant difference between the gender and learning through online exercise over traditional classroom learning.

Null - Rejected

Table No 4.4.12 - Gender * I Prefer To Learn All Subjects Using Online Mode.

Particulars			I Prefer To Learn All Subjects Using Online Mode.					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	10	34	46	63	38	191
		%	5.2%	17.8%	24.1%	33.0%	19.9%	100.0%
	Female	Count	14	40	40	38	25	157
		%	8.9%	25.5%	25.5%	24.2%	15.9%	100.0%
Total		Count	24	74	86	101	63	348
		%	6.9%	21.3%	24.7%	29.0%	18.1%	100.0%

Table No 4.4.13 - Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.189 ^a	4	.126
Likelihood Ratio	7.203	4	.126
Linear-by-Linear Association	6.140	1	.013
N of Valid Cases	348		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.15.			

For the fourth table representing the gender and preference towards learning all subjects through online mode, it was observed that the p-value (0.126) is greater than the significance level, (α), typically 0.05 the result is considered statistically insignificant. It indicates that there is no evidence to reject the null hypothesis.

Thus, we can come to a conclusion that learning all subjects through online mode is accepted when compared with gender. We can state that there is no significant difference between the gender and learning all subjects through online mode.

Null - Accepted

Table No 4.4.14 - Gender * I Wish Online Mode Will Be Available Forever.

Particulars			I Wish Online Mode Will Be Available Forever.					Total
			Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Gender	Male	Count	11	27	42	56	55	191
		%	5.8%	14.1%	22.0%	29.3%	28.8%	100.0%
	Female	Count	13	12	56	51	25	157
		%	8.3%	7.6%	35.7%	32.5%	15.9%	100.0%
Total		Count	24	39	98	107	80	348
		%	6.9%	11.2%	28.2%	30.7%	23.0%	100.0%

Table No 4.4.15 - Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.253 ^a	4	.003
Likelihood Ratio	16.531	4	.002
Linear-by-Linear Association	2.847	1	.092
N of Valid Cases	348		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.15.			

For the second table representing the gender and wishing online mode to be there for ever, it was observed that the p-value (0.003) is smaller than the significance level, (α), typically 0.05 the result is considered statistically significant. In this case, there is enough evidence to reject the null hypothesis, and the data provide strong support for an association between the variables.

Thus, we can come to conclusion that there is a significant difference between gender and wishing online mode to be there forever.

Null - Rejected

Table No 4.4.16 - Overall Result

Sr. No.	Degree of adaptation for Digitalization	Result	Overall Result
1	understanding of basic and advanced concepts clearly through online mode	Accepted	Rejected
2	understanding the need towards more learning opportunities through online approach	Rejected	
3	understanding the learning through online exercise is preferred over traditional method of learning in class	Rejected	
4	preference towards learning all subjects through online mode	Accepted	
5	wishing online mode to be there for ever	Rejected	

Since out of five questions put forth to student respondents two got accepted and three got rejected. Therefore, the null hypothesis is rejected, and alternative hypothesis is accepted.

CHAPTER V –

FINDINGS, CONCLUSION, SUGGESTION AND SCOPE OF FURTHER STUDY

5.1 Findings

The study aims to analyze the effectiveness of digitalization in teaching-learning in postgraduate management education. The study considers three key perspectives: students, faculties, and the Dean/Head of the Department (HoD).

- **Faculty Perspective:** Since faculties play a significant role in introducing students to the digitalization process, the Technology Acceptance Model (TAM) is being used to understand the effectiveness of digitalization from the faculties' point of view. TAM is a widely used model for understanding users' acceptance and adoption of technology. Based on which faculties Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Behavioral Intention to Use (BI), Actual System Use (Usage). Based on which effectiveness is observed in teaching learning through digitalization is identified.
- **Student Perspective:** The study recognizes that students are crucial recipients of the digitalization efforts in teaching and learning. Their opinions and experiences are essential in evaluating the overall effectiveness of digital techniques in education. Students studying in Pune Management Instituted were asked to opine on various questions related to digitalization to understand their perspective.

By considering these three perspectives, the study aims to gain a comprehensive understanding of the effectiveness of digitalization in postgraduate management education. It covers the key stakeholders involved in the process and aims to identify areas of improvement and success.

The first hypothesis framed was based on the relationship between and teaching experience and performance expectancy. Performance expectancy refers to an individual's perception of how well they believe they can perform a specific task using a particular technology or tool. In the context of teachers and teaching, it relates to their belief in their ability to effectively use teaching strategies, methods, and technologies to enhance student learning outcomes. With the help of the opinion obtained from faculties for performance expectancy Kruskal Walis test was performed based on which the test resulted as there is a strong relationship between the performance expectancy

and teaching experience. The number of years spent in one profession brings with it a kind of assumptions and maturity to perform any sort of task.

Based on the second hypothesis, which was about the contribution of gender differences in understanding the facilitating conditions. Facilitating conditions like technology influencing how one should work, enough time required to use technology, necessary resources available for using technology, and compatibility of the technology to work with were considered. To understand the same Mann-Witneys test was applied to identify the relationship between the gender and the facilitating condition. So based on the test result conclude that there is a statistically significant difference between gender and facilitating conditions. Perception based on the gender differences has a significant contribution towards facilitating conditions.

Based on the testing of hypothesis three, which was performed on the students data as to understand the gender and degree of adaptation for Digitalization in Teaching Learning. It was observed through five different questions putforth towards students to understand the adaptation towards digitalization. The five questions putforth were as towards understanding basic and advanced courses, more opportunities towards learning, better than traditional method, preference to learn all subjects through online, wishing to have online mode forever. Based on the Chi square test it was observed that understanding basic and advanced concepts through online mode, getting more opportunities of learning through online mode, wishing online mode to be forever had a significant difference to traditional method. Whereas learning through online exercise is preferred over traditional and preference towards learning all subject's online mode got accepted. Stating the difference that is created due to traditional mode.

5.2 Suggestion

We can observe from the above table that teaching experience has a strong influence on performance expectancy. As the age grows there is a significant shift in need of acceptance towards technology can be observed. It can also be observed that gender has a strong relationship with facilitating condition. Where needs and expectations of faculty can be observed based on the gender differences. Based on the tests results of the students it can be clearly observed that online mode is useful but traditional teaching method is also important. There are many things even after the success infusion of knowledge through online mode certain knowledge needs physical presence.

1. Based on the findings obtained from the Deans and head of the institution, it might be suggested to provide continuous faculty development programs to equip educators with the skills and knowledge to effectively integrate digital tools in their teaching methods.
2. To further improve the quality of teaching and learning, there could be a recommendation to enhance student support services, ensuring that learners receive the necessary assistance and guidance in the digital learning environment.
3. Deans/HODs might propose fostering collaborative partnerships with other institutions and experts to leverage best practices in digital education and share resources.
4. To address concerns regarding access, there could be suggestions to ensure equitable access to technology for all students and educators, especially those from disadvantaged backgrounds.
5. Leveraging data collected through digital platforms, to use data analytics to gain insights into student learning patterns and identify areas for improvement in the teaching-learning process.
6. Encouraging the adoption of virtual mobility opportunities through online meetings and collaborations with experts can lead to a broader and diverse learning experience.
7. Implementing a systematic evaluation and assessment process can help gauge the effectiveness of digitalization initiatives and guide future improvements.

Overall, such a study can provide valuable insights into the impact of digitalization in education and inform decision-making processes to improve the quality of teaching and learning in the management education domain.

5.3 Conclusion

After conducting the study on the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis, the following conclusions can be drawn based on the research objectives and hypotheses:

- **Degree of Adaptation for Digitalization in Teaching-Learning:** The study revealed that there is a considerable degree of adaptation for digitalization in the teaching-learning process. Educators and students have shown a positive response towards the integration of digital tools and technologies in the classroom. This finding

suggests that digitalization has become an integral part of the education system and is widely accepted in the post-graduate management education sector in Pune Metropolis.

- **Effectiveness of the Teaching-Learning Process in Faculty's Perspective:** To understand the same for faculty members who take the core role in implementing the digitalization process effectively, TAM's model was applied based on which faculties performance expectancy, effort expectancy, social influence, facilitating condition, experience and willingness were considered. Wherein it was observed that age, gender and teaching experience of the faculty members had a significant role in understanding the various parameters of TAM's model for acceptance of digitalization in teaching learning process. Things can be brought under control based on continuous support, training, and investment are crucial for the sustainable and successful integration of digitalization in education.
- **Effectiveness of the Teaching-Learning Process in Students Perspective:** The investigation into the effectiveness of the teaching-learning process with digitalization showed promising results. Students have reported higher levels of engagement, interactivity, and better access to learning resources through digital means. The use of multimedia, online collaboration platforms, and interactive content has enhanced the learning experience, leading to improved academic performance and overall satisfaction among learners. But it was also observed that for certain subjects and content due importance was given by students for traditional classroom teaching as well.

5.4 Scope of further study

The study on the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis provides valuable insights, but there are several areas that can be explored further to deepen our understanding and address any limitations. The scope of further study in this domain could include:

- **Longitudinal Study:** Conducting a longitudinal study over an extended period can offer a more comprehensive view of the impact of digitalization on teaching-learning practices. Tracking the progress of students and educators over time would reveal

trends and changes in attitudes and performance related to digital tools and technologies.

- **Comparative Analysis:** Expanding the research to include multiple institutions or comparing different educational levels (e.g., undergraduate, doctoral) can provide insights into how digitalization's effectiveness varies across different contexts and academic programs.
 - **Qualitative Research:** Incorporating qualitative research methods, such as in-depth interviews and focus groups, can provide a deeper understanding of educators' and students' experiences with digitalization. It can uncover specific challenges, success stories, and innovative practices that quantitative data might not capture.
 - **Impact on Learning Outcomes:** Further research can focus on measuring the direct impact of digitalization on learning outcomes, such as grades, retention rates, and skill development. This would help establish a stronger correlation between the use of digital tools and academic performance.
 - **Pedagogical Approaches:** Investigating specific pedagogical approaches and strategies that leverage digital tools can reveal best practices for effective integration. This could include exploring flipped classrooms, gamification, and other innovative teaching methods.
 - **Student Engagement and Motivation:** Understanding how digitalization affects student engagement and motivation in the learning process can provide valuable insights into designing more engaging and interactive digital learning experiences.
- By addressing these areas of further study, we can gain a more nuanced understanding of the effectiveness of digitalization in teaching-learning practices and identify strategies to optimize its implementation for enhanced educational outcomes.

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Interview Schedule for Dean and HOD

Name: _____

Gender: MALE FEMALE

Name of the college: _____

Questions

1. Online education requires lot of planning and expertise from me as an administrative head
2. Online education requires regular coordination from the IT department administrative heads
3. Online education develops my digital skills and expertise
4. Online teaching needs training and assistance to be organized for the team to use online education more effectively
5. According to your view, do you think online education is an appropriate instructional strategy?
6. Online education is preferred because it induces critical and higher order thinking skills among students
7. Online education facilitates creativity in teaching and learning activities
8. Online education creates anxieties among teachers, as all cannot design games for their classes
9. Online education creates lot of confusion among students and teachers
10. Online education is against the principles of teaching and learning

**TO STUDY THE EFFECTIVENESS OF DIGITALISATION IN
TEACHING- LEARNING PRACTICED FOR POST GRADUATE
MANAGEMENT EDUCATION IN PUNE METROPOLIS**

Questionnaire for Teachers

Full Name: _____ **Gender:** Male Female

Age in Year: 18 to 24 25 to 40 41 to 60 Above 60

Designation: _____ **Teaching Experience:**
(in years) _____

Performance Expectancy

1. Do you think technology is very useful when you do your work?
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
2. Do you find technology to be supportive when you do your work?
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
3. Do you think digital technology (Interactive Digital / Smart boards, computers, tablets, etc.) outpace traditional technology (Whiteboards, paper, etc.)
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
4. Do you think you need higher competence (be more competent) if you use (even more) technology?
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

Effort Expectancy

1. Is the systems or technology difficult to use?
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

2. Do you think it would be/is easy for you to learn and become proficient in using the technology you have today?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

3. Do you believe that you are competent and skilled at using technology, in general?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

Social Influence

1. Do you think that people around you who influence you and your daily work influence you or think that you should / should use technology in your daily work (mainly teaching)?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

2. Have you observed people in your environment who use technology and who influence you and your attitude towards the use of technology in your teaching?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

3. Do you think that the use of technology in teaching is closely linked/related to your identity as a teacher?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

Facilitating Conditions

1. Do you think technology determines/influences how you should do your work?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

2. Do you have enough time required to use the technology?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

3. Do you think that there are necessary resources available for you to be able to use the technology you have today?

- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

4. Do you think the technology with the work you do daily is compatible?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

Experience

1. Are you using technology in your teaching and working for a long time?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

2. Do you use technology at home and in your free time?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

Voluntariness

1. Do you have an obligation to use technology in your daily work?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

2. Do you use technology more / in a different way than what is requested?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

3. Would you like to use technology more / in a different way than what is requested and is it your duty?

- | | | |
|-----------------------|--------------------|-------------|
| (a) Strongly Disagree | (b) Disagree | (c) Neutral |
| (d) Agree | (e) Strongly Agree | |

* * * * *

TO STUDY THE EFFECTIVENESS OF DIGITALISATION IN TEACHING- LEARNING PRACTICED FOR POST GRADUATE MANAGEMENT EDUCATION IN PUNE METROPOLIS

Questionnaire for Students

Full Name: _____ Gender: Male Female

Name Of the College: _____

1. Answering Questions Through Online Mode Is Preferred In Comparison To Books Or Paper.
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
2. For Learning In Future, Online Platforms Are Found To Be Interesting.
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
3. Exercises In Games Are Preferred Over The Quizzes During Online Class
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
4. Computer Games Are Preferable To Make The Subject More Interesting.
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
5. Online Platforms Help Me To Learn Better By Myself
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
6. Learning At Own Pace And Sequence Is Easier Due To Online Learning
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
7. Studying Online Provides Me With Flexibility With Timings.
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
8. Learning In Online Mode Provides Me With The Flexibility To Choose The Place Of Learning.
(a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree

9. The Content Of Online Games And Exercises Matches My Subject And Syllabus.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
10. Online Activities And Computer Games Help Me To Think Critically.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
11. Online Puzzles And Problems Are Very Interesting
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
12. It Is Worth To Try Using Online Interactive Games And Videos For Learning In Future.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
13. Assignments And Projects Can Be Completed Online And These Are Encouraging Activities.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
14. The Understanding Of The Subject Is Challenged By Online Simulations.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
15. The Multimedia Elements In The Online Games And Platforms Are Interesting
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
16. As Per My Need Studying And Understanding The Concepts Online Requires A Shorter Time Span
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
17. The Use Of Colour, Design, Layout And The Games/Videos Are Interesting
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
18. The Scores And The Progress Of The Online Exercises/Games Provide Motivation.
- (a) Strongly Disagree (b) Disagree (c) Neutral
(d) Agree (e) Strongly Agree
19. Understanding The Basic And Advanced Concepts Clearly Is Easier Due Through Online Exercises.
- (a) Strongly Disagree (b) Disagree (c) Neutral

(d) Agree

(e) Strongly Agree

20. I Wish To Get More Learning Opportunities Through Online Approach.

(a) Strongly Disagree

(b) Disagree

(c) Neutral

(d) Agree

(e) Strongly Agree

21. Learning Through Online Exercises/ Games Is Preferred Over Traditional Methods Of Learning In Class.

(a) Strongly Disagree

(b) Disagree

(c) Neutral

(d) Agree

(e) Strongly Agree

22. I Prefer To Learn All Subjects Using Online Mode.

(a) Strongly Disagree

(b) Disagree

(c) Neutral

(d) Agree

(e) Strongly Agree

23. I Wish Online Mode Will Be Available Forever.

(a) Strongly Disagree

(b) Disagree

(c) Neutral

(d) Agree

(e) Strongly Agree

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Interview with Dr Pranati Tilak, Dean, HOD, Tilak Maharashtra Vidyapeeth, Pune



Dr Vinod Ingavale, Dr Mahesh Shitole, Bharati Vidyapeeth, IMED Pune.



Dr. Jobin Jacob, HOD, Christ University Pune



Dr. Mohit, Faculty, Christ University

**“TO STUDY THE EFFECTIVENESS OF DIGITALISATION IN
TEACHING- LEARNING PRACTICED FOR POST GRADUATE
MANAGEMENT EDUCATION IN PUNE METROPOLIS”**

A THESIS

SUBMITTED TO THE

TILAK MAHARASHTRA VIDYAPEETH PUNE

FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN MANAGEMENT

Under the Board of Management Studies



By

**Mrs. Bhagyashree Nilesh Deshpande
(PRN 15819005723)**

UNDER THE GUIDANCE OF

Dr. Pranati Rohit Tilak

DEPARTMENT OF MANAGEMENT

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80_Recommendation

Findings

The study aims to analyze the effectiveness of digitalization in teaching-learning in postgraduate management education. The study considers three key perspectives: students, faculties, and the Dean/Head of the Department (HoD).

- Faculty Perspective: Since faculties play a significant role in introducing students to the digitalization process, the Technology Acceptance Model (TAM) is being used to understand the effectiveness of digitalization from the faculties' point of view. TAM is a widely used model for understanding users' acceptance and adoption of technology. Based on which faculties Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Behavioral Intention to Use (BI), Actual System Use (Usage). Based on which effectiveness is observed in teaching learning through digitalization is identified.
- Student Perspective: The study recognizes that students are crucial recipients of the digitalization efforts in teaching and learning. Their opinions and experiences are essential in evaluating the overall effectiveness of digital techniques in education. Students studying in Pune Management Instituted were asked to opine on various questions related to digitalization to understand their perspective.

By considering these three perspectives, the study aims to gain a comprehensive understanding of the effectiveness of digitalization in postgraduate management education. It covers the key stakeholders involved in the process and aims to identify areas of improvement and success.

The first hypothesis framed was based on the relationship between and teaching experience and performance expectancy. Performance expectancy refers to an individual's perception of how well they believe they can perform a specific task using a particular technology or tool. In the context of teachers and teaching, it relates to their belief in their ability to effectively use teaching strategies, methods, and technologies to enhance student learning outcomes. With the help of the opinion obtained from faculties for performance expectancy Kruskal Walis test was performed based on which the test resulted as there is a strong relationship between the performance expectancy and teaching experience. The number of years spent in one profession brings with it a kind of assumptions and maturity to perform any sort of task.

Based on the second hypothesis, which was about the contribution of gender differences in understanding the facilitating conditions. Facilitating conditions like technology influencing how one should work, enough time required to use technology, necessary resources available for using technology, and compatibility of the technology to work with were considered. To understand the same Mann-Witneys test was applied to identify the relationship between the gender and the facilitating condition. So based on the test result conclude that there is a statistically significant difference between gender and facilitating conditions. Perception based on the gender differences has a significant contribution towards facilitating conditions.

Based on the testing of hypothesis three, which was performed on the students data as to understand the gender and degree of adaptation for Digitalization in Teaching Learning. It was observed through five different questions putforth towards students to understand the adaptation towards digitalization. The five questions putforth were as towards understanding basic and advanced courses, more opportunities towards learning, better than traditional method, preference to learn all subjects through online, wishing to have online mode forever. Based on the Chi square test it was observed that understanding basic and advanced concepts through online mode, getting more opportunities of learning through online mode, wishing online mode to be forever had a significant difference to traditional method. Whereas learning through online exercise is preferred over traditional and preference towards learning all subject's online mode got accepted. Stating the difference that is created due to traditional mode.

Suggestion

We can observe from the above table that teaching experience has a strong influence on performance expectancy. As the age grows there is a significant shift in need of acceptance towards technology can be observed. It can also be observed that gender has a strong relationship with facilitating condition. Where needs and expectations of faculty can be observed based on the gender differences. Based on the tests results of the students it can be clearly observed that online mode is useful but traditional teaching method is also important. There are many things even after the success infusion of knowledge through online mode certain knowledge needs physical presence.

1. Based on the findings obtained from the Deans and head of the institution, it might be suggested to provide continuous faculty development programs to equip

educators with the skills and knowledge to effectively integrate digital tools in their teaching methods.

2. To further improve the quality of teaching and learning, there could be a recommendation to enhance student support services, ensuring that learners receive the necessary assistance and guidance in the digital learning environment.
3. Deans/HODs might propose fostering collaborative partnerships with other institutions and experts to leverage best practices in digital education and share resources.
4. To address concerns regarding access, there could be suggestions to ensure equitable access to technology for all students and educators, especially those from disadvantaged backgrounds.
5. Leveraging data collected through digital platforms, to use data analytics to gain insights into student learning patterns and identify areas for improvement in the teaching-learning process.
6. Encouraging the adoption of virtual mobility opportunities through online meetings and collaborations with experts can lead to a broader and diverse learning experience.
7. Implementing a systematic evaluation and assessment process can help gauge the effectiveness of digitalization initiatives and guide future improvements.

Overall, such a study can provide valuable insights into the impact of digitalization in education and inform decision-making processes to improve the quality of teaching and learning in the management education domain.

Conclusion

After conducting the study on the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis, the following conclusions can be drawn based on the research objectives and hypotheses:

- **Degree of Adaptation for Digitalization in Teaching-Learning:** The study revealed that there is a considerable degree of adaptation for digitalization in the teaching-learning process. Educators and students have shown a positive response towards the integration of digital tools and technologies in the classroom. This finding suggests that digitalization has become an integral part of the education system and

is widely accepted in the post-graduate management education sector in Pune Metropolis.

- **Effectiveness of the Teaching-Learning Process in Faculty's Perspective:** To understand the same for faculty members who take the core role in implementing the digitalization process effectively, TAM's model was applied based on which faculties performance expectancy, effort expectancy, social influence, facilitating condition, experience and willingness were considered. Wherein it was observed that age, gender and teaching experience of the faculty members had a significant role in understanding the various parameters of TAM's model for acceptance of digitalization in teaching learning process. Things can be brought under control based on continuous support, training, and investment are crucial for the sustainable and successful integration of digitalization in education.
- **Effectiveness of the Teaching-Learning Process in Students Perspective:** The investigation into the effectiveness of the teaching-learning process with digitalization showed promising results. Students have reported higher levels of engagement, interactivity, and better access to learning resources through digital means. The use of multimedia, online collaboration platforms, and interactive content has enhanced the learning experience, leading to improved academic performance and overall satisfaction among learners. But it was also observed that for certain subjects and content due importance was given by students for traditional classroom teaching as well.

Scope of further study

The study on the effectiveness of digitalization in teaching-learning practices for post-graduate management education in Pune Metropolis provides valuable insights, but there are several areas that can be explored further to deepen our understanding and address any limitations. The scope of further study in this domain could include:

- **Longitudinal Study:** Conducting a longitudinal study over an extended period can offer a more comprehensive view of the impact of digitalization on teaching-learning practices. Tracking the progress of students and educators over time would reveal trends and changes in attitudes and performance related to digital tools and technologies.

- **Comparative Analysis:** Expanding the research to include multiple institutions or comparing different educational levels (e.g., undergraduate, doctoral) can provide insights into how digitalization's effectiveness varies across different contexts and academic programs.
 - **Qualitative Research:** Incorporating qualitative research methods, such as in-depth interviews and focus groups, can provide a deeper understanding of educators' and students' experiences with digitalization. It can uncover specific challenges, success stories, and innovative practices that quantitative data might not capture.
 - **Impact on Learning Outcomes:** Further research can focus on measuring the direct impact of digitalization on learning outcomes, such as grades, retention rates, and skill development. This would help establish a stronger correlation between the use of digital tools and academic performance.
 - **Pedagogical Approaches:** Investigating specific pedagogical approaches and strategies that leverage digital tools can reveal best practices for effective integration. This could include exploring flipped classrooms, gamification, and other innovative teaching methods.
 - **Student Engagement and Motivation:** Understanding how digitalization affects student engagement and motivation in the learning process can provide valuable insights into designing more engaging and interactive digital learning experiences.
- By addressing these areas of further study, we can gain a more nuanced understanding of the effectiveness of digitalization in teaching-learning practices and identify strategies to optimize its implementation for enhanced educational outcomes.