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Research Article

Revolutionary and Innovative Changes in Educational Transformation: Education 5.0 – Part I

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ABSTRACT

Educational progress and its rapid evolution always positively affected to the society, industrial, productive and service sectors. India with its largest population characterized by diverse linguistic, culture and socio-economic background poses a unique challenge in providing quality education. Traditional education usually struggles to provide personalize and flexible learning environment. The adoption of education 5.0 over Education 4.0 leads to adoption of new technology to make education more constructive and unveiling the latest insight of learning. Education technology builds a new era of skills, knowledge and competence in the education ecosystem. The execution of advanced educational technologies combined with innovative pedagogy to promote innovation and research to empowers students to thrive in the digital age. The satisfactory implementation of education 5.0 in India requires lots of efforts such as competencies of teachers, advanced teaching-learning methods, information and communication technologies (ICT), curriculum advancement, policies and reforms, financial investment and physical infrastructure. Learning through education 5.0 concept is moving to the next stage of digitalization, providing value creating opportunities, innovating and problem-solving attitude. In this paper, education 5.0 technologies and teaching paradigm for higher and technical education is discussed to re-shape the education system. Education 5.0 framework can be a powerful tool to address new era challenges and provide quality education for all. To address the challenges of new era in education, an online survey was developed and distributed to students and educators active in the field of higher education.

Keywords: Personalize learning, education 5.0, education technology, ICT, digitalization, Value creation, problem solving.

INTRODUCTION

Learning and development is a continuous process to improve knowledge and skill along with new technologies and it is possible to learning anytime and anywhere. To reshape the education system requires advanced digital technologies and these technologies are forcing us to think about our own learning and teaching style to explore abilities. Radical reforms in education leads to education 5.0 to promotes personalize, skill based, research-based and flexible education. By empowering students to take ownership of their learning journey and equip them with the tools to become confident, adaptable, and successful individuals [1]. The field of education using ICT, and ensure that these tools are used effectively to enhance learning [2]. By fostering a space for academic staff and students to connect, discuss topics, and exchange ideas beyond traditional classroom hours to create a dynamic and engaging learning environment. Educational institutions can create a more inclusive, engaging, and effective learning environment for all students [3]. Education 5.0's emphasis on personalized learning to meet the diverse needs of

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students compared to the more standardized approach of Education 3.0 and 4.0 [4]. A successful transition to education 5.0 requires a hard effort to train both staff and students in the necessary skills and competencies. Institute should prioritize training programs for educators that equip students with the tools to thrive in the digital age and navigate the challenges of industry 4.0 [5]. Technology should seamlessly integrate into the classroom environment, providing students with the necessary tools and resources to explore and learn the successful implementation of Industry 5.0 in education will require a significant shift in pedagogical practices, technological infrastructure, and assessment strategies [6-7]. The introduction of new technology-assisted learning tools such as mobile devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualizations, and virtual laboratories has provided students with unprecedented access to educational resources and opportunities [8-9]. The study revealed a noteworthy correlation between higher levels of acceptance among educators and a corresponding decrease in their anxiety levels. This research demonstrated that younger teachers exhibit greater levels of acceptance and reduced anxiety in comparison to their older counterparts. The insights from the study pave the way for targeted interventions that can enhance educators' preparedness and enthusiasm toward education 5.0. Ultimately, this will reduce anxiety levels and empower educators with the confidence to embrace change [10]. To meet the challenges of a dynamic global landscape, education systems must undergo a comprehensive transformation. This involves restructuring the environment, revolutionizing the academic process, prioritizing operational excellence, leveraging digital resources, and cultivating a culture of scientific research that continuously assesses and adapts to the evolving needs of business and education. [11]. The profound changes brought about by technology have reshaped our social interactions and relationship with the environment. This necessitates a re-evaluation of how our societies are structured and organized, and, as a result, a critical examination of our educational systems to ensure they are adequately preparing individuals for the future [12-13].

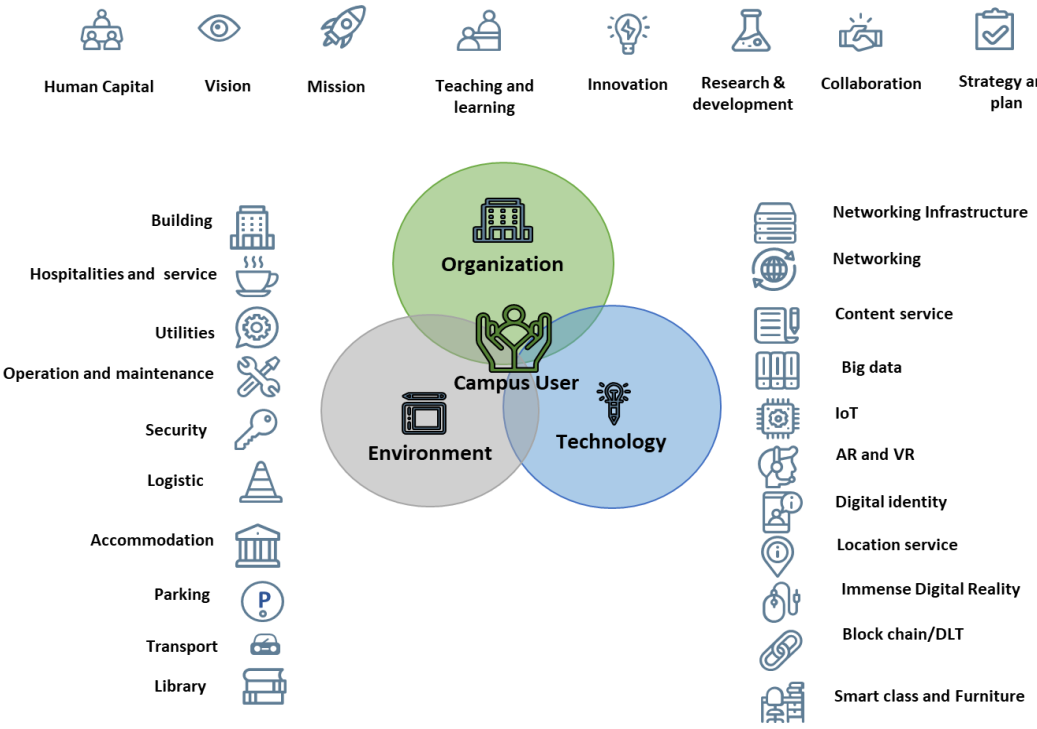

Figure 1. Requirements to implement education 5.0

This study provides an overview of the transformation as well as the potential implications for future education. This study will give benefits to future innovation in teaching methods in improving the educational process for students and educators, the direction of personalized learning, global competence, and alignment with industry needs [14-15]. In the digital era, lifelong learning, continuous professional development, entrepreneurship innovation through education is important pillar. Here, the main requirement to implement Education 5.0 framework in an organization as shown in figure 1.

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1. Essential needs of educational framework:

For smooth operation of any organization require 5M i.e Mission, Man power, Machinery, Method and Management with clear vision. The education sector deals with all these 5M and require their proper utilization with full potential. The presence of all (M's) will give the assurance of growth in terms of capability, capacity and constraint. If any one of them is absent then consistent growth is not possible. The educational framework includes five most important aspects i.e. teachers, textbooks and curriculum, policies and reforms, educational technology (ET), research and innovation.

Teachers: The teacher student ratio is an indicator of how a student receives the individual attention of the teachers, which thereby aids in better learning.
Curriculum: Curriculum is the physical manifestation of education system. So, time to time updating of curriculum limits to the older pedagogic module and outdated information
Policies and Reforms: The consistent progress and push for educational policies at local, state and national level of public and private sector to uplift the nations growth.
Educational Technologies: The ultimate goal of ET to mingle teaching-learning software and hardware to increase student engagement, participation in dynamic learning. With the help of ETs, educators can develop interactive textbook, gamification, digital teaching and learning material.
Research and Innovation: Research and innovation is an integral part of education which ultimately developed research competencies.

2. Education 5.0 framework

Every industry, society and businesses are subjected to natural cycle of change so education sector too required. The teaching aspect now requires blended teaching with practice in teaching and in learning. In order to shift from conventional teaching and learning material to digital and innovative resource require combine effort of institutions, educators and students. The perception and readiness for education 5.0 adaption by institutions, educators and students has been discussed below.

3.1. Perceptions of students

- New generation is very much technology oriented and they prefer to use maximum technologies in education
- Smart education requires smart devices to fulfil the demand of current education.
- Most of student find comfort with laptops/personal computer, smart phone, writing pads etc. to carry out their academic work.

3.2. Perceptions of educators:

- Some teachers may struggle with technical issues such as frequent machine hangs, program cannot be launched, old operating system, old computer system, low internet speed etc.,
- Teachers lost their enthusiasm and resist the new technology & pedagogy because rapidly changing technology.
- Too much use of technology makes teaching is a lengthy and difficult process.

3.3. Perceptions of institutions

- When the time is to be come for implementing education 5.0 then some institute see as a growth opportunity but some institute see as an expense.
- The cost of replacing existing infrastructure, technology, hardware, software, etc, can be a barrier for some institution.

The education 5.0 is all about shifting in higher education through leveraging technologies to make learning more flexible, personalized, social being, and response to the demand of society by creating values. The establishment of education 5.0 require various core components such as competencies/skill, ICT technologies, infrastructure, learning methods as shown in figure 2.

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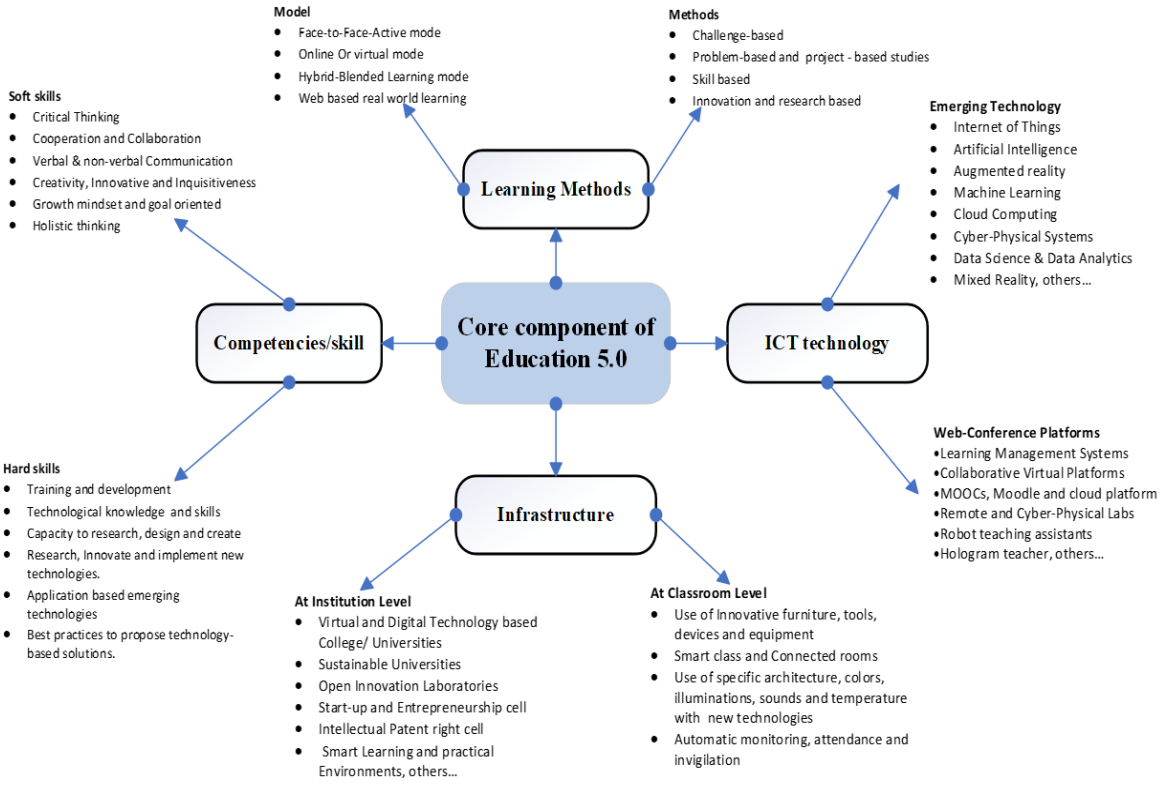

Figure 2. Core component of education 5.0

The main focus of Education 5.0 to support innovation and research to fulfil the outcome-based as well as research-based education through project based, skill based, inquiry based, innovation and challenge-based type of teaching learning methods. Types of transformed learnings from the traditional learning are:

1. Online learning mode
2. Virtual learning mode
3. Blended learning mode
4. Hybrid learning mode
5. Web based real learning mode

All these learning promotes personalize and flexible learning to develop 21st century skills to bridging the gap between academia and industry. In present scenario, innovation, creativity and creating values are much required for better survival. The role of teacher is immensely important to provide decent environment to achieve target of creating values of 21st skills amongst the student.The skills are categorizing as individual, professional and social based environment.

Table 1. Role of teacher in creating values and 21st century skills

Individual based	Professional based	Society based
Self- Assessment 1. Do you support students in developing and understanding their own cognitive skills? 2. Do you help students in developing their own ability to self-motivate? 3. Do you assist students in assessing and evaluating	**Verbal & non-verbal communication** 1. Do you offer students with lots of chances to express and transcribe using their own unique idea and genuine voices? 2. Do you help students to concentrate around theVerbal and non-verbal communication they want to make?	**Collaboration acrosssocial networks** 1. Do you facilitate students for global communication and collaboration? 2. Do you give chance to students to collaborate face-to-face and virtually? 3. Do you assist your students in developing their own personal

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own experiences?		learning networks?
Vision and purpose 1. Do you offer students the time, space and opportunity to find and pursue their dreams ideas? 2. Do you support students in developing the steps and strategies required to accomplish their dreams? 3. Do you council the student in search their own individual purpose in life	**Problem-solving and critical thinking** 1. Do you encourage and emphasize student to doing things that haven't been done formerly, where you and your student have to rethink or think innovative? 2. Do you ask students to create & ask their own exceptional or unique critical questions?	**Liveliness and adaptability** 1. Do you agree to take change as normal & natural and assist yourstudents in doing so, too? 2. Are you and your learners flexible? 3. Do you assist your students practice a variety of tools or methods to solve live problem?
Inquisitiveness 1. Do you help and inspire inquisitiveness? 2. Do you instigate student to add their own "personal touches" to their learning understandings?	**Inventiveness and entrepreneurship** 1. Do you promote student toinvolved in meaningful work? 2. Do you provide perspective to students for taking risks and initiative to do things?	**Holistic thinking** 1. Do you realized students about wellness, spiritual and mind bodyrelation? 2. Do introduce your students with emotional balance and expand your mind for new things?
Anticipation and optimism 1. Do you model, teach, supportpositive self-talk or can-Doattitude? 2. Do you backing student in enhancing their individual thinking? 3. Do you give exposer to stories that depict and describe how others have succeeded or overcome difficulties?	**Grit and goal oriented** 1. Do you stretch students to work on long-term goal and complete the projects? 2. Do you support students in identifying and acknowledging the rewards of persevering through tough times? 3. Do you advise students for doing work consistently to achieve goal?	**Society wellbeing** 1. Do you realize students for how your knowledge is helpful for society? 2. Do you inspire students to transform their own life and life around them? 3. Do you realize student for objective of education and industry are identical and Both will serve society and better life?
Flexibility and resilience 1. Do you help students see catastrophes as openings forprogress? 2. Do you encourage and reinforce students own innate resiliency? 3. Do you ensure that each and every learner knows 'You Matters? 4. Do you guide your students to tackle different situation and change according to that?	**Growth mindset** 1. Do you realize students to do differently next time to make things work better? 2. Do you help students to manage distraction duringwork? 3. Do you realize the student to respect opponents' thoughts and make healthycompetition? 4. Do to guide student on how they keep going when thing gone tough?	**Empathy and Stewardship** 1. Do you provide students with opportunities for perspective taking? 2. Do you assist students in understanding the interdependence and interrelationship of all living system? 3. Do you guide students to put understanding and sympathy into action; engage in pro-social behaviors envisioned to benefit others?

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3. Survey On Engagement and Interaction with Digital Technologies

An online survey is conducted to know the student and educators' engagement and interaction with digital technologies. Gathering feedback from students and educators' perceptions give the picture of how digital technologies will be helpful in engaging and effective learning environments. We have studied the challenges faced by the learners and educators for creating the learning environment interactive and developing curiosity for their subjects.

Phase 1:

Questionnaire: Based on student engagement and interaction with digital technologies
Sample: Students
Sample Size: 313 students of different Engineering colleges including second, third and fourth year.
Survey Type: Online and scale-based questions
Survey Objective: To know student engagement and motivation factor to endorse active learning and interaction using Digital technologies.
Survey Outcomes: Identify the level of effectiveness in using digital platforms
Survey Question: Data for the graphs are based on the following question were asked in online mode through google form:

Q1. I am very comfortable in using digital technologies during class.
Q2. My college teacher shows me how to use and which digital technology required for particular applications.
Q3. My college teacher can teach effectively using these technologies such as PPTs/Google slides online/live quiz/online whiteboard etc.
Q4. My college teacher allows me to use technologies in classroom and laboratory.
Q5. I prefer online/digital platform for the sharing and submission of assignments/reports/practical etc.

Figure 3. illustrates that, overall, the majority of students (56%) either strongly agree or moderately agree indicating that they are comfortable using digital technologies. However, a significant portion (32%) are neutral suggesting that they are generally comfortable and there may be some areas where they experience discomfort. Only a small percentage (12%) either moderately disagree or strongly disagree, indicating they are not comfortable in their feelings towards digital technologies. After analyzing the graph as shown in figure 3 of "comfortlessness in using digital technologies" the following issues regarding disagreement from the student and educators' point of view depends on:

i. Availability of internal facility
ii. Availability of smart devices (concern for financial and weaker section)
iii. Lack of technical skill to handling the device

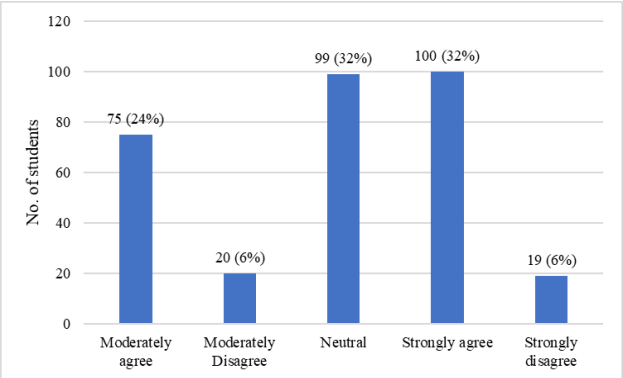

Fig. 3. Comfortlessness in using digital technologies (Refer Q.1 from Phase 1)

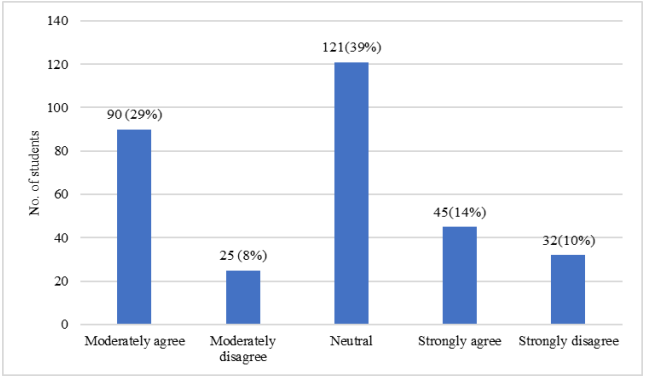

Fig. 4. Teachers assisting in digital technology for specific applications (Refer Q2. from Phase 1)

Figure 4. shows that digital technology offers a wide range of resource including videos, articles, and interactive exercises. Here, output indicate only 14 % students are strongly agree and 29 % moderately agree on teachers assisting in digital technology for specific applications. It shows that teachers require more training and development regarding new technology learning. After analyzing the graph as shown in figure 4 of "Teachers assisting in Digital Technology for Specific Applications" the following issues regarding disagreement from the student and educators' point of view depends on:

i. Students often have a higher level of technological proficiency compared to their teachers. This can lead to frustration and a lack of engagement on both sides.

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ii. Educators who are not comfortable with technology may feel hesitant to incorporate it into their teaching, limiting their ability to provide a comprehensive learning experience.
iii. Time management during the ongoing teaching session because of additional digital technologies in classroom
iv. Digital resources can sometimes experience technical difficulties or malfunction.

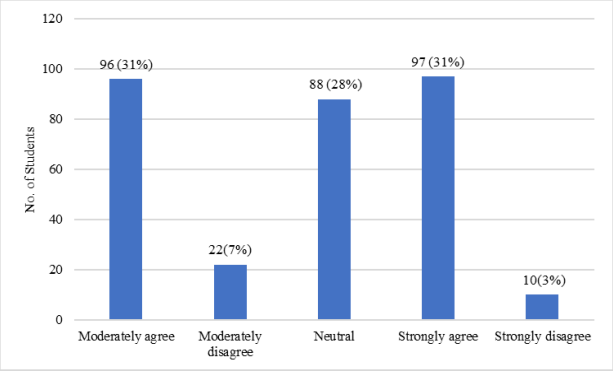

Fig. 5. Effective teaching techniques (Refer Q.3 from Phase 1)

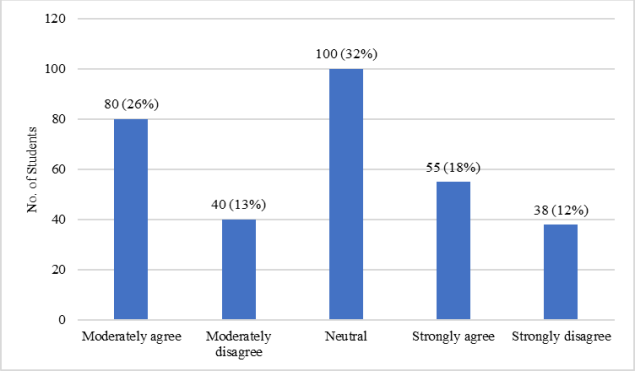

Fig. 6. Allowing technology in the classroom and laboratory (Refer Q.4 from Phase 1)

The graphs in figure 5 shows that 62 % (31 % moderately agree and 31 % strongly agree) of students are on the side of effective teaching methods such as PPTs/Google slides online/live quiz/online whiteboard etc. However, a significant portion (28%) are neutral, suggesting that they generally find the techniques helpful but there may be areas for improvement. Only, 10 % of student supports traditional mode of teaching methods. After analyzing the graph as shown in figure 5 of "Effective teaching techniques" the following issues regarding disagreement from the student and educators' point of view depends on:

i. Students may be more comfortable with traditional chalk-and-talk or textbook-based learning.
ii. Some students may struggle with technology or lack of access to necessary devices.
iii. If these digital technologies/methods are not used effectively or creatively, they can lead to boredom or disengagement.
iv. Some students may simply prefer different learning styles or have specific needs that are not met by these methods.

After analyzing the graphs as shown in figure 6 of "Allowing technology in the classroom and laboratory" the following issues regarding disagreement from the student and educators' point of view depends on:

i. Time management
ii. Students' use of smart devices during class can be a sometime leads distraction, affecting their learning and engagement.
iii. Digital resources can sometimes experience technical difficulties or malfunction.

Regulatory bodies like AICTE & UGC will emphasizing the integration of digital technology along with conventional methods to enhance the interaction-based teaching which will be student centric. As per the student perspective DT should be used in the classroom and most of the students think that allowing technology is having half-half chances because teachers' policies and still teachers are not allowing mobile, tablet, ppts in theory classes. that's why only 44% (strongly and moderately agree) students agree on allowing technology in the classroom and laboratory.

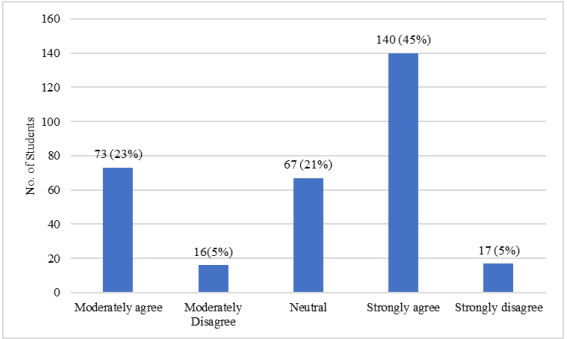

Fig. 7. Preference for online platforms (Refer Q.5 from Phase 1)

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As the figure 7 shows the data related to online platform utilization. By using online platform geographical barrier are breakdown and students learn from their own pace and schedule. Educators can be view assignment anytime and anywhere and send for modification to the student and save the record of the students for required time period. Student are now more flexible and accessible by sharing and submission of assignments/reports/practical etc. Total 68 % students are strongly and moderately agreeing and indicating that they prefer online platforms or there may be some areas where they find traditional methods more suitable. Only a small percentage 10% either moderately disagree or strongly disagree, indicating that they generally prefer traditional methods or have neutral feelings towards online platforms. After analyzing the graphs as shown in figure 7 of "Preference for online platforms" the following issues regarding disagreement from the student and educators' point of view depends on:

i. Students may face difficulties in accessing online platforms due to unreliable internet connections, especially in rural area
ii. Platform malfunctions or software compatibility problems can hinder submission processes.
iii. Some students may not have access to suitable devices or software for completing and submitting assignments.

Phase 2:
Questionnaire: Based on educators' level of preference in digital technologies in teaching process.
Sample: 61 educators of higher education
Sample Size: 61
Type: Scale based questions
Survey Objective: To know the technical skill of the educators by using digital technologies in teaching learning process.
Survey Outcomes: To measure the level of preferred digital platforms in teaching learning process.
Survey Question: Data for the graphs are based on the following question were asked in online mode through google form:

Q1. I am very comfortable in using digital and ICT technologies during class.
Q2. I like hardcopies of books rather than e-book/digital book.
Q3. I like automation and digitalization in educational activities such as automatic attendance/ monitoring/data compilation in feedback/quiz/marks/score etc.
Q4. I prefer online/digital platform for assign, checking, creating, sharing the assignments reports/ practical/information/notice/lecture etc.
Q5. I prefer virtual meetings, online discussion forum, online teaching, online docs/sheets /PPTs in whenever necessary.
Q6. The addition of digital platforms, virtual labs, emerging technologies promotes R&D activities in an institute.

After analysing the graphs as shown in figure 8 of comfort with digital and ICT Technologies in the Classroom the following recommendation for improvement in the system depends on:

i. Provision of time and resources for technology integration and teacher attitudes towards technology and its role in education.
ii. Access to training and professional development opportunities and teachers' personal proficiency with digital tools and platforms.
iii. Align technology use with curriculum objectives and understanding how to effectively integrate ICT into teaching and learning.
iv. Institutional culture and values regarding technology adoption: Availability of reliable internet connectivity, devices, and software and adequate technical support and maintenance

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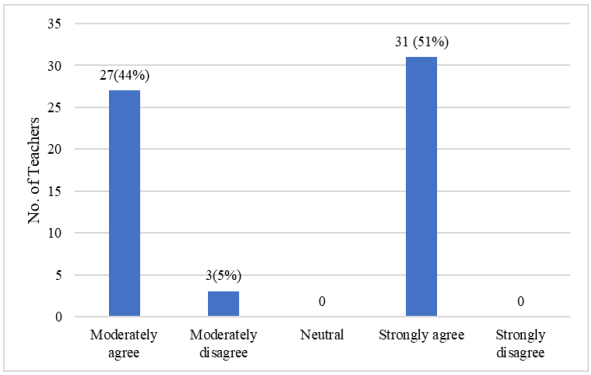

Fig. 8. Comfort with Digital and ICT Technologies in the Classroom (Refer Q.1 from Phase 2)

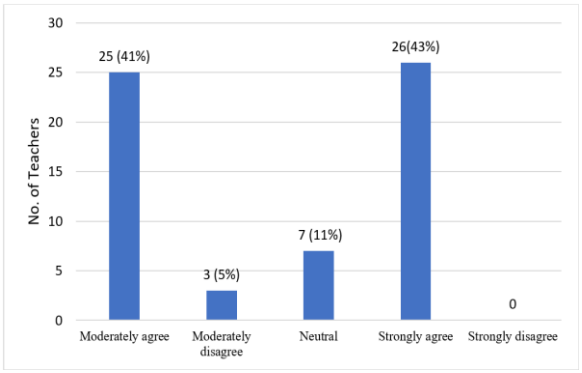

Fig. 9. Preference for hardcopies over e-books/digital books (Refer Q. from Phase 2)

After analysing the graphs as shown in figure 9 of preference for hardcopies over e-books/digital books the following issues regarding disagreement on e-books:

i. Issues with internet connectivity or device compatibility in certain classrooms.
ii. Concerns about students' access to devices or reliable internet.
iii. Resistance to change and some teachers may find it easier to annotate and take notes directly from the physical books.
iv. Initial investment in e-readers or tablets and ongoing costs of digital textbooks or subscriptions.

The effective teaching and learning with the integration of Digital and ICT has revolutionized the process. However, the effectiveness of is largely depends on the comfort of teacher to use technology in the classrooms. Here, survey result shows almost all the teachers are interested to use ICT technologies. All the teachers are interested in using ICT technologies, but some may lack the necessary training or resources to implement them effectively. Hardcopies are always preferred and traditional way to learn/read the things. In today's scenarios, digital book decreases the need of hardcopies. The production of hardcopies increases the deforestation, water usage, shipping cost and significant environmental effect. Government promotes the digital accessibility for learning platform. Here, the online survey result displays that most of the teachers still prefer hardcopies over soft copies and big gap is there.

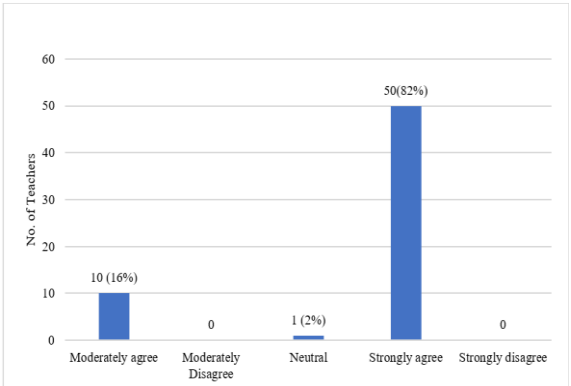

Fig. 10. Automation and digitalization in educational activities (Refer Q.3 from Phase 2)

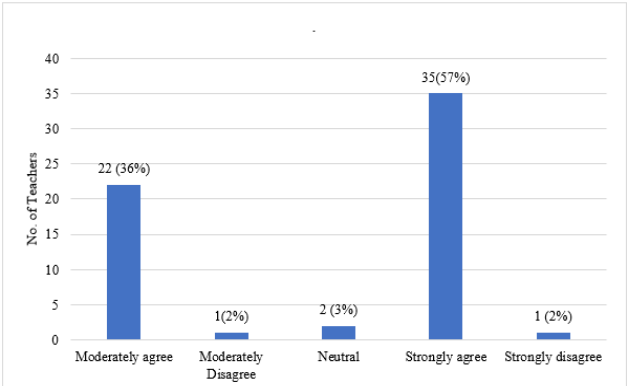

Fig. 11. Teaching -Learning management through online/ digital platform (Refer Q.4 from Phase 2)

After analysing the graphs as shown in figure.10 of Automation and digitalization in educational activities the following recommendation for improvement in the system depends on:

i. Offer specific training programs that address the unique needs and interests of educators.
ii. Pair experienced educators with those new to technology to provide guidance and support.
iii. Foster a culture of innovation and experimentation, encouraging educators to explore new tools and approaches
iv. Facilitate online or in-person communities where educators can share experiences, best practices, and resources.

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v. Encourage membership in professional organizations that focus on educational technology.

Some of the tasks like attendance and its analysis, feedback, quiz, data compilation are very time-consuming process. Automation and digitalization in educational activities reduces the time and improve efficiency and accuracy. The results show almost all teachers are agree on this point of digitalization.

After analysing the graphs as shown in fig. 11 of Teaching -Learning management through online/digital platform. Majority of teachers agreed on the point that teaching learning through online mode is a better option to enhance the learning. the following recommendation for improvement in the system depends on: Effectively using digital platforms to enhance the teaching learning methodology. Here, result shows that almost all faculty members are familiar and wants to adopt digital /online platform for assign, checking, creating, sharing the assignments reports/ practical/ information/ notice/ lecture etc.

Figure 12. graph shows the convenience to use Online platforms, flexible way to connect, collaborate, and learn. The result of graph shows the that Majority agrees of 84% teachers strongly agree that online platforms offer a convenient and flexible way to connect, collaborate, and learn. Only 2% of teachers moderately disagree or strongly disagree with the statement. Overall, the data suggests that a significant majority of teachers find online platforms to be a valuable tool for education and collaboration.

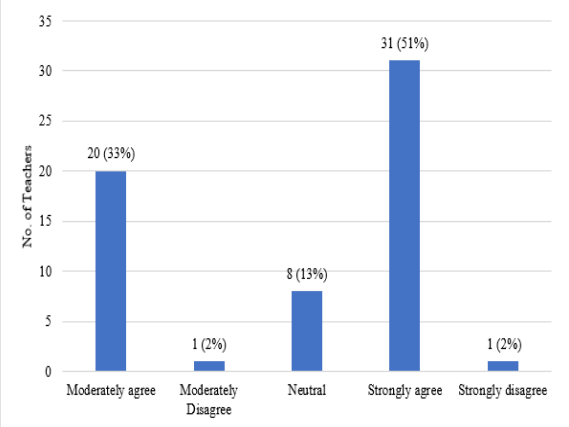

Fig. 12. Preference for online tools, education and collaboration (Refer Q.5 from Phase 2)

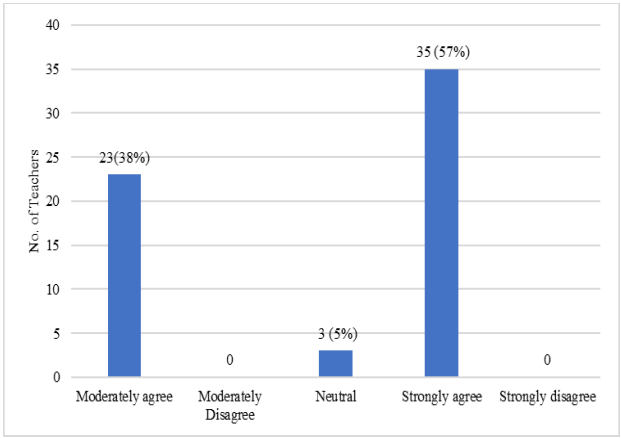

Fig.13. Integration of digital tools and emerging technologies in educational research (Refer Q.6 from Phase 2)

After analysing the graphs as shown in fig. 13 of Automation and digitalization in educational activities the following recommendation for improvement in the system depends on:

i. Online Surveys and Questionnaires enable researchers to gather large-scale data efficiently and cost-effectively.
ii. By tracking student interactions with digital resources, researchers can gain insights into learning behaviors and identify areas for improvement.
iii. Natural Language Processing techniques can analyze textual data, such as student essays or transcripts, to identify patterns and themes.
iv. Analyzing massive datasets can reveal trends and correlations that might be missed using traditional methods.

The convergence of technology and education has revolutionized the landscape of educational research. Digital tools and emerging technologies offer unprecedented opportunities to enhance data collection, analysis, and dissemination. This integration is driving innovation and transforming the way we understand and improve educational practices. The data suggests that there is a strong consensus among teachers in favour of integrating digital tools and emerging technologies into educational research.

4. Proposed Learning Research Model (Lrm) For Education 5.0

Todays' society and industries demands skill-based and research-based mindset. It has been observed that, many great players of education think that the research can only be implemented at the post graduate and at Ph.D. level

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and bachelors' level is only all about to only know the thing about their field. Now, time is changed and technologies make things faster and now information is available at one click. So, we also have to change our attitude towards bachelor's degree students and give a path in the direction of research-based solution. To develop research attitude a Learning Research Model (LRM) has been proposed as shown in fig. 14.
The LRM shows the opportunity to the students for learning through research aspects whereas educators are also updating their knowledge and learn through augment view from books to real-world. The graph represents the ideal progression of learning, moving from lower-level outcomes (remember, understand) to higher-level outcomes (apply, analyze, evaluate, create) and from teacher-centric to research-centric environments. Any particular problem needs a precise process to start and reach to its final stage. The LRM give an idea about the student's learning environment, where they stand and how to start on a problem, perceive a problem, how to handle it and learning through it from remember to create level. A suitable learning environment give chance and platform on each steps to a student as well as educators to enhance their research. For a good leaning environment is supported by good infrastructure, collaborations, educators, resources, vision and mission in the right direction.

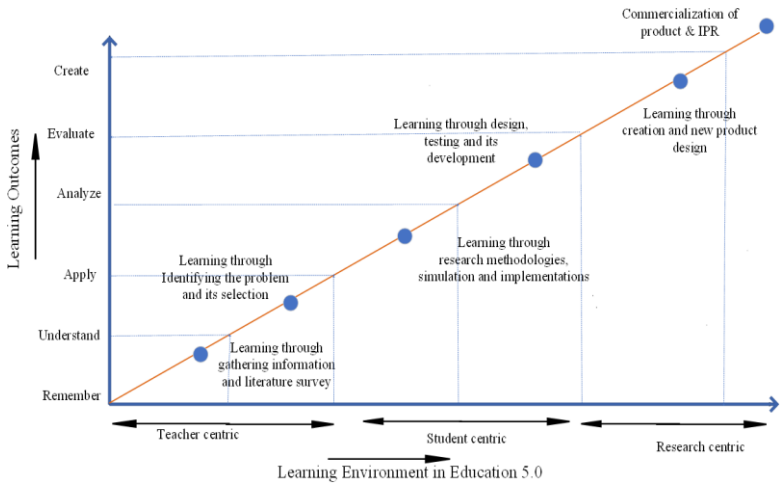

Fig.14. Learning Research model (LRM)

First Phase-Teacher centric: In this phase, students struggled to find out the problem and its identification by gathering information, reading, observing and its selection. Here, teacher guidance and knowledge are very important and student using the skill of remembering and understanding for learning in this phase.

Second phase-Student centric: In this phase, students are able to learn by more discussions, analyze different research methodologies, their advantages and disadvantages and selection/identification of problem and proposed new methods/model/simulation and also validate through design, testing, results and by comparing. This learning become more student centric and student are able to apply their knowledge to analyze and evaluate.

Third phase-Research centric: In this phase, student can think about creation by innovate new product, start-ups, commercialization of product, consultancy, patent and try to become research analyst for particular product. In the third stage student become independent and think as individual.

The aim of education 5.0 is to make students independent to create a value through research attitude & provide vision to think about society and critical thing developed by experiencing the different situations and level of research.

5. Conclusion

In conclusion, the rapid evolution of educational progress, exemplified by the transition and significantly impacted various sectors, including society, industry, productivity, and services. In a diverse and populous country like India, characterized by its linguistic, cultural, and socio-economic variety, delivering quality education presents a unique challenge. Traditional educational methods often fall short in offering personalized and flexible learning environments. The digital technology facilitates a more constructive and insightful learning experience, fostering innovation and research that equips students to excel in the digital age. Key areas for development include enhancing teacher competencies, adopting advanced teaching methodologies, integrating

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ICT, advancing curricula, enacting supportive policies and reforms, and investing in financial and physical infrastructure. Transition to education 5.0 heralds a new era of digitalization, creating opportunities for value-driven education and fostering a problem-solving mindset. By integrating cutting-edge technologies and innovative pedagogies, education 5.0 can effectively address contemporary educational challenges and ensure that quality education is accessible to all.

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