A Study on Digital Competency and Upskilling Among Faculty Members in Higher Education Institutions.

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ABSTRACT:
In the contemporary era, individual across all sectors are witnessing profound transformations in the workforce and work culture, largely driven by changes in working systems and organizational practices. Traditional methods of work are rapidly being replaced by dynamic, technology, enabled processes, reshaping how tasks are performed and how professionals adapt to evolving expectation. These shifts are not isolated or temporary, rather, they represent a continuous and accelerating transition influenced by advancements in technological know-how.

Today every individual is facing drastic changes in the work force and the work culture due to the change in working system. We are completely driven away from the traditional method of work force and even the work method is changing day in and day out. When we look into this we get only one answer and that is nothing but the advancement in the technological knowhow and implications of AI and ML. This paper is an attempt to understand the changing work culture and the methods involved in teaching. Today when we look into the teaching and learning capabilities of teaching faculties we will have to go deep into the system and understand the solutions for the same.

With these drastic changes specially Bangaloreans are faced with the challenges of trying to manage a higher cost of living that requires them to work for more hours. They have to deal with the fact that an increase in the hours they work takes time away from their daily routine like time to cooking, fitness and also family time. Through this paper it is an attempt to understand how the various fraternities are getting along with the changing time.

This paper is a clear attempt to understand how the teaching fraternity manage to upskill their learning ability and technical knowledge to manage the students with the changing life style.

Keywords: Upskilling, Technology, Changing work environment and Human Intelligence.

Introduction:

Indian education system is known for its innovation and creative methods of teaching and learning, we have been known for scholars from centuries and also most of the innovative teaching pedagogies are picked from the Indian

teaching methods. But with the changing time the teaching is also changing its point of view and the way it is reaching the students is also changing drastically. Today the scenario is very different compared to earlier period, today students have information but they need mentors to make them understand the importance of the information they have. The changing technologies and advanced learning process has taken away the curiosity of new and innovative things amongst the students, and that is a greatest challenge for all the teaching fraternity today.

The recent innovations in information technology are challenging our traditional notion of what it means to live a good and productive life, and to assure that the digital world reflects our ethical values. From the ethical issues associate with artificial intelligence, to the growing break down of trust, accountability, civility and consensus in online spaces.

Now let us get into the actual connect of this paper where the meaning of Ethics and Human values are connected. Ethics the word itself speak so high and loud about the commitment and value for what ever an individual do at his work place, here in this article the attempt is to understand the ethics a teacher carries towards his profession in changing era of learning. With three decades of teaching and learning one aspect I personally have experienced is subjects might not have changed a lot but the method of teaching the same has changed drastically. Today when we speak about the teaching methods, we will have to concentrate more on the ability to teach, ability to hold the class and the ability to reach mass is some of the major aspects. Ethics in teaching is nothing but fulfilling all the above features.

Further this study is to understand the human ability in teaching which has brought in remarkable transformations which has helped the students community to understand the subjects better. In the ancient times, education was almost monotonous and had no much of different approach, but today with the modern teaching which has evolved into a dynamic, student-centric profession that blends essential human abilities with advanced technological tools to foster critical thinking, creativity, and collaboration. The 21st century educator serves as a facilitator and guide rather than just a transmitter of knowledge as knowledge and information is readily available in abundance. In this scenario through this paper it is an attempt to understand the essential human abilities which are required for a teacher to fulfil the requirements for modern education.

Objective of the research:

- First to identify the need for appropriate skillset for the teaching profile.
- To create awareness amongst the teaching category about the need for upskilling
- To understand the benefits of unlearning and learning skills which would directly or indirectly help in increasing the output.
- To upgrade the technology which would make the life of teachers easier.
- To get updated with the changing and advance technology to be in the field of education.
- To benefit the student fraternity with the right approach to share knowledge and get connected faster to fulfil the needs of todays generation.

Research Methodology

- Secondary data is collected from the internet and reviews collected on some important data on prevailing skills and requirement of upskilling in education industry.
- Research papers and presentations are also considered as the secondary data to collect information to prepare this paper.
- Primary data from questionnaires & Reviews

Review of Literatures

- Exploring Teacher-Artist Partnership a model of CPD of supporting & enhancing Arts education in Ireland: A research Report.

Dr.Ailbhe Kenny and Dr Dorothy Morrissey in their paper presented during December 2016 have made it very interesting about the upskilling and need for the upskilling. This was the publication of Exploring Teacher-Artist

Partnership as a Model of Continuing Professional Development (CPD) for Supporting & Enhancing Arts Education in Ireland: A Research Report. The Government of France decided to introduce education and art as a combination, for which the teachers were also to be educated in the same line. Initially they faced some hitches, but the steps taken to implement the policy were excellent. In order to initiate the policy, the teachers were trained on phase base and later they were made to teach the students. It was also made sure that the teacher who is interested to upskill were only selected and they were trained in the area art and area of their choice. This resulted in better results at the end of the academics.

✓ Upskilling VET practitioners: technical currency or professional obsolescence? By Berwyn Clayton, Victoria University Regan Harding, TAFENSW-North Coast Institute Melinda Toze, Queensland VET Development Centre Mark Harris, Queensland VET Development Centre. This is the attempt made by the Department of Vocational Education Training to train their own teachers to help them train students better. The author has worked on the current situation then, where the organization deliver around 1.15 million courses to their stake holders. The targeted stake holders of the organization are students and industry professionals. This research was taken only to ensure that the Government of Australia has suggested for the betterment of the educational quality and VET practitioners were asked to be more flexible in their approach. This attempt of the research brought about a drastic change in the quality teaching and industry development in all aspects. The out come of the study was that, this entails organizations getting the climate right, adopting a strategic approach to maintaining currency; encouraging collaborative learning; learning about practice, through practice, in practice and facilitating updating for the here and now. It also requires individuals to accept responsibility for maintaining vocational currency. To actively facilitate this, there is a need to bring updating to the fore in performance management discussions and to entrench the concept of continuous learning in every initial teacher education program. This is where we can learn from the professions.

✓ HOW UNIVERSITIES ARE TEACHING BIM: A REVIEW AND CASE STUDY FROM THE UK - Zulfikar A. Adamu Lecturer & Tony Thorpe, Professor in Construction IT in Architectural Technology School of Civil and Building Engineering, Loughborough University, UK Building Information Modules is the next area where the upskilling was tested. Generally, effective learning by students requires a combination of methods, including lectures, 'isolated drill and practice', cooperative learning, use of narrative videos as well as problem-based and guided self-study, according to Bransford, et al. (2000) who discussed the principles of 'how people learn'. Hence, learning BIM can be achieved via teacher-led instruction in traditional lectures and/or lab tutorials, problem-based projects/coursework and use of web-based tutorials for acquiring practical skills in BIM technologies. This was the logic followed by the author of this research. The out come of the study were 1. Plan, phase and priorities, 2. Create an ecosystem of BIM, 3. Identify learning outcomes and industry needs, 4. Get teaching and administrative support, 5. Develop student-centered learning methods, 6. Form university coalitions for multi-disciplinary learning.

✓ Taylor-made for Teachers: Deskilling through increased competencies by Dr.Rober Runte, Faculty of Education, & Dr.Mary Runte, Faculty Management, University of Lethbridge. The main highlight of this research is, When professional labour is analyzed within the framework of the upskilling/down skilling or deskilling literature, neither model appears to accurately capture what is actually happening to knowledge workers: that teachers are being deskilled in terms of knowledge production, autonomous control over the work process, etc., but simultaneously upskilled in terms of implementation techniques. Here the author concentrates only on the teachers, he tries to prove that upskilling and down skilling are very important aspects of life during 1993 as there were new technologies, which had to be accepted by the teachers to upgrade themselves. Author

speaks about the upskilling upskilling tradition may also be criticized for its failure to acknowledge the segmented nature of the labour market. Further the author speaks about deskilling where he says that the removal of skills or responsibilities from a job category through the redesign of the work processes. The question then arises whether teachers are undergoing upskilling or deskilling, with the evidence open to contradictory interpretations. In the research author concludes saying that the teachers should upskill as and when needed and on the other hand to upskill they must de skill the outdated technology or learning/ knowledge they had acquired.

✓ Shifting Identity: new conditions and the transformation of practice – teaching within post-compulsory education by JAMES AVIS University of Wolverhampton, United Kingdom: The article explores the social and economic context of teaching within further education in England. It examines the lived experiences of lecturers working in the sector. It suggests that the attempt to explain these in terms of proletarianization or re-professionalism is limited, and argues instead that we are witnessing a transformation of teaching and learning. This transformation is informed by an understanding of the economic context in which the sector is placed together with an interpretation of the needs of learners within these new conditions. It is suggested that a social bloc has been formed of constituencies that share this understanding. The transformation of teaching and learning in the sector opens up new forms of practice and identities for lecturers. The challenge is to work on the good sense of these changes. This article examines a number of issues concerning the nature of teaching and learning in English post-compulsory education. However, the debates raised are similar to those found in other educational sectors and are also pertinent to societies who have experienced educational polices shaped by the new right. The paradox this article seeks to unravel is concerned with the apparently progressive models of educational practice surrounding post-compulsory education and teachers experience of the conditions and pedagogic context in which they work. Education is placed within a particular economic and social context: one that emphasizes the globalization of economic relations. In such a context the develop et of human capital as a means of winning competitive advantage becomes paramount. Value added waged labour and the key role of education in this process becomes pivotal. Author concludes his article with a open ended note as to education is a field which has to ensure that society looks for language of right, social justice and inclusion become appropriated by a reformist capitalism. The educational task is to ensure that it does not disturb aby of them.

✓ Upskilling India Building India's talent base to compete in the global economy, an article by team of researchers from IBM. New technologies, everchanging skills requirements and outdated curricula are challenging India's higher education system in its efforts to equip graduates with job-ready skills. To address these challenges, India's education leaders should consider providing students with requisite skills by partnering with industry, adopting new learning technologies and delivering experience-based, applied learning is the concept looked in this research. It was evident from the study that the higher education leaders and institutions need to evolve traditional educational models, address key challenges and industry and government partnership to keep up with today's ever-changing skills requirements. Study also reviles that there is huge gap in the skill required, when compared with the changing technology. The company emphasizes on the present population and industrial potential, it targets the present population, where we have a more youth base population where as maximum part of the world is moving towards the aging population. This positive position has taken maximum population towards the most looked upon situation that is industrialization and entrepreneurship. And India's economy and entrepreneurial community are becoming ever more vigorous. But India's ongoing growth and development is not assured. In our recent report on Indian entrepreneurship, 70 percent of India's venture capitalists surveyed indicated that startups are experiencing difficulties scaling due to challenges obtaining employees with the right skills. Of even greater

concern is that, according to estimates from a recent employability survey, as many as 70-80 percent of India's engineering graduates are reported to be functionally unemployable. India's executives surveyed in our 2016 report on the Indian economy said that improved access to higher-quality skills will boost productivity and efficiency throughout the economy, and 54 percent were eager to better promote skills development. This would reflect on various other areas of skill development, as a result educational sectors should be more open for skill-based education. And this require skill development amongst the faculty who train the students. The study has reviled the critical skill areas. Ability to analyze problems and draw conclusion, Ability to collaborate effectively and work in a team, ability to communicate effectively in the business context, and willingness to be flexible, agile and adaptable to change. The study further says that the present Indian education system has failed to provided what students need, industry require and society is looking for. It also emphasizes on the rooms for improvements in transferring relevant knowledge to students, providing access to students from a broad range of background and preparing them to be entrepreneurs. With the changing environment it is also understood that the students do not acquire the basic skills which is job readiness. The researchers conclude saying, the present education system has to change as per the industrial requirement, majorly the contribution is expected from the academic leaders, next comes the senior educators, corporate recruiter and trainers and finally educational innovators.

✓ Teacher coaching to upskill teachers and support pasifika achievement: An exemplar Kellie Spee, Judy Oakden, Dr.Ruth Toumu'a, Pale Sauni and Clark Taugalu Wellington New Zealand. This paper is on providing personalized support teachers to help them to engage with and improve Pasifica students' academic success encourages and supports its teachers to self-reflect as a way to improve their practice and participation. In order to improve the results of the students, the top management and the teachers took a collective decision to share additional responsibilities to the teachers by the management. The teachers were further provided with support like teacher coach, Specialist classroom teacher, middle management, teachers appraisal system, professional learning groups, external professional development consultancy. The role of the teacher coach is to provide an 'intentional disturbance', and to provide a looking glass for teachers to help them reflect on their practice. By working in partnership with the teacher, the teacher coach supports them to articulate what they are doing and, more importantly, why they are doing things in a certain way. The result of the study was the senior management, and teachers were able to identify a number of key benefits from the college decision to introduce the teacher coaching process. The result of the research was very positive, proving that the trained teachers in various skills can train the students in a better manner resulting in better results.

Skill related issues in work place and its impact

1. In the Indian working condition, we have been observing that the people start working from the age of 18, and India is one of those countries which is just above the poverty line. We have seen people losing their health on their job. But most of them fail in their life at a very early age to reach where they have to or they had dreamt to reach. What could be the reason for such a situation? If we analyze this we would be put to shock. There are many reasons for this kind of situation in individual's life. It could be due to social barrier or because of the financial situation. But these cannot be reasons for being under skilled.
2. Today when we turn back and see ourselves, we really feel very successful in life, immediately we would be stuck with one more question that are we really successful? Why are we in such a confused state of mind? What is the reason for such situation? Is it our mindset or are we been forced to feel so?
3. We will come across many responses for all these questions. The study says that learning is ever lasting process and we would be learning one or the other things in our lives. But understanding what is right and what is needed for my

profession is more important than learning without any goal.

4. We come across many people learning one or the other skills/art base or may be upgrading themselves in some technology, but how far is it relevant to their life is very important question to be answered by themselves. Today the world is all about micro and everything is a miniature, in such a situation it is the basic responsibility of an individual to minimize this thought process and be updated for the day and situation.

5. There was a time when people use to say that one should have learned all 64 skills, which are they, what are they is very irrelevant here. But one should be in a clear mindset to understand what does he need to be in the industry. For ex: and accountant learning tally or ERP for his position is acceptable. Where as same accountant learning coding or decoding would appear very irrelevant. This study is to show that every individual and industry has to upgrade themselves or they will be out of the rat race.

6. Today every job looks for a different skill, which would make the individual stand apart from the crowd. But the unfortunate thing is people are not really understating the situation. People are just giving reasons to escape from updating themselves. The banking sector is a major example for this. It was decided by the RBI to computerize all the nationalized banks and in turn they insisted all their employees to upskill themselves with minimum computer knowledge. Many couldn't do thinking that the decision might not be really serious and they can run the show without much pressure. But bank was very strict on its own decision, resulting most of the senior employees had to take voluntary retirement and settle. This resulted in many new job opportunities for technically sound people.

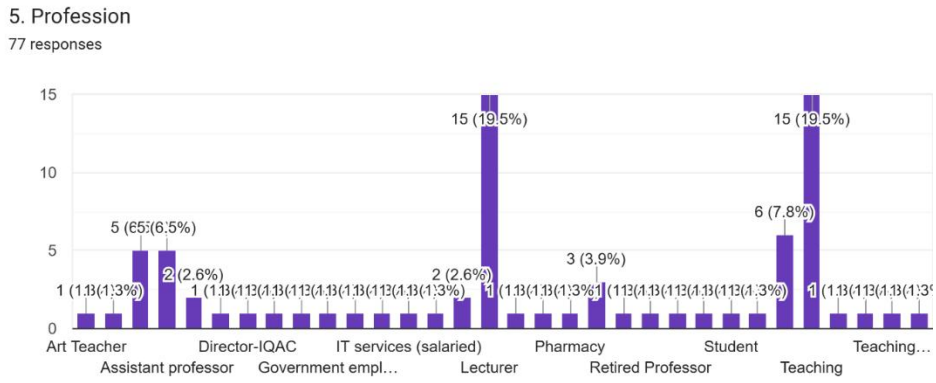
7. In my own experience I have come across many Post graduates in engineering are working with banks today. Likewise, many commerce graduates are working in software industry in the back end to support the system. So, it is evident that upskilling is need of the hour today.

8. Further when we enter the other part of the economy, today we see mostly software base industries, where all the operational aspects are computerized. This kind of working atmosphere is creating more competition amongst the people working but it is not helping improving the competency, reason being, people are not ready to upgrade to the speed industry is moving. The only solution for this situation is upskilling.

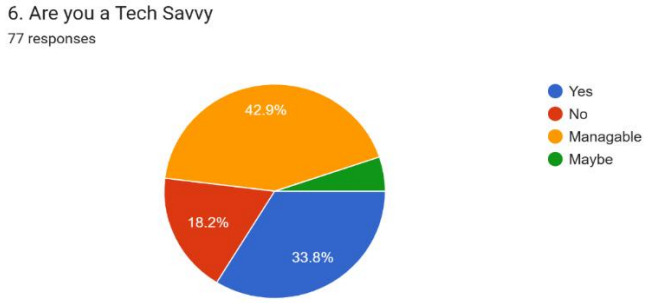
Review on primary survey of upskilling – Benefits of upskilling in work culture.

This review is with a sample size of 77 teaching and academic professionals, where the data speaks the requirement of upskilling and upward knowledge for all the teachers to survive in the industry.

1. Professions from the information is collected.

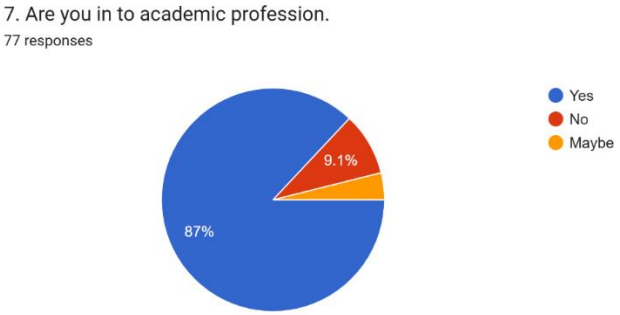


2. Teacher being tech Savvy,



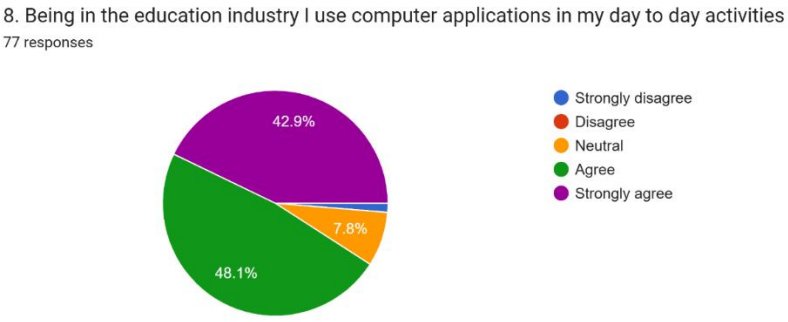
This data is so clear that the teacher or the faculty members from whom the data is collected are yet to understand the term if they are technically sound, out of the total population, only 33.8% is clear that they are aware of the required technology to be in the industry, 18.2% is also clear that they are not technically sound. But the major portion of the population is still confused with 42.9% of the population whether they have the right skill set to be in the industry.

3. This question speaks about their profession which has given a clear-cut information.



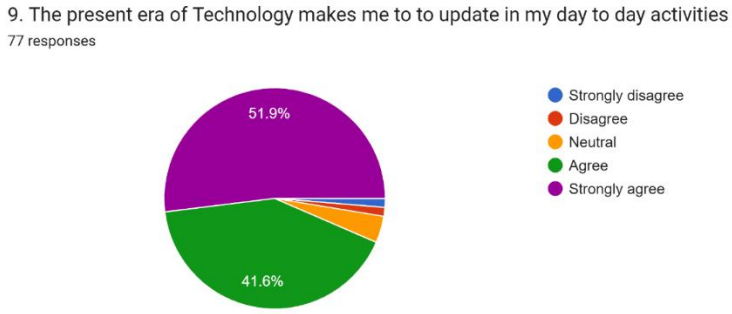
87% of the total population is clear with their profession, and again somewhere around 4% is not clear about their profession as some of them are in to teaching as well as leadership positions. But the primary responsibility is taken as teaching only here for the purpose of information.

4. Usage of computer in daily routine is the information sought here in this question.



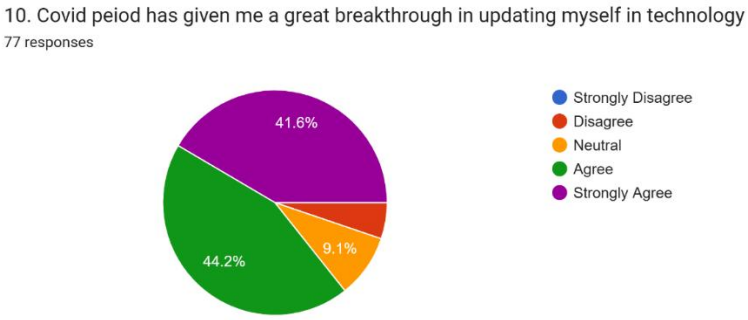
Of the total population around 91% of the population has clearly agreed that they need the changing computer application in their daily routine. By this it is evident that the digital era has not put the teaching fraternity in to difficulty, but they have adopted it in a very comfortable speed.

5. The present era of technology makes me to update in my day to day activities.



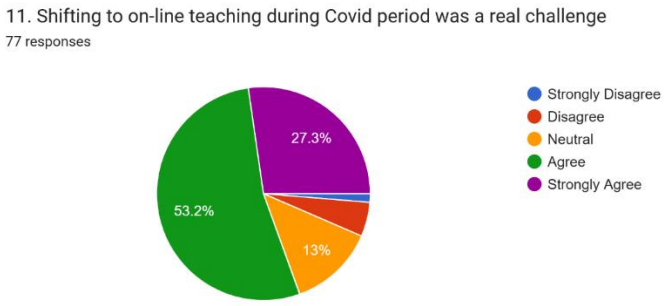
This is a clear indication of the statement "survival of the fittest" where 93.5% of the population feels upgrading, updating and upskilling is the need of the hour and not burden. This data makes it clear that the teachers are not under pressure to upskill but they are open for such experimental change in their career path.

6. The below data which speaks so strong about the reason for upskilling is the Covid period.



Teacher agrees that situation like Covid made them to come out of their comfort zone and to upskill their knowledge in all aspects. There is not even a single person who has disagreed to the fact that technological knowhow and upskilling is the need of the hour.

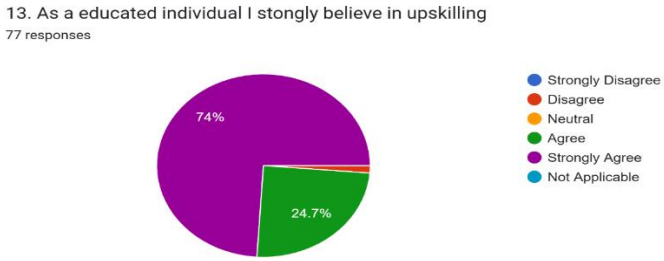
7. The majority of 80.5% of people have made this transforming change during the Covid time which clearly indicates the need for survival.



As we are aware that the human is one of those animals which can survive in any situations, Covid was one such situations which made even the teaching fraternity to upgrade their skills to survive in the industry. In fact teachers were the most active people during this era, even though the students did not give their 100% for learning, where as teachers gave their self to bring in that one required change. The above data speak so loud about the transformation of teachers and

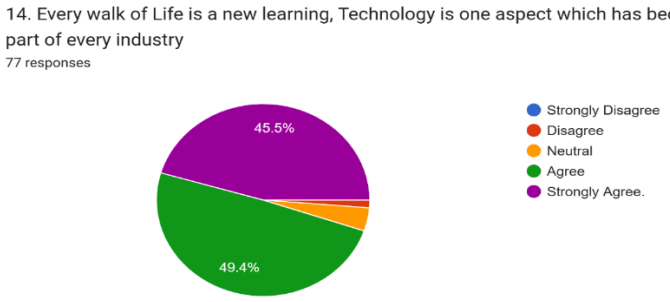
also unskilled their pervious methods of teaching by adopting to new methods of teachings.

8. The need for upskill is very clear with the below data:



Of the total sample size 98.7% has completely agree that upskilling the need of the hour. Without the required skill it is not possible to be in any of the profession. Specially professions like teaching, hospitality or any service industry for that matter, upskilling is the need of the hour. Thanks to digitalization where people are willingly updating their skills to be in the relevant industry.

9. Is upskilling essential for our daily life?



The above data makes it very clear that technology is the base for every industry today. Even if it is manufacturing, service industry even security and safety of nation, everything depends on the technology

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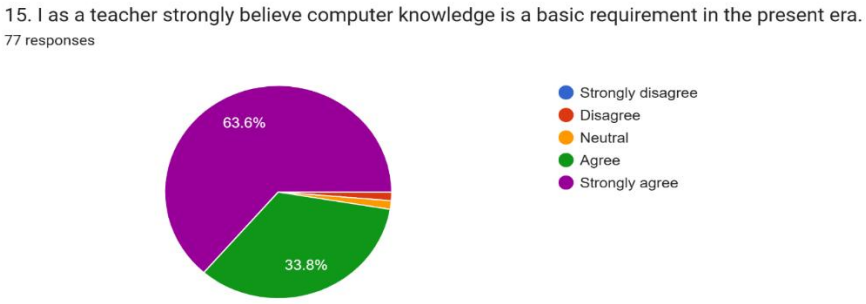
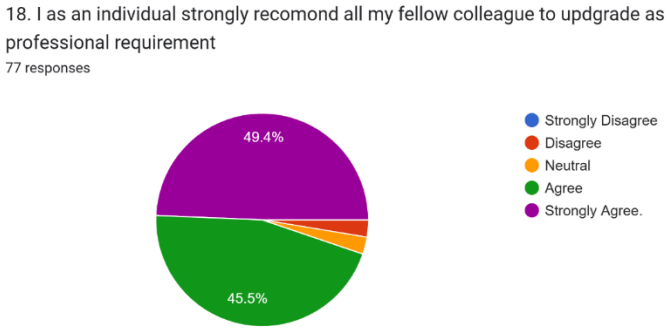
10. The need for digitalization is completely understood by the teachers and the data below speaks volumes.



Out of the total population, 97.4% completely agree to the fact that the computer knowledge or digital knowledge is basic requirement in the present era of learning. So the outcome of this survey is so clear that even if you are a teacher

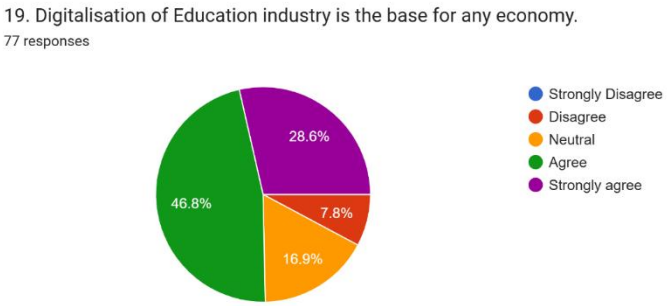
teaching management subjects of pure science subject knowledge of computer is a must.

11. The data below not just speak about the individual opinion about upskilling but also speaks so loud about the need of the hour .



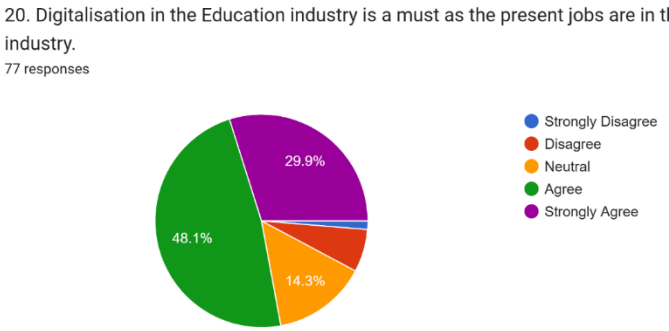
94.9% almost 95% of the people from the data opine that upskilling is not an option but it is the need of the hour. The change in the process have brought in this strong statement in the minds of the teaching fraternity.

12. The next information which is a direct hit on to the society is so strong with the information that the data collected displays the facts.



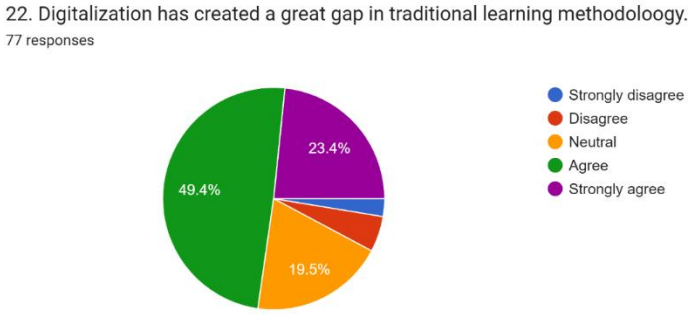
Of the total population 75% is of the opinion that the major part of the revenue can be upgraded only if the industry is technically and digitally strong. This is the era where even we are using digitalization for a small monitory transaction and teachers being the back bone of the economy they believe that digitalization can make a huge difference in the economy and it is true as well.

1. Today majority of the industry is software based and anything and everything is with a click of a button, digitalization is no more an option. The following data speaks it clear.



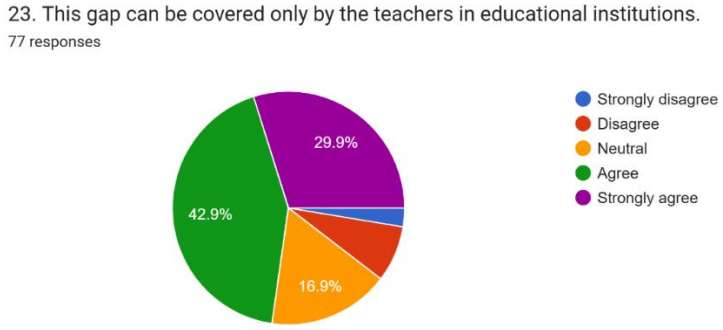
Again 78% of the population is of the opinion that digitalization is a must even for the education industry as most all the jobs in the market today are digitalized. Even the lowest of al jobs, goods carriers are digitalized and weighing machines are digitalized. So for teacher there is no other option than getting upskilled to help the student fraternity to be ready for the job market.

2. Has the concept of digitalization created a gap in the industry?



The source clearly shows that 73% of the population is clear that digitalization is a must, but still 19.5% is yet to digest the fact that they need to be upskilled digitally. This gives us a clarity that if there is any gap in the industry it is all because of the people who are not upskilled.

3. Further the survey also concludes that the only solution for such gaps in the society is only through basic education which is the responsibilities of the teaching fraternity.



73% of the population takes the responsibility that the gap can only be filled by the teachers. This could be teachers from any grade, or it is the other way around that the teachers from all grades and levels are responsible for filling the gap in the society.

4. It is an attempt to understand the need of upskilling through this survey and to make the teaching fraternity to get along with the changing pedagogies of teaching. an attempt to understand the

Gaps in the research:

This study clearly establishes the importance of upskilling and digital competency among faculty members: however, several research gaps can still be identified. The reason for identifying these gaps is to better the understanding of research and to work more closely to have constructive analysis and outcome. Some of the gaps in this papers are:

a. Lack of Focus on specific skill areas: The study broadly discusses upskilling and digitalization but does not identify which specific technical, digital or pedagogical skills are most required by faculty members in higher educational settings.

b. Limited analysis of challenges in upskilling: While the study highlights the importance of digitalization, it does not deeply

examine the barriers faced by teacher, such as lack of training opportunities, institutional support, financial constraints, resistance to change, or technological infrastructure issues.

c. Lack of student perspectives: The research focuses only on faculty perceptions and does not include students' opinions regarding the effectiveness of digitally upskilled teachers and technology enabled teaching methods.

d. No measurement of impact on teaching effectiveness: The study identifies positive attitudes towards upskilling but does not measure how digital competency actually improves teaching quality, student learning outcomes, academic performance or employability.

e. Post-COVID transformation not deeply explored: Although COVID-19 is identified as a major reason for digital transformation, the long-term impact of pandemic driven upskilling on teaching practices and institutional development has not been comprehensively analysed.

Conclusion:

The analysis of the collected data clearly indicates that upskilling and digital competency have become essential components of the teaching profession in the modern educational environment. The findings reveal that a majority of faculty members acknowledge the growing importance of technology and digitalization in higher education and professional survival. Although only 33.8% of respondents are fully confident about being technically sound, and 18.2% openly admit lacking technical expertise, a significant 42.9% remains uncertain about whether they possess the required technological skills. This uncertainty highlights the urgent need for continuous training, awareness and professional development initiatives among educators.

The study further demonstrates that faculty members possess strong professional clarity, with 87% clearly identifying teaching as their primary profession. At the same time the emergence of multiple academic and leadership roles indicates the evolving nature of the teaching profession. The finding also show that 91% of respondents recognize the necessity of changing computer applications in the daily work, proving that educators have gradually adapted to the digital transformation brought into education.

An overwhelming majority of respondents strongly agree that upgrading, updating, and upskilling no longer optional but essential for professional survival and growth. Nearly 93.5% of faculty members consider upskilling a necessity rather than a burden, indicating a positive attitude towards learning new technologies and teaching pedagogies. The experience during the COVID-19 pandemic acted as a major catalyst for this transformation. Teacher were compelled to move beyond traditional classroom practices and rapidly adopt online teaching tools, digital platforms, and innovative teaching techniques. The data confirms that educators responded positively to these challenges and embraced technological change to ensure continuity in education.

The study also highlights that digital literacy has become a fundamental requirement in every profession, particularly in teaching and service oriented industries. Around 97.4% of respondents agree that computer and digital knowledge are basic necessities and no more an additional skill in the current era. This finding emphasizes that regardless of subject specialization, teachers must possess technological competence to remain relevant and effective in the education sector.

Further, the respondents strongly believe that digitalization contributes significantly to economic growth, institutional development, and employability. Approximately 75% of the population opines that revenue generation and industrial growth are closely linked with technologies strength and digital infrastructure. Similarly, 78% believe that digitalization is essential even in the education industry because modern job markets are predominantly technology driven.

However, the study also identifies a gap where a section of faculty members still hesitate to fully accept digital upskilling. Around 19.5% of respondents are yet to completely adapt to technological advancement. This gap suggests

that institutions must focus on structured faculty development programs, digital training workshops and continuous professional development to create a future-ready education system capable of meeting the demands of the Modern Education System.

Overall, the study highlights that teachers play a vital role in bringing the gap between academia and industry, and continuous upskilling is necessary to prepare students for the evolving digital world.

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