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HOLISTIC AND MULTIDISCIPLINARY EDUCATION

Editors

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FROM THE EDITORS' DESK

Multidisciplinary and holistic education aims to develop the diverse capacities of human beings in an integrated manner. This type of education will help to build versatile and well-rounded individuals well-equipped with twenty-first-century skills and abilities in diverse streams. A multidisciplinary approach in education is often seen as the ideal way to tackle complex problems and will be essential for India's continued success in the global economy. Therefore, "undisciplining of knowledge" is a need of the hour and churning out "undisciplinarians", who don't follow only one discipline of knowledge throughout their life. Multidisciplinary education is an educational strategy combining multiple disciplines to create a holistic learning experience. It is designed to foster a deeper understanding of the subject matter through the lens of different disciplines. This approach encourages creative thinking, critical analysis, collaboration, and communication skills. We are indebted to Sr.Landrada Centre for Research, St.Ignatius College of Education(Autonomous), Palayamkottai, for rendering the support to publish this edited book "Holistic and Multidisciplinary Education".We congratulate the authors who have contributed papers to the reader. The editors of this book thank the management and Rev Sr A.Gemma ICM, Secretary of our college, for their valuable support in publishing this book. We hope this book will be helpful for students, teachers, researchers and academicians.

Editors

Rev Dr L Vasanthi Medona

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HOLISTIC AND MULTIDISCIPLINARY EDUCATION

CONTENT

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CREATIVITY-DRIVING FORCE IN IMPROVING TEACHING AND LEARNING

Vasanthi Medona L
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Introduction

In today's inter -connected world, higher education is faced with preparing students for a complex environment. Beyond higher education, our graduates need to be creative to survive and prosper in an ever-changing world. Creativity becomes a force of great value when it is applied to causes that benefit humankind and the world at large. Creative thinking tends to discover and explain the nature of things in a new way or create new ideas without any precedent. Creative thinking has many characteristics such as flexibility, maturity, originality, problem sensitivity, criticality, independence, detail, ability to solve problems in new ways. In learning and teaching, the traditional teacher-centered transmission model of learning has now shifted to a student-centered model where learners are prepared to be creative in an increasingly complex environment. Learners need the skills and creative approaches to cope successfully.

The rapid changes of the world are influencing education in many ways and so we need to think about changes in the teaching-learning process, and to aim at recognizing the needs of individual with the new needs of the society. From time to time the methodology, philosophy and sociology of education change from time to time. This needs creative thinkers in every field of life. This can be achieved only through teaching for creativity through creative teaching in adopting new ways and means in curricular transaction. Creativity is not a new term in the field of education. Creativity in education and society are inevitable because the changing society always needs creative thinkers. Educating the common people for creativity was the major aim of education at the ancient time. But only few people could get the opportunity to be trained for creative thinking. According to Aleinikov (1989) creative pedagogy is the influence of educational environment on the learner while acquiring knowledge in a subject through certain study material which is differing from the higher achievement in subject area. He also mentioned that creative pedagogy will help the learner to rise from the object of influence to the rank of a person with creative thinking instead the

transformation of traditional study material to describe and demonstrate the facts. Creative pedagogy has some creative goal. In an increasingly unpredictable and swiftly changing world, human creativity has popularly been recognized as a catalyst for innovation, survival, persistence and adaptability. Creativity can be viewed as a process of interaction between the personality (or the person's inner world) and the reality than as the process of creating something new (Levko, 2004). Pedagogy in general is defined as the study of the process of teaching, then creative pedagogy is defined as the science and art of teaching creatively (Aleinikov, 1989). According to the views of Ismuratova (2016) categories of pedagogical activity optimization is a purposeful selection of the best teaching and learning option by the teacher, which provides most efficient solutions of education and training challenges and during relevant time. Pedagogical creativity leads to self-fulfillment of the individual, psychological, intellectual forces and abilities of each teacher. (Ibragimkyzy, Slambekova, Saylaubay and Albytova, 2016). The concept of pedagogic creativity is of great significance in the present educational scenario. Its importance is noticeable from the

point of view of a pedagogue and also the one who is benefitting from the pedagogue. It is a vital element in any successful educational system. Though we consider the concept of pedagogy as something which centre around the process of teaching, it also directly affects the growth and progress of learners. From a different perspective, this concept can be also be considered significant to the professional development of teachers as a reagent for professional motivation.

Going beyond "what is creativity" to "where is creativity" -Creativity is essential to tackle the social, cultural and environmental issues facing communities in the future. Creative approaches are required if society is to respond positively to the challenges and responsibilities associated with rapid change, uncertainty and adversity. Schools and communities that equip students to be creative will generate individuals capable of fuelling a vibrant and innovative cultural, social and economic life. Individuals acting together transform society. Social cohesion, environmental sustainability, economic prosperity and effective governance will depend on people's ability to unlock their creative potential and form new connections

and interactions. School systems cannot afford to ignore the mandate to transform the way we educate young people so that their creativity is enabled.

The following four statements in an attempt to encapsulate the major reasons why enabling creativity should be a priority in the education of our young people

- **Creativity enables individuals to structure rewarding and fulfilling lives-**The world that our children face will be complex, ambiguous and uncertain. They need to be equipped with curiosity and confidence in order to exercise choice and respond positively to opportunities, challenges and responsibilities, to manage risk and cope with change and adversity. A creative life generates excitement and personal delight. Creativity also emerges from the struggle to deal with what is dark about ourselves and the surrounding world.
- **Creativity stimulates learning and enhances literacy-** With creativity, children are more likely to make full use of the information and experiences available to them and extend beyond habitual or expected responses. When children are encouraged to think independently and creatively, they become more interested in discovering

things for themselves, more open to new ideas, and keen to work with others to explore ideas. As a result, their motivation, pace of learning, levels of achievement and self-esteem increase.

- **Creativity is a driving force of economic Growth-**Today's global economy increasingly runs on knowledge, creativity and innovation and the ability of nations to attract, retain and develop creative people. Knowledge, imagination and individual creativity are the wellspring of innovation, and the ability to innovate is increasingly acknowledged as the critical corporate asset of the 21st century. Creativity, innovation, inventiveness, entrepreneurship and enterprise are valued social capital.

How do Schools Foster Creativity?

Creativity is a constant feature of the school experience. When students gain new insights about solving a math problem or when they produce genuinely interesting projects, they are manifesting their creativity.

- Creativity in schooling can be seen as an approach that is brought to learning activities a mindful, open, flexible, critical, and experimental way of being.

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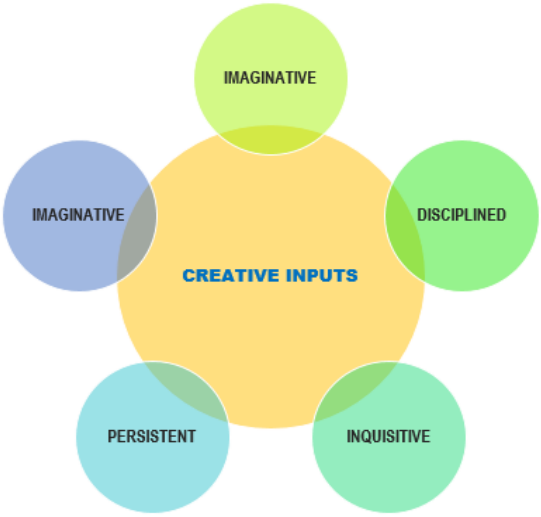
- Schools help students develop their dispositions for creativity in a number of different ways: through everyday teaching strategies that foster creativity; by teaching creativity directly; and through programs that provide rich opportunities for creativity.
- Everyday aspects of the classroom that foster creativity include: encouraging students to pose questions and share their insights and ideas; helping students to identify problems and issues; providing opportunities for discussion and debate; and encouraging students to be active participants in their own learning.
- Creativity thrives in classrooms that support personal interests and engage students in challenging tasks. Teachers also teach creativity directly. For example, there are techniques to improve creative thinking skills such as approaching tasks with fluency, flexibility, and openness. Teachers also help students develop creative metacognition, that is, the ability to evaluate one's own creative strengths and limitations as well as when and where to be creative.
- Another approach to setting conditions that foster creativity is the integrated program, where the learning

requirements for several different courses are combined into a single project. The merging of ideas and the cross-subject connections that students make often stimulate larger leaps of creativity than typically occur within individual courses. Examples include new house construction, environmental leadership, renewable energy technology, and musical digital media. School-community partnerships also provide opportunities for creativity.

- Programs such as Learning through the Arts foster creativity by bringing local artists into the classroom to plan and teach curricula with classroom teachers and by developing creative school-based and community-based projects. Critical thinking has also been identified as an essential component of creativity21: the process of creativity is incomplete if the individual lacks the capacities necessary for assessing the process and products of creativity. A comprehensive model that incorporates the competencies of both creativity and critical thinking has been developed and adapted as a tool for creativity measurement suitable for the school context. The model describes five creative habits of mind and 15

sub-habits.22 This tool provides a formative assessment of creative thinking that can be used by teachers and by students to assess their own creative habits.

The following picture shows the five habit to enhance creativity in an individual.



Developing skills for innovation

Creativity carries indirect benefits. Creative explorations give students experiences with situations in which there is no known answer, where there are multiple solutions, where the tension of ambiguity is appreciated as fertile ground, and where imagination is honoured over rote knowledge. The following figure shows the three main sets of skills for innovation.

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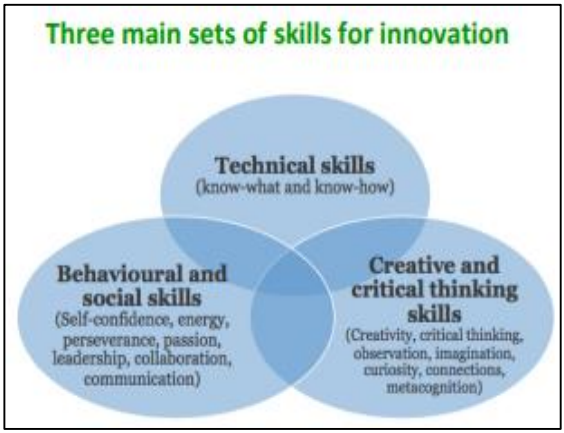

Creativity and technology in education

Creative teaching alone is a complex and open-ended arena. Incorporating effective uses of technology for teaching is also complex on its own terms. So things become more complex when these two intersect, as they must in 21st century classrooms. Mishra, Koehler, and Henriksen (2011) have argued that the best uses of educational technology must be grounded in a creative mindset that embraces openness for the new and intellectual risk-taking. This is a tremendous challenge for any teacher, but especially new teachers. It has not been addressed in great detail by teacher education, professional development, or educational policy. Contemporary technologies often bring new possibilities for people to be creative. In classroom terms teachers must understand the range of ways in which technology can

present content creatively, and see how this intersects with different pedagogies. Since technologies emerge and shift continuously, a tool-based focus is akin to a moving target. Creative real-world approaches to teaching might allow us to also consider how technology helps us view and learn content in original or compelling ways. It allows us to create content, rather than summarize and repeat it.

Three stands of influence for approaching creativity in 21st century education -Our goal in this paper is to lay out a broad plan for action. We do not provide this in micro-detail because to do so would be challenging (if not impossible), given the range of settings and variables in education. But we do wish to introduce the idea that each of these three arenas of teacher education, assessment and policy are crucial to moving these ideas forward. Specifically, teacher education focused on creativity is necessary for creativity to be infused into classrooms. Teacher training must support repurposing of technologies in the classroom and teaching approaches that creatively engage students with content. However, creative student work must also be assessed requiring an emphasis on the assessment of creative work. Finally, none of this is possible

if we do not focus on the broader policy goals of integrating technology and creativity across the policy framework of education. Thus we argue that a focus on these three areas is the first step towards locating creativity within educational systems.

Teacher education

A teacher's pedagogy is often a primary driver of how students develop and learn. Teachers who model creativity tend to fluidly enhance, support and develop the tendency in their own students (Amabile, Conti, Coon, Lazenby, & Herron, 1996). We must build teaching dispositions that take advantage of the affordances of new tools for learning and thinking creatively, in ways not possible without new technologies (Ertmer et al., 2012). But effective teaching is difficult in itself, even without the added elements of creative and technology-savvy practices. How do we support the development of creative pedagogy, along with effective use of classroom technology, to support the 21st century teacher and student? Teacher education programs are often the core driver of how new teachers see the profession, how they interact with students and develop their classroom practices and repertoire. Therefore, it becomes important

that we see teacher education as a key site in developing a creative mindset and practices that encourage the use of new technologies creatively in the classroom. Yet the role of creativity and technology in teacher education is rarely clear, varying at the school/program level. It is essential to build a platform for teacher education programs that addresses creative, technology-rich approaches and pedagogies. In brief, the research and scholarship in this area suggests the following key recommendations.

Teacher education / teacher professional development recommendations

Develop Teacher Education curriculum that integrates technology and creativity across the program- Current teacher education curricula may give some emphasis to teaching creatively with technology though even there it appears spotty at best. The other aspect that of teaching to enhance creativity in students, and to explore the affordances of technology to do so, has received even less attention. Integration of ideas related to creativity and technology need to be across the program and curriculum. Research has shown that highly creative teachers tend to engage in a variety of creative pursuits that they draw into their teaching

practice (Henriksen & Mishra, 2015). Teacher education students could be encouraged to actively spend time in creative interests, and incorporate these into lessons and activities through technology. This might include coursework that specifically asks new teachers to "play" with approaches to using technology in the curriculum in creative lessons on content. Opportunities to engage in lesson planning focused on real-world, cross-curricular and novel approaches to content and technology (TPACK) would help build creative teaching skills, as a part of a teacher 33 education curriculum. Examples of such practices can be found in the special issue devoted to teacher education, creativity and technology (Henriksen & Mishra, 2015), and in Koehler et al. (2011).

Specific course / programs focusing on creativity and technology-Even as we seek to suffuse a "creativity mindset" across programs, we see the need for specific courses that target creativity and technology and their use in the classroom teaching/learning context. This includes more theoretical knowledge of creativity into teacher education curricula for pre-service teachers, particularly in emphasizing the relationship between creativity and student

achievement or teacher effectiveness and impact (DeSouza Fleith, 2000; Henriksen & Mishra, 2015). Other researchers have highlighted the ways that TPACK can be used as the basis of creative approaches to technology integration (Koehler et al., 2011). A theoretical understanding of creativity is something that should connect to practical applications. Teacher education students must have the opportunity to consider how creativity works in their own lives and practices, particular with regard to technology and tools for teaching. See Henriksen and Mishra (2015), and Koehler et al. (2011) for examples.

Identify / use a framework that connects creativity and technology to curriculum guidelines

Curriculum guidelines are overarching structures that determine how specific curricula are designed. It is important that the dual-goals of teaching creatively with technology, and teaching for enhancing creativity with technology, be incorporated in these guidelines. The use of theoretical frameworks (such as the systems model of creativity or TPACK) give cohesion to any research study or paradigm. Without a good framework guiding the work, it is hard to move beyond ad-hoc ideas and examples. While

frameworks currently exist for creative education, or for technology infusion in education, it is difficult to find a framework that integrates the constructs. Developing such a framework would guide teacher education programs on a path that blends these ideas into their curricula.

Assessment

Due to its open-ended nature creativity is difficult to evaluate and assess. However, if creativity is to become a part of the educational process, developing a range of assessments is essential. The arena of assessment of creativity is rife with multiple challenges, which tend to present as dichotomous tensions. We see these tensions as inherent and not ones that can be wished away. As educators we have to contend with these dichotomies, and find a resolution or compromise that works in our specific context. We list a few of these tensions below.

Psychometric vs Behavioral

Most creativity research has focused on identifying psychometric characteristics of creative individuals (such as affinity for risk-taking, cognitive flexibility, etc.). At the other extreme are behavioral measures of creativity (such as

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the alternative uses test, where participants are asked to come up with as many alternative uses for a random object).

Process vs Product

This distinction is important in the classroom where the teacher may focus learning processes for creative solutions (sometime irrespective of whether the final result was judged creative or not) or may focus on the output of the creative activity. Most of the current discourse on assessment has emphasized the process aspect, though there are a few approaches to considering the final product developed by students. A product is concrete and more amenable to evaluation, but process may be more important to teachers since its respects the whole learner (process may be idiosyncratic and playful, which also brings up another challenge). For example, an ICT approach tends to focus on the final output or product, compared to the art teacher concerned with process. In considering both creativity and technology, assessment has to consider how to navigate between and consider both product and process, for effective, creative uses of classroom technology.

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Individual vs Group

This is particularly important in contexts where teachers give students open-ended, group projects. These projects are more authentic (in being similar to actual work-place situations) but prevent the easy assessment of the individual contribution, which has typically been the mainstay of assessment in schools. In other words, how do we get students to engage in the kinds of collaborative and open-ended products that support creativity.

Domain general vs domain specific

This is an ongoing problem and dispute among most creativity researchers. Evaluation becomes more challenging unless we start from a place of solid agreement on whether creativity is located specifically within domains, or whether it is a more general and extendable thing. The overwhelming theme of creativity and assessment revolves around the challenge of navigating tensions in evaluating and assessing creativity. It is important that we not focus on just one approach towards assessment but explore a range of alternative assessment formats that consider how creativity and technology intersect. These allow for the dynamic, flexible, application of idea across learning contexts.

Assessment recommendations

- **Recognize that assessment of creativity** (with us without technology) exists within a range of tensions/dilemmas Issues related to the assessment of creativity have a range of dimensions (individual group, process product, domain general domain specific etc.). These are not problems to be solved, but essential tensions to be resolved in a context sensitive manner. This is important when we consider technology-driven activities and assignments, where often the mere inclusion of technology is seen as being creative. Clearly this is a far more complex problem, where the role of technology needs to be better understood and articulated so that creative teaching, and teaching for creativity, (using ICTs) can be better understood.
- **Use alternative forms of assessment** triangulation through technologically sophisticated, dynamic and flexible approaches. It is essential that we explore a range of different and alternative forms of assessments (i.e., open ended versus more constrained tasks) to allow for the dynamic, flexible, triangulation of the construct as it plays out in different learning contexts. Technology can play an important role in terms of allowing teachers and learners to both easily

construct creative artifacts. However evaluating these artifacts (and the process that led to their construction) is complex. It requires evaluating the artifacts (or the process) through multiple assessment techniques (formal and informal, process and product, formative and normative).

- **Evidence based research on creativity and technology from the classroom** Finally, there is clearly need for research connected to these different learning contexts where creativity and technology co-exist. These contexts differ in a range of dimensions. This requires a new form of research, that both honors the complexities of practice as well as the broader goals and themes of learning and creativity, and the role of technology in the process. Only through such research can we offer sound, data-driven guidelines for future educators, scholars and researchers.

Conclusion

Fostering creativity in students helps them to develop resilience, resourcefulness, and confidence preparing them to address life's challenges. Creativity also carries its own intrinsic value. Developing creative sensibilities and habits enhances quality of life for teachers and students. Creativity carries indirect benefits. Creative explorations give students

experiences with situations in which there is no known answer, where there are multiple solutions, where the tension of ambiguity is appreciated as fertile ground, and where imagination is honoured over rote knowledge. Research suggests that creative pursuits also help students to learn more effectively in other domains. Studies have documented the relationship between rich in-school arts programs and the creative, cognitive, and personal competencies needed for academic success.

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TECHNOLOGY-ENHANCED ASSESSMENT: TECHNIQUES, SEIZING OPPORTUNITIES AND ADDRESSING CHALLENGES

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Introduction

Technology-enhanced assessment can also play an important role in comparative surveys related to individuals' acquisition of new skills, carried out at national and international levels. In most of these studies, ICT is both the assessment content and the tool to carry out the study. Technology-enhanced assessment can play a key role in meeting the needs formed by the digital society in the context of a systemic reform of educational systems. If pedagogically rather than technologically driven, such an assessment can support a new vision of learning characterized by Learner-centeredness. The learning environment encourages learners' active engagement. The personalization of learning. The learning environment is sensitive to individual differences. The social nature of learning. The learning environment encourages scaffolder

cooperative learning. Emphasis on high-level skills such as creativity, problem solving, linguistic and verbal reasoning. In the transition from the traditional school to that of the digital society, one of the main changes regards the underlying learning paradigm. The traditional school is based on the idea that learning is the result of a process of transmission of knowledge from a teacher to a learner. This model is centred on the teacher who covers the standard content by lecturing in front of a class while students listen and then study at home. In this model, assessment is mainly aimed at identifying whether stude5rnts can recall facts or are able to solve given tasks; thus, major emphasis is given to the grading function.

Assessment is playing an increasingly important role in education. Whether it is the ubiquitous monitoring of students' achievement as they progress through school; the obsession with examination results or the use of aggregated data to judge the quality of a school or the education system as a whole, assessment is increasingly the driver of school, teacher and student priorities. Yet, in a world transformed by the advent of the internet, mobile phones, downloads and apps, the impact of such novel tools on this diet of

assessment activity seems so far to have been remarkably small. The apparent anomaly of a world transformed by the availability of digital tools for almost every purpose, in contrast to the continuing domination of traditional approaches to assessment, prompted a team of researchers based at the Graduate School of Education to explore the causes and significance of this situation further. They conducted a literature review to establish the current range of purposes for which digital assessment tools have been developed and to identify what might be the factors inhibiting the further spread of the use of such tools. Starting from the premise that there is a pressing need for assessment tools capable of documenting students' progress in relation to the knowledge, skills, dispositions and attitudes necessary to equip them for a changing and increasingly digital world, the researchers' aim was to identify both the opportunities and the risks associated with the greater use of digital technologies in assessment.

Technology-enhanced formative assessment

As online learning is increasingly adopted and implemented in educational institutions, many educators are faced with the challenge of devising and implementing effective

pedagogical practices that truly advance student learning. Online learning requires a profound pedagogical shift “from systems of teaching and supervision of learning to systems of learning and facilitation of learning” (Haddad & Draxler, 2002). Both online learning and formative assessment require a complete review of students’ and instructors’ roles, relations and practices (Vonderwell, 2004; Coppola, Hiltz, & Rotter, 2002). To be effective in online learning, an instructor needs to change from "teacher-centred to student-centred, lowinteractor to high-interactor, and low-initiator to high-initiator" (Dennis & Ferdig, 2008), from being the sole expert to facilitator, coach or mentor (Smith, 2009). The students are no longer passive recipients of knowledge and information. They are, instead, co-creators of knowledge and information with the help of an instructor playing the role of a facilitator (Alias & Luaran, 2016). Likewise, for an effective formative assessment, the teacher takes on the role of facilitator and coach and "no teacher will discover how empowering formative assessment is, until s/he begins to act in a way that involves the students in their learning" (Black et al., 2003, p. 99). In a sense, formative assessment would be better facilitated and delivered through online or blended

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learning environments that are effectively designed and deployed. Conversely, using effective formative assessment activities would enhance student learning in online or blended learning environments.

Computer Assisted Assessment

Computer Assisted assessment (CAA) is a common term for the use of computers in the assessment of student learning. Various other forms exist, such as Computer-Aided Assessment, computerized assessment, Computer Based assessment (CBA) and computer-based testing. Online Computer Based Assessment has existed for a long time in the form of Multiple Choice Questions (MCQs).Computer Based Assessment is commonly made directly via a computer, whereas Computer Assisted Assessment is used to manage or support the assessment process. Examples are the optical mark reader used to score MCQs and database programs used to record student marks. Computer Assisted Assessment is usually formative and criterion referenced as it helps students to discover whether they have learned what the educator intended and provide timely feedback on how best to teach a subject. Increasingly, it can be summative, with limited feedback typically being given at the end of a

course and serving to grade and categorize the student's work. It can also be diagnostic, eg. by testing for pre-knowledge.

Online Assessment

The term online learning (or, as it is sometimes called, distance learning) includes a number of computer-assisted instruction methods. In simple terms, online teaching and learning is faculty-delivered instruction via the Internet. Online instruction includes real-time (synchronous) and anytime, anywhere (asynchronous) interactions. Two parallel processes take place in an online learning environment: • Students become more active, reflective learners. • Students and teachers engage in learning through the use of technology and become more familiar with technology by using it. In assessing online learning, it is important to create a "mix" of assignments that cover the multiple dimensions of learning that online courses can employ. Traditional tests become a smaller part of the grade as we move towards encouraging student interaction on group projects and other activities.

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Asynchronous learning networks and assessment

Currently, asynchronous learning networks (ALN) are the most prevalent use of information technology in the higher education field. This is a term used to describe instructor-led online courses that include extensive student as well as instructor-student communication, and are taught mainly on an "anytime, anywhere" basis, though most also include other media (e.g., synchronous chats, recorded lectures, limited face to face meetings, or computer-assisted modules such as tutorials or simulations). The pedagogical emphasis in ALN courses is typically collaborative or team based learning. Participatory examinations aim to foster deep learning in ALN. According to Bloom's Taxonomy of Educational Objectives (Bloom et al., 1956), the cognitive levels of learning can be categorized as knowledge, comprehension, application, analysis, synthesis, and evaluation. The participatory examination process engages students in all levels of cognitive skills.

Authentic Assessment and Peer Evaluation

In traditional education, assessment is conducted entirely by the instructor. With participatory examination, the assessment is closely tied with student learning processes

since students experience both assessing their peers' work and being assessed by their peers. Wright (2003) indicates that acceptance of assessment innovations is increasingly useful in today's education, in that changes in the assessment process can transfer classroom cultural practices to reach authentic assessment (Shepard,2000). Assessment skills are also important for students to work as a professional. The participatory examination provides an opportunity for students to practice authentic assessment. When students participate in assessment activities, they get an opportunity to build a metacognitive awareness of what constitutes excellent work (Frederikson and Collins, 1989). The practices of the assessment activities also facilitate students' intrinsic motivation to improve their work based upon peers' feedback (McConnell, 1999). A structured peer assessment approach helps students to understand the mechanism and implementations of working in teams (Goode and Teh, 2005).

Computer-Mediated Communication and Collaborative Learning

With the emergence of low-cost computer networks and the Internet, computer-mediated communication (CMC)

technologies have been widely utilized in higher education and many other fields. CMC technologies support many communication elements for collaborative tasks. Asynchronous learning networks take advantage of CMC to achieve the promise of learning "anytime and anywhere" through asynchronous online discussions (Wu and Hiltz, 2004). CMC supports the collaborative (or group) learning through online social interactions, which is one of the most important implementations of the constructivist approach. The participatory examination process is conducted within an asynchronous CMC system and can utilize any asynchronous CMC platform that supports online classes.

Exam Research

Examinations are a standard assessment tool for both schools and students to achieve their goals. However, exam research has previously been carried out with only a few computer computing sciences related courses. For example, Woit and Mason (1998) found that students are better motivated to learn practical programming skills by taking a combination of both traditional and online exams in first year programming courses. Medley (1998) argues that online finals in computer programming courses can better

represent students' learning and can provide clear and immediate feedback for students, while students reported considerable stress in online examinations (Woit and Mason, 2000). Simkin (2005) reported that student scores in collaborative exam teams in an entry-level computer programming class were significantly higher compared to individual scores. Recently, some participatory exam research has been carried out (Shen et al., 2005), which focuses on learning style, collaboration and community aspects of participatory examinations.

The roles of technology in formative assessment -After portraying teachers' perceptions towards formative assessment, the second theme highlights the roles of technology in the context of formative assessment. As technology becomes more pervasive in language assessment, particularly in classroom assessment, due to its merits, teachers perceive that technology has multiple roles in formative assessment practice. They assert that technology can assist them in some ways, such as workload efficiencies, providing feedback, and facilitating students' engagement and independent learning. Technology becomes more pervasive in assessment, in

particularly in classroom assessment, due to its merits, teachers perceive that technology has multiple roles in formative assessment practice. They assert that technology can assist them in some ways, such as workload efficiencies, providing feedback, and facilitating student's engagement and independent learning. Another role of technology in formative assessment is that it ca facilitate feedback from teachers, peer and department staff. With the assistance of technology, teachers can provide personalized feedback to the students in order to monitor their learning improvement and to guide them in achieving learning goals. The students submit their projects in social media, such as Instagram or Facebook group. Then, other students and lecturers to give some comment towards the students' project. The comment focused on some interesting points and things to be improved. As technology becomes more pervasive in language assessment, particularly in classroom assessment, due to its merits, teachers perceive that technology has multiple roles in formative assessment practice.

They assert that technology can assist them in some ways, such as workload efficiencies, providing feedback, and

facilitating students' engagement and independent learning. For some teacher, especially the ones who have a big class, checking, correcting, and grading students' work every week is fatiguing. It is time consuming when teachers have to check over a stack of papers and to give comment one by one. Meanwhile, other teaching tasks are awaiting to be handled. All participants admit that using technology in the formative assessment, such as online quiz assist them effectively in providing instant feedback and quick score. The finding is aligned with the teachers' preference in providing feedback for large classes. An automatic or a real-time formative assessment feedback effectively saves their time to check the students' work.

The impact of technology-enhanced formative assessment

Although all participants view technology as worthwhile for formative assessment activities, the goal of achieving workload efficiencies often comes first before the impact of technology integration on pedagogy or students' language learning. However, this part attempts to discuss further the effect of technology on students' learning as a reflection of the way teachers utilize technology in

formative assessment settings. Overall, participants noted that the integration of technology in formative assessment gives some impact on students' performance, specifically language accuracy. An online quiz, such as Kahoot, Quizizz, Quizlet, and Socrative apps, is the most prevalent platform used by the teachers. It facilitates pre-test, post The impact of technology-enhanced formative assessment Although all participants view technology as worthwhile for formative assessment activities, the goal of achieving workload efficiencies often comes first before the impact of technology integration on pedagogy or students' language learning. However, this part attempts to discuss further the effect of technology on students' learning as a reflection of the way teachers utilize technology in formative assessment settings. Overall, participants noted that the integration of technology in formative assessment gives some impact on students' performance, specifically language accuracy. An online quiz, such as Kahoot, Quizizz, Quizlet, and Socrative apps, is the most prevalent platform used by the teachers. One of the useful features of formative assessment digital tools is automated or instant feedback. It assists the students to realize their learning

strengths and weaknesses. Some platforms provide the correct answers with complete explanations and others merely show the answer on the screen.

Authentic assessment

Authentic assessment is a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills. Or, as Grant Wiggins (1993) describes it, authentic measures are "engaging and worthy problems or questions of importance, in which students must use knowledge to fashion performances effectively and creatively. The tasks are either replicas of or analogous to the kinds of problems faced by adult citizens and consumers or professionals in the field." Cormack (n.d.) identified six key aspects of authentic assessment. According to him, the term 'authentic' was seen to imply assessment that: connects assessment to the curriculum, engages students, teachers and others in assessing performance,looks beyond the school for models and sites of action, promotes complex thinking and problem solving,encourages student 'performance' of their learning and engages with issues of equity. In authentic assessment, assessment drives the curriculum. In authentic

assessment, teachers first determine the tasks that students will perform to demonstrate their mastery, and then a curriculum is developed that will enable students to perform those tasks well, which would include the acquisition of essential knowledge and skills. This has been referred to as planning backwards (McDonald, 1992). One of the advantages that teachers see in authentic assessment is the flexibility it provides to design curriculum and assessment tasks that are more likely to engage student's interests and to involve students in active, performative learning. While most of the traditional assessment tasks involved students in sitting down at a desk using a pen and paper, this was typically as an adjunct to activities that involved students in doing, designing, making, talking and producing. There is the potential for such an active approach to engage students who do not succeed in traditional classroom environments. As the nature of work and leisure changes outside the school there are very real pressures on teachers to adapt their curriculum accordingly

Technology in Formative Assessment Practices

The potentials of adding technology to formative assessment practices are widely discussed in literature and were

succinctly summed up by Pachler et al. (2010) in the following benefits that technology can offer:

- Greater variety and authenticity in the design of assessments
- Improved learner engagement, for example, through interactive formative assessments with adaptive feedback
- Choice in the timing and location of assessments
- Capture of wider skills and attributes not easily assessed by other means, for example, through simulations, e-portfolios and interactive games
- Efficient submission, marking, moderation and data storage processes
- Consistent, accurate results with opportunities to combine human and computer marking
- Immediate feedback
- Increased opportunities for learners to act on feedback, for example, by reflection in e-portfolios
- Innovative approaches based on the use of creative media and online peer and self-assessment • Accurate, timely and accessible evidence on the effectiveness of curriculum design and delivery

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Conclusion

Innovation in learning engagement, diversification of student population and massification are pressing concerns in higher education. These interconnected concerns have particular impact on assessment. As our student populations and learning engagements become more diverse and class size grows, the use of assessment for promoting and determining student achievement becomes increasingly challenging. Technology is often seen as essential to meeting this challenge. Technology enhanced assessment (TEA) is a meeting place for digital learning and assessment of, as and for learning. TEA is an area rich with opportunity, but also fraught with risks. Achieving success while avoiding failure is a key mandate for members of university communities, from individual teaching staff to senior leadership. As technology-enabled assessment evolves towards the betterment of teaching practice, there are both opportunities and challenges for teachers to consider. Teachers could capitalize on the more intelligent and personalised forms of assessment to engage students in the higher-order or deeper learning. Assessment plays a crucial role in the teaching and learning process. It is an activity for gathering information

about students learning progress and measuring their achievement.

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ESSENTIAL ASPECTS OF EFFECTIVE GOVERNANCE

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Introduction

The term "governance" refers to the controls that an organisation employs to guarantee that its members abide by the rules and procedures that have been established. This is the main factor influencing any organisation, including a school, in terms of growth, development, and eradicating poverty. Improvements in governance will result in better learning outcomes and student experiences. The unclear planned reformation of school governance structures would, however, take attention away from the main goals for accomplishment and use up resources. School governance is the process of deciding on policies and procedures at schools while taking the school's budget and the law into account. This includes stakeholder connections, vision, strategy, accountability, trust, and capability. Effective governance is a management strategy for fostering the growth and accountability of educational institutions. This is crucial for

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giving schools their institutional legitimacy. The purpose of school governance is to improve the performance of effective school government. This is a collection of duties, habits, rules, and guidelines followed by an organisation to provide strategic direction for guaranteeing the accomplishment of objectives and the responsible, accountable, and open use of resources. This means that putting strong school governance into practise will raise a school's degree of involvement, accountability, and transparency as well as its level of management effectiveness. Hence, this article focuses on the various aspects of effective governance at the school and higher education institution level. It also emphasises the role of decision making skills on effective governance.

School Governance

Effective resource management requires open, accountable, transparent, fair, and responsive to societal needs. This is what good governance entails. This may also be regarded as a fresh approach to public management. The qualities of responsiveness, accountability, transparency, and engagement in the design and implementation of policies should characterise good governance in education. As a

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result, both the school council and the principle must exercise strong leadership to ensure excellent school governance. The principal and school council must be able to collaborate. Influential school administrators establish direction, train staff, drive change, enhance learning and teaching, address issues, uphold moral principles, foster trust, and are readily apparent to all students. The indicators of good governance are applicable to education and can be modified to evaluate the governance of public services. The United Nations Development Program (UNDP "Governance and Sustainable Human Development, 1997") is frequently cited when discussing the fundamentals of effective school governance. Transparency, accountability, responsibility, autonomy, fairness, and participation are the principles that guide the current study.

Transparency

Access to information, institutions, and processes is made simple by transparency. In general, better management techniques, transparency in resource use, and accountability to all stakeholders can improve the educational provision.

Accountability

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Management and the ideas of empowerment, decentralisation, participation, and transparency are all related to accountability. Democracy and efficiency requirements both call for some level of accountability at schools, where the political power of the leaders is exercised in three different ways: through enforcement, monitoring, and answerability. Depending on the organisation and whether an internal or external decision was made, the culpability varies. To regulate teachers and hold them responsible, though, principals should keep an eye on them and give them with information. As a result, the public and institutional stakeholders should be able to hold decision-makers at educational institutions, whether they are private or public.

Responsibility

The ability of the organisation to oversee the application of policies or procedures is referred to as responsibility. The schools must ensure that the decision-makers respond positively to the policy.

Autonomy

The decision-making procedures are impacted and school autonomy is increased by the transition from a centralised

authority system to a decentralised one. As a result, some adjustments bring about a new atmosphere in schools. The autonomy of schools and participatory governance, however, would be important for improving schools. The schools become independent, professionally run-in accordance with their respective roles and functions, and free from outside pressure.

Fairness

The equity principle encourages fairness. the idea that laws should be just and equally applied to everyone. Fairness suggests equal treatment in upholding stakeholder rights in accordance with contracts and rules. For instance, school policies do not discriminate between students in daily interactions.

Participation

It has been demonstrated that participation enhances both the governance of educational institutions and the quality of instruction. Research shows that participation, educational quality, and governance are all positively correlated (Oxfam, 2017). Decision-making involves all parties, either directly or through representation. Additionally, interaction among

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educational stakeholders, the community, the business world, and the government is closely related to participation.

Decision Making

In order for any school programmes to be successful, it is primarily the principals' role. Most of them are chosen by the administrator or instructional leader. In order to establish and carry out the school's plans for finances, teaching and services, internal procedures, and organisational growth, the principals collaborate with the other school stakeholders. They should be able to comprehend messages, strategies, and circumstances in their educational settings and come to judgments. In other words, school principals take on a prominent role among school stakeholders in achieving school performance success, which is largely based on student academic results and teacher career satisfaction. A few strategies are suggested to help the school continue its exceptional performance. Reasonably, the responsibility for the success of a school rests with the principal, as the attitude of the principal has a big impact on how effectively and efficiently a school is run. This implies that the school administrators take on a dominating stakeholder role and are in charge of overseeing academic achievement. The expert

judgement may be useful in resolving poorly organised management issues in educational institutions. Additionally, a tool simulation is configured in a problem-based learning method to detect and replicate decision-making events. The principals are forced to come up with different ideas through the decision-making process.

The teaching and learning materials, time management, assessment, timetable, and budgeting are few examples of those that are frequently of utmost importance in meeting the requirements and desires of the stakeholders. The suitability of educational programmes implemented by the school is frequently a factor in decision-making. As a result, effective leaders are those that use decision-making to respond to issues and circumstances in the most suitable way.Additionally, a data-informed decision-making system is notable for expanding the role of administrators in improving school performance. The effectiveness of the principal's decision-making is substantially impacted by the decision support system. The information system enables school principals to identify powers, fears, limitations, and strategies in the decision-making process for putting good governance policies for schools into practice. The ease of

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information accessibility is now essential because decision-making processes now call for the active participation of all parties, including parents, teachers, students, and educational staff. However, due to the very small proportion, it has proven difficult to implement participatory decision-making among school principals, teachers, and parents. Starting with problem identification, solution formulation, idea testing, and occasionally problem discovery during testing, the decision-making process begins.

School Governance and Decision Making

Support procedures in promoting organisational processes to give the means for and decrease the obstacles are the influential variables in the decision-makers' behaviour and decision-making processes. It is acknowledged that several educational innovations have made managing the schools challenging. The administration of the school is required by the national government to establish the circumstances necessary for success. The central government's school districts are responsible for ensuring that both public and private schools adhere to its stance on education. In other words, it is possible to view the relationship between central government and the division of labour between the central,

district, schools, and instructors as convoluted and confusing. While the overall improvements in education should focus on decentralising systems for more involvement and decision-making as well as replacing bureaucratic control with professional responsibility and accountability.

To enable participatory decision-making and openness in school leadership when establishing policies, decision-quality requires a supportive environment of self-governing schools. More decision-making authority has been devolved to the local school level as a result of the federal government's decentralisation of the educational system. In order to ensure the effectiveness of the school, the implementation is concentrated on expanding the responsibility distribution. As a result, the rights and duties of the stakeholders in the school are expanded for the principals.

Good school governance improves the efficacy and quality of decisions. The term "decision quality" describes a choice made in accordance with the objectives of the institution. This implies that the degree to which group members comprehend and support the decision affects how it will be

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implemented. When setting broad goals, school supervisors, administrators, and other leaders use strategic decision-making and should take the lives of the children into account. How much authority administrators have in many areas of decision-making for school development is a reflection of their power as school leaders. Flexibility, unwavering optimism, inspiring attitudes and dispositions, and dedication via teacher empowerment should serve as the foundation for school transformation.

The teachers, school board, and national government might all impose restrictions on the principal's ability to make decisions. Principals will have more obligations, influence, and authority in schools if they act more responsibly for the advancement of educational quality. For increased responsibility, decentralisation, and dominance in the decision-making process, the principals' duties have been enlarged. However, teachers' ability to solve problems and make deliberate, well-informed judgments improves as a result of the central government's shared decision-making with schools. There are other school-related decisions that may be made by the instructors and parents, such the funding of the school. To put it another way, inclusive decision-

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making may boost human capital. In order to achieve desirable outcomes, participatory decision-making is frequently established through goal-setting, locus of knowledge, participation in the generation of alternatives, planning and assessing outcomes, task strategy development, and cooperative problem-solving. The techniques of collaborative decision-making were chosen because they reduced role ambiguity and conflict and improved academic achievement. Depending on their influence at the schools, school supervisors and local educational authorities are also frequently asked for help by school administrators. As a result, school administrators are able to manage the engagement of outside organisations in schools and increase the authority of the central educational authority.

Effective Governance and Leadership for Higher Education Institutions

In higher education institutions, a culture of quality and innovation is made possible through strong governance and leadership. Strong self-governance and exceptional merit-based nominations of institutional leaders have been the

defining characteristics of all world-class institutions worldwide, including India.

All HEIs in India would strive to become autonomous, self-governing institutions that pursue innovation and quality through a proper system of graded accreditation and graded autonomy over a period of 15 years. At all HEIs, steps will be made to guarantee the best leadership and advance an excellence-focused institutional culture. A Board of Governors (BoG) composed of a group of highly qualified, competent, and committed people with demonstrated abilities and a strong sense of commitment to the institution shall be established upon receiving the appropriate graded accreditations that deem the institution ready for such a move. An institution's Board of Governors (BoG) shall have the authority to make all nominations, including those for the position of institution head, and to make all governance-related decisions. The BoG's composition, appointment, modes of operation, rules and regulations, as well as its tasks and responsibilities, should be outlined in overarching law that will override any conflicting clauses of prior legislation. An expert committee that the Board has created will identify potential new board members, and the BoG will make the

final decision. When choosing the members, equity concerns will also be taken into account. All HEIs are expected to be encouraged, assisted, and mentored during this process, with the goal of becoming independent and possessing such an empowered BoG by 2035. The BoG will be accountable to the stakeholders through open self-disclosures of all pertinent information. Through the National Higher Education Regulatory Council, it will be in charge of adhering to all regulatory requirements imposed by HECI (NHERC).

All positions of authority and institution heads will be given to those with strong academic credentials, a track record of executive and leadership success, and the capacity to handle challenging circumstances. A strong social commitment, a belief in teamwork, pluralism, the ability to collaborate with people from different backgrounds, and a positive outlook are among the qualities leaders of HEIs will exhibit. They will also show strong alignment with the institution's overall vision and the Constitutional values. A rigorous, unbiased, merit-based, and competency-based selection procedure will be used by the BoG, and it will be overseen by an EEC made of of eminent experts. While tenure stability is crucial for the

creation of a favourable culture, leadership succession will also be carefully planned to prevent good practises that define an institution's processes from ceasing due to a change in leadership. Leadership changes will occur with enough overlaps and won't leave any positions vacant in order to ensure smooth transitions. A ladder of leadership positions will be used to identify and nurture exceptional leaders early on.

All HEIs shall exhibit a dedication to institutional quality, involvement with their local communities, and the highest standards of financial probity and accountability while gradually receiving enough resources, enabling legislation, and autonomy. Each institution will create a strategic Institutional Development Plan on the basis of which it will create initiatives, evaluate its own performance, and accomplish the objectives set forth, which may then serve as the foundation for additional public financing. The Board, institutional leaders, teachers, students, and staff will all work together to produce the IDP.

Conclusion

This article's conclusion states that the tenets of openness, responsibility, accountability, independence, fairness, and

participation form the foundation of effective school governance. The effectiveness of the principal's decision-making has been positively impacted by good school governance, according to empirical evidence. Additionally, the research has confirmed that effective school governance makes it easier for educators to participate in decision-making. Additionally, effective school governance raises the standard of decision-making by giving teachers more power, delegating more responsibility, and promoting group decision-making.

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ONLINE AND DIGITAL EDUCATION: USAGE OF SOCIAL NETWORKS

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Introduction

Social networking refers to the use of social media sites on the Internet to keep in touch with friends, family, colleagues or clients. Social networks can have a social purpose, a business purpose, or both, through sites such as Facebook, Twitter, Instagram, and Pinterest.Social media is also an important opportunity for the teaching profession and marketers looking to engage customers. Facebook remains the largest and most popular social network, with 2.91 billion people using the platform on a monthly basis. Teaching profession take to next level after corona virus infection all over the world from 2019. Full teaching module turned into social networking sites like Zoom, Google Meet, GoToMeeting, Skype, Microsoft Team, Own Applications, WhatsApp Video Tutoring, etc. It is therefore mandatory for

all educators to be aware of the use of social networking sites for their teaching and learning.

This generation lives in a digital world where online social interactions are inevitable. A social networking service is a platform to build social network or social relations among people who share interests, activities, backgrounds, or real life connections. A social network consists of a representation of each user his or her social links, and a variety of additional services. Social network are web-based services that allow individuals to create a public profile, to create a list of users with whom to share connections, and view and cross the connections within the system. Most social network services are web-based and provide means for users to interact over the internet, such as e-mail and instant messaging. Social network sites are varied and they incorporate new information and communication tools such as mobile connectivity, photo or video or sharing and blogging. Social networking sites allow users to share ideas, pictures, posts, activities, events, interests with people in their network.

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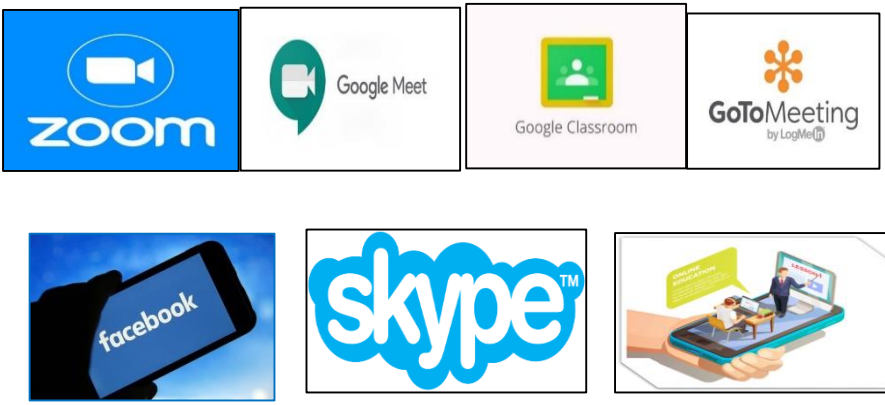
TECHNOLOGY APPLICATION IN TEACHING



Zoom

Zoom is a cloud-based social networking video communications app that allows you to set up virtual video and audio conferencing, webinars, live chats, screen-sharing, and other collaborative capabilities.You don't need an account to attend a Zoom meeting, and the platform is compatible with Mac, Windows, Linux, IOS, and Android, meaning nearly anyone can access it.

Google Meet- Google Meet (formerly known as Hangouts Meet) is a social networking video- communication service developed by Google. It is one of two apps that constitute the replacement for Google Hangouts, the other being Google Chat.

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GoToMeeting- GoToMeeting is a web-hosted social networking service created and marketed by Login. It is an online meeting, desktop sharing, and video conferencing software package that enables the user to meet with other computer users, customers, clients or colleagues via the Internet in real time.

WhatsApp- WhatsApp Messenger, or simply WhatsApp, is an Social Networking, cross-platform centralized messaging and voice-over-IP service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other content.

Characteristics of Social Network

There are some basic characteristics that differentiate social network from the regular websites. Those characteristics are as follows,

- ❖ Users submit and organize information.
- ❖ Users can share photos and ideas with friends.
- ❖ Away to connect and have fun with friends.
- ❖ Members hold common beliefs or interests.

- ❖ Can reconnect with new friends.
- ❖ Each member gets a unique web address that becomes the identity of that individual.
- ❖ Each member is provided free web space to publish content.
- ❖ Members are provided web space to build their profiles.
- ❖ The social networking sites allow members to upload text message, photographs,audio and video files free of cost.
- ❖ Content posted by members can be browsed and commented upon by all memberswho form part of the community.
- ❖ Most social networking sites have chat clients and members who can chat with otherin real time.
- ❖ Members can send e-mails to each other.

Types of Social Network Sites

Many social network can be broken up into many categories and most network fall into more than one category. There are six main types of social networking sites and every social service can be categorized into at least one of these:

- **Social Network-** Services that allow a person to connect with other people of similar interests and background. Usually they consist of a profile, various ways to interact with other users,ability to setup groups, etc., The most popular are Facebook and LinkedIn.
- **Bookmarking Sites-** Services that allow a person to save, organize and manage links to various websites and resources around the internet. Most allow a person to 'tag' his/her links to make them easy to search and share. The most popular are Delicious and StumbleUpon.
- **Social News-** Services that allow people to post various news items or links to outside articles and then allows its users to 'vote' on the items. The voting is the core social aspect as the items that get most votes are displayed the most prominently. The community decides which news items seen by more people. The most popular are Digg and Reddit.
- **Media Sharing-** Services that allow a person to upload and share various media such as pictures and video. Most services have additional social features such as profiles, commenting etc., The most popular are YouTube and Flickr.

- **Micro blogging**- Services that focus on short updates that are pushed out to anyone subscribed to receive the updates. The most popular is Twitter.
- **Blog Comments and Forums**-Online forums allow members to hold conversations by posting messages. BlogComments are similar except they are attached to blogs and usually the discussion centers around the topic of the blog post. There are many popular blogs and forums.

While these are the different types of social network, there can be overlap among the various services. For instance, Facebook has micro blogging features with their 'status update'. Also Flickr, Facebook, Twitter and YouTube have comment systems similar to that blogs.

Educational Benefits of Social Network

- One can gain social confidence from interacting with other people online, which may help them feel more secure in new situations, such as going to college, joining asports team, and meeting new friends.
- One can become more familiar with new and emerging technologies, as well as increase their media literacy through exposure to many different types of online

mediathat are shared by their friends.

- ❖ Most of the students find support in online communities; this is especially true forkids who have unique interests or feel isolated.
- ❖ Online communities can be very diverse and expose the child to view many new points, ideas, and opinions that the child may not be familiar with.
- ❖ Students tend to use social networking to augment-not replace-their real-world relationships, helping them to learn to communicate in many different ways. Social networking is becoming an increasingly important method of communicating in schools and the work place, so it is good for the child to be prepared to communicate through sites.
- ❖ Keeping in touch with family members that live far away can become much easier through the use of online social networking.
- ❖ Social networking is becoming increasingly important in schools WhatsApp, Facebook, Moodle, Second Life, Digg, and other sites are often used by teachers to communicate with students or for out-of-classroom discussions.

- Youth can further explore topics that they are interested in through online social networking.
- Teachers often take advantage of students' social networking abilities to create class blogs, discussion forums, videos, and more.

Social Network: Functions and Applications

Social networking will help a person get in touch with classmates and childhood friends. Discovering all these individuals without the help of social networking websites will be time consuming and difficult. Further, Social networking Sites are making it easy to start new friendships across the globe. Cadima et al. (2010). As soon as the person uses the same website that you do, the two of you can effortlessly become friends. Apart from being fun, social network can be used professionally. Many people utilize them to establish new business contacts and to promote their products and services. Social Networking Sites (SNS) are an excellent way to expand your professional network. Getting in touch with other individuals operating in your sphere is one of the most important professional advantages. Today youngsters use SNS in sharing of

knowledge and day today happenings, before we get in television and newschannels it is shared in SNS.

- **Get Feedback-** Social networking allows people to get feedback about their doubts, the project they are currently involved in or the blog posting that they recently wrote. It becomes exceptionally easy to get feedback via social media. Receiving comments and constructive criticism will take only several hours to achieve. You can obtain comments about anything that you need to have the opinions of others on. Social Networking Sites are facilitating this exchange of ideas.
- **Receive Help-** If you are stuck in the middle of nowhere, having no idea how to get home or where to seek assistance, you can use SNS to deal with the problematic situation. SNS allows you tofind help in nearly everything that you are doing. At least one of the individuals in your network will have information that will allow you to get out of a problematic situation.
- **Look for Employment-** Social networking can even be used to discover a new job and projects. Establishing contacts this way will give you access to information

about available job positions or the companies that are currently looking for new employees. The advantages of using social networking are diverse. Everyone can discover something positive this way. Some people use social media to education. Others utilize these communication channels to promote their website and establish business contacts. As long as an individual has set clear goals, social networking can be used to an advantage.

- **Features and Functions of Social Networking Sites**

  The Social Network Sites have a variety of different features that teachers use as a part of their participation on the sites. The structure of these sites is driven by their genre and its history, Boyd and Ellison (2007) say that the features themselves say little about the complexity of how teachers use them and alter their practices because of them. Social Networking Sites are web-based services that allow individuals to construct a public or semi- public profile within a bounded system, publicly articulate a list of other users with whom they share a connection. Anyone can search for anyone, provided that the

searcher knows the other person's full name or email address. On sites surfing is the dominant way in which people find each other. Users view the Friends lists of their Friends and surf to their profiles.

Conclusion

According to Association for Educational Commission Technology (U.S.A), "The Process of Educational Technology involving People, Procedures, Devices, Ideas and Organization for analyzing problems and devising implementing, evaluating and meaning solution and to those problems involved in all aspects of learning". Leith (1976) defines, "Educational Technology is the systematic application of scientific knowledge about teaching-learning and conditions of learning to improve the efficiency of teaching and training". Mitra defines that "Educational Technology can be conceived as a science and technical methods by which educational goals could be realized". The technologies which can be used in a classroom may be brought under single term as ICT.The teaching profession goes on the next level after the corona virus infection to all around the world from 2019. The

complete teaching module changed into social networking sites such as Zoom, Google Meet, GoToMeeting, Skype, Microsoft Team, Own Applications, WhatsApp Video Tutoring,etc. In India teachers are too grown to use the web tools with Smartphone teaching. So it is mandatory to all the educators to aware of using socialnetworking sites for their teaching and learning.

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ENGINEERING STUDENT'S ATTITUDE TOWARDS MATHEMATICS AND ITS INFLUENCE ON MATHEMATICS SKILLS

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Introduction

Mathematics is considered by many students to be the most feared subject in our educational system since it has series of rules to be memorized, or as arithmetic calculations, mysterious and algebraic equations, and geometrical proofs. The purpose of learning mathematics is to help students gain problem-solving skills, reasoning, ability to make interconnections, generalization, establish communications, and some other mathematical skills such as sensory and psychomotor skills, and to use these skills in order to solve problems they encounter in real life . Often, students think that mathematical issues can either not be learned, or can only be learned with great difficulty. According to Baykul (1990), many students have difficulties in mathematics and

this creates increased anxiety levels because they think that they cannot succeed in mathematics; and therefore, develop negative attitudes towards mathematics classes. In another study, Baykul (1990) states that students gradually develop negative attitudes towards mathematics classes in the process from the 5th grades of primary education until the last grade of high school. Perhaps the most important factor which influences mathematics success levels of students is the students' attitude towards mathematics.

Significance of the Study

Mathematics skills are needed to excel in the study or practice of engineering. Good math skills are indispensable for all engineers regardless of their specialty. McKay (2003) believes that students in engineering courses "traditionally struggle" with the mathematical elements of their modules. Parsons (2004) also reported on a number of different forms of mathematical support provided to engineering students as a result of students‟ poor progression in engineering courses related to their failure in mathematics.Research has shown that a large number of students entering into engineering programmes in higher education lack the basic mathematical knowledge and skills required to do well in engineering

(MathsTEAM 2004,). Learning mathematics does not only involve thinking and reasoning, it is dependent on the attitudes of the learners towards learning and mathematics (Kele& Sharma, 2014). Kurbanoğlu and Takunyacı (2012) argues that students should develop positive attitudes towards mathematics in order to be successful in mathematics lessons. Therefore, in this context it is essential to study about mathematical skills and attitudes towards mathematics of engineering students since it has a significant impact on students' achievement.This study is significant that it intends to study about students' attitudes towards mathematics which will help the policy makers and teachers to plan appropriate interventions to improve students' attitudes towards mathematics, and hence further improve their achievement.

Objectives of the study

The objectives of the study were as follows:

- To find out whether there is any significant difference in the mathematical skills of engineering students with respect togender, nature of residence, nature of college

- To find out whether there is any significant differencein the attitude of engineering students towards mathematics with respect to gender, nature of residence, nature of college
- To find out the whether there is any significant relationship between mathematical skills and attitude of engineering students towards mathematics

Sample

By using random sampling technique a sample of 200 under graduate students was selected from all engineering colleges in Thoothukudi district.

Tool used in the study

Mathematical skills test and attitude towards Mathematics scale prepared by the investigator was used to measure the Mathematical skills and attitude towards mathematics of the sample.

Results of the study

Table 1: Difference in the Mathematical skills of engineering students with Respect to Gender

Gender	Count	Mean	S.D	Calculated 't' value	p value	Remark
Male	92	6.8	2.098	2.807	0.021	**Significant**
Female	60	7.08	2.061			

Table 2: Difference in the mathematical skills of engineering studentswith Respect to Nature of Residence

Nature of residence	Count	Mean	S.D	Calculated 't' value	p value	Remark at 5% level
Day scholars	107	6.80	1.930	1.012	0.313	NS
Hostellers	45	7.18	2.405			

Table 3: Difference in the mathematical skills of engineering students with respect to nature of college

Nature of college	Count	Mean	S.D	Calculated 't' value	p value	Remarks at 5% level
Unisex	3	6.33	2.082	0.487	0.627	NS
Co-education	149	6.93	2.086			

Table 4: Difference in the attitude of engineering students towards mathematics with respect to gender

Gender	Count	Mean	S.D	Calculated 't' value	p value	Remark
Male	92	103.34	8.599	1.358	0.176	NS
Female	60	101.37	8.959			

Table 5: Difference in the attitude of engineering students towards mathematics with respect to nature of residence

Gender	Count	Mean	S.D	Calculated 't' value	p value	Remark
Day scholars	107	101.73	9.172	1.814	0.72	NS
Hostellers	45	104.53	7.446			

Table 6: Difference in the attitude of engineering students towards mathematics with respect to nature of college

Gender	Count	Mean	S.D	Calculated 't' value	p value	Remark
Unisex	3	109.33	12.662	1.356	0.177	NS
Co-education	149	102.42	8.678			

Table 7: Relationship between mathematical skills and attitude of engineering students towards mathematics

Variables	Calculated 'γ' value	p value	Remarks at 5% level
Mathematical skill Attitude of engineering students towards mathematics	0.144	0.76	NS

From the above table it is inferred that the p(0.021) value is lesser than 0.05. Hence the null hypothesis isrejected. That is, there exists significant difference in the mathematical skills of engineering students with respect to gender.

From the above table it is inferred that the p(0.313) value is greater than0.05. Hence the null hypothesis isaccepted**.** That is, there exists no significant difference in the mathematical skills of engineering students with respect to nature of residence.

From the above table it is inferred thatthe p(0.627) value is greater than 0.05. Hence the null hypothesis isaccepted. That is, there exists no significant difference in the mathematical skill of engineering students with respect to nature of college.

From the above table it is inferred that the p(0.176) value is greater than 0.05. Hence the null hypothesis is accepted. That is, there exists significant difference in the attitude of engineering students towards mathematics with respect to gender.

From the above table it is inferred that the p(0.72) value is greater than 0.05.Hence the null hypothesis isaccepted. That is, there exists significant difference in the attitude of

engineering students towards mathematics with respect to nature of residence.

From the above table it is inferred that the p(00.177) value is greater than 0.05.Hence the null hypothesis isaccepted. That is, there exists significant difference in the attitude of engineering students towards mathematics with respect to nature of college.

From the above table it is inferred that the p(0.76) value is greater than (0.05). Hence the null hypothesis is accepted**.**That is there exists no significant relationship between mathematical skills and attitude of engineering students towards mathematics.

Findings and discussions

Significant differenceexists in the mathematical skills of engineering students with respect to gender. Female engineering students have more mathematical skills than male engineering students.

Paechter (1998) argues that male and female students do experience the world in different ways. Firstly, they are differently positioned in society. The second is their different learning styles and how they perceive and process reality. Majority of the topics in mathematics requires sound

knowledge and practice to master the skills. Generally girls outperform boys in more complex areas of mathematics such as those involving more advanced problem-solving, basic numerical skills and on problems that have a set procedure for solving them. Also they have lower levels of math anxiety and higher levels of confidence in their mathematics skills. The above discussions may be the reason for having more mathematical skills than male engineering students.

No significant differenceexists in the mathematical skills of engineering students with respect to nature ofresidence andnature ofcollege.

No significant difference exists in the attitude of engineering students towards mathematics with respect to gender, nature of residence and nature of college.

Recommendations of the Study

The findings of this study, suggest some recommendations to improve mathematics skills and attitude towards mathematics.

- Special and particular attention should be given in post-primary mathematics education.

- The students should be exposed to more problems involving skill development of mathematics and provide opportunities for them to practice and refine the techniques needed.
- Intensive interventions should be given during the course of first-year engineering programmes to ensure that students' core mathematical skills are robust.
- Although improvements were made in the course of the year for most of the questions on the test, significant deficiencies were still identifiable in basic skills.
- Condition-based maintenance (CBM) marking schemes should be introduced for the students in Higher Education institutions. The CBM approach will inform students about their areas of weakness and highlight the misconceptions they have.
- Teachers should be trained to use variety of techniques to deal with students with negative attitude towards mathematics.
- Innovative teaching methods, more motivated teachers, attractive course books may help the students to develop positive attitudes towards mathematics.

- Efforts should be undertaken to help engineering students grasp the necessary mathematics skills and master them.

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CONTRIBUTION OF LANGUAGE ACQUISITION THEORIES IN LANGUAGE DEVELOPMENT

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Introduction

Language is a communication system that involves using words and systematic rules to organize those words to transmit information from one individual to another. While language is a form of communication, not all communication is language. Many species communicate with one another through their postures, movements, odors, or vocalizations. This communication is crucial for species that need to interact and develop social relationships with their conspecifics. However, many people have asserted that it is language that makes humans unique among all of the animal species. There is no other species known to date that can express infinite ideas (sentences) with a limited set of symbols (speech sounds and words).

Stages of Language Development

Pre-birth: Preparation of the human brain for language acquisition after birth- Language acquisition begins well

before a child is born. Babies are initially familiarized with speech and language in the womb. The human ear begins to function at the 3rd trimester or the 7-month mark of pregnancy (Saxton, 2017). During this period, unborn infants respond to all types of sounds. What is more fascinating is that they can discriminate speech sounds from non-speech sounds. In the womb, babies are more sensitive to their own native languages than foreign ones, and also make a well-defined distinction between their mother's voice and others (Saxton, 2017). This phenomenon is one of many natural occurrences that supports the claim that language is hardwired in the human brain.

This stage of language perception/hearing in the womb is essential for language acquisition after birth. Children who are born with congenital auditory impediments or hearing loss are deprived of this stage. As a result, language acquisition is generally delayed by four to five months after birth.

Babbling – 7 months of age

At this stage, infants begin to explore the properties of sounds through production. The sounds of early babbling are universal. However, by the time a child reaches the age of 8

months, a drift occurs in the characteristics of babbling (Helms-Park, 2018). Babbling becomes more distinctive. Infants begin to make sounds that would only occur in their own native languages. A French baby and an American baby will not babble the same, as there are certain sounds that English and French do not share. At this stage, parents should expect their children to go through three phases. They follow:

- One consonant and a vowel at a time. Example: "ma," "da," "du," "bi"
- Reduplicative babbling. Example: "da-da-da-da"
- Non-reduplicative babbling. Example: "ba-du-ba-du."

One-word (Holophrastic) Stage – 1-1.5-years-old

During this stage, children begin to acquire and produce real words of their native languages. A child in this stage will use single-word constructions to communicate. Although the child tends to utter a single word at a time, its meaning is also supplemented by the context in which it takes place, as well as by nonverbal cues. An example of such a one-word sentence would be a child leaning over the edge of his cot and pointing to his bottle while laughing and saying "botty" in a commanding way. An adult in the situation could well

interpret the child's holophrase as meaning, "Give me my bottle immediately (so that I can throw it over the edge of the cot again and you can pick it up)." Another example would be "Dada", which could mean "Daddy, please come to me." At this stage, children know the meanings of words that they say, as speaking is often accompanied by finger-pointing (Helms-Park, 2018).

Two Word Stage – 1.5 – 2 years-old

Children usually enter this stage when they have acquired about 50 words. They begin to demonstrate their knowledge of the word order that occurs in their language. At this stage, lots of verbs, nouns, and adjectives emerge, as well as intonation! Intonation is a lear indication that children do not perceive speech production as one chunk, but rather as individual words coming together to convey a more complex meaning.

Telegraphic Stage – 2-2.5-years-old

At this stage, children experience a vocabulary spurt or "explosion." Production is pidgin-like, as grammatical/function words (little words) such as 'the,' 'a,' 'is,' 'will,' 'of,' 'by,' pluralization, tense (past -ed), verb endings/person agreements (she eat 's') are omitted.

During this stage, a child will primarily communicate with content words (verbs, nouns, adjectives) and some pronouns such as 'me' and 'mine.' Although many function words are missing at this stage, children obey the word order and structure of their language. Considering the English word order (SVO), English speaking children are expected to produce phrases similar to the following sentences:

- "Want more ice-cream."
- "Mommy go bye-bye."
- "He go play."

For instance, a child might say "The cat stand up on the table." Correct grammar still isn't prevalent in this stage, but the sentence conveys that the cat is standing up in addition to being on the table.

Multi-word stage – 2.6+-years-old (beyond 30 months)

Early in this stage, complete sentences begin to emerge. Imperative and declarative sentences appear first (Helms-Park, 2018):

- Imperative (command): "Give me my toy."
- Declarative (Relay information): "That's my toy truck."Coordination (acquired first) and subordination

sentences also appear early in this stage, however, they are mastered by 4-5-years-old (Helms-Park, 2018):

- Coordination (Two clauses joined in a symmetrical relation): "I am tall, but she is short."
- Subordination (Two clauses joined in a non-symmetrical relation): "When I am older, I am going to be bigger."

By a child's 3rd birthday, they begin to use more grammatical/function words, such as regular plural '-s,' endings on verbs '-ing,' prepositions (of, in, by), but third person agreement comes a bit later "She loves candy." Near the end of this stage, almost everything is acquired between the ages of 5-6

A child who may be behind does not necessarily indicate a language impediment. Again, every child is unique and different. Some may acquire language faster than others.

Language Acquisition Theories

Behaviorist Theory

The Behaviorist Theory originates from the work of B.F. Skinner, who asserted the role nurturing plays in language development rather than nature. B.F. Skinner is considered to be the father of the modern behavioral theory. Skinner was especially interested in how children mimic the language or

verbal behavior of the adults. According to behaviourism, learning involves a period of trial and error where the child tries and fails to use correct language until it succeeds. Infants also have human role models in their environment who provide the stimuli and rewards required for operant conditioning. For example, if a child starts babblings, which resembles appropriate words, then his or her babbling will be rewarded by a parent or loved one by positive reinforcement such as a smile or clap. Since the babblings were rewarded, this reward reinforces further articulations of same kind. Children also utter words because they cause adults to give them the things they want thus they are trained through reinforcement and rewards when their speech is close to that of an adult. Through the imitation or modeling component of Skinner's theory of language acquisition children learn to speak by copying the utterances heard around them and by having their responses strengthened by the repetitions and corrections that adults provide. Behaviorists also noted that children receive negative reinforcement when their language attempts are received poorly.

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So the behavioral perspective states that language is a set of verbal behaviors learned through operant conditioning. Operant conditioning is a method of changing behavior so that a desired behavior is reinforced immediately after it occurs. Behaviorists believe that language behaviors are learned by imitation, reinforcement, and copying adult language behaviors. They consider language to be determined not by experimentation or self-discovery, but by selective reinforcements from speech and language models, usually parents or other family members.

Nativistic Theory

Another important psycholinguistic theory is the nativistic theory from Noam Chomsky, a highly respected American linguist who is also viewed as a founder of modern cognitive science. The Innatist theory is sometimes called nativist theory. The nativistic theory is a biologically-based theory which states that language is innate, physiologically determined, and genetically transmitted. This means that a newborn baby is "pre-wired" for language acquisition and a linguistic mechanism is activated by exposure to language. This theory believes that language is universal and unique to only humans and that unless there are severe mental or

physical limitations, or severe isolation and deprivation, humans will acquire language. Noam Chomsky. came up with the idea of the language acquisition device (LAD). The LAD is a similar to an organ exclusively for language that is hard-wired into our brains at birth. Once a child is exposed to language, the LAD activates. He also argues that there is a universal grammar or deep grammatical structures to human languages which extend across cultures regardless of geographic proximity. Chomsky focuses on the brain having a language acquisition device that fades after about age 12 or upon reaching puberty. This is the basis for the critical period, that is the window of time before puberty when all humans have immense potential to acquire native-like proficiency in languages. He believed that if no language was learned before then, it could never be learned in a normal and functional sense.

Cognitive Theory

Jean Piaget was a Swiss psychologist who was famous for his four stages of cognitive development for children, which included the development of language. However, children do not think like adults and so before they can begin to develop language they must first actively construct their own

understanding of the world through their interactions with their environment. A child has to understand a concept before he or she can acquire the particular language which expresses that concept. Essentially it is impossible for a young child to voice concepts that are unknown to them; therefore, once a child learns about their environment, then they can map language onto their prior experience. Piaget's cognitive theory states that children's language reflects the development of their logical thinking and reasoning skills in stages, with each period having a specific name and age reference. There are four stages of Piaget's cognitive development theory, each involving a different aspect of language acquisition:

Sensorimotor Period- (birth to 2 years) Children are born with "action schemas" to "assimilate" information about the world such as sucking or grasping, putting the objects in the mouth, opening their fingers, waving their legs. The infant constructs an understanding of the world by coordinating sensory experiences with physical actions. In the process the baby hears its parents and learn how to imitate sounds.

Pre-Operational Period- (2 years to 7) Children's language makes rapid progress and the development of their "mental schema" lets them quickly "accommodate" new words and situations. Children's language becomes "symbolic" allowing them to talk beyond the "here and now" and to talk about things such as the past, future and feelings. From using single words (for example, “milk”), they begin to construct simple sentences (for example, “mommy go out”). During this time, children’s language often shows instances of what Piaget termed “animism” and “egocentrism.”

Operational Period- (7 to 11 years) and (11 years to adulthood) Piaget divides this period into two parts: the period of concrete operations and the period of formal operations. Language at this stage reveals the movement of their thinking from immature to mature and from illogical to logical. They are also able to "de-center" or view things from a perspective other than their own. It is at this point that children's language becomes "socialized" and includes things such as questions, answers, commands and criticisms. So providing ample opportunities for children to interact with the environment through all their senses allows them to gain a better understanding of the world around them.

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Social Interactionist Theory-Interactionists argue that language learning is influenced by the desire of children to communicate with others. The interaction theory proposes that language exists for the purpose of communication and can only be learned in the context of interaction with adults and older children. It stresses the importance of the environment and culture in which the language is being learned during early childhood development because this social interaction is what first provides the child with the means of making sense of their own behaviour and how they think about the surrounding world. Speech to infants is marked by a slower rate, exaggerated intonation, high frequency, repetition, simple syntax and concrete vocabulary. This tailored articulation used by parents and care-givers to young children to maximize phonemic contrasts and pronunciation of correct forms is known as child-directed speech (CDS). The main theorist associated with interactionist theory is Lev Vygotsky. He developed the concepts of private speech which is when children must speak to themselves in a self-guiding and directing way-initially out loud and later internally and the zone of proximal development which refers to the tasks a child is

unable to complete alone but is able to complete with the assistance of an adult. In the early stages of a child`s life this is usually done through motherese or ``baby talk`` which may allow children to ``bootstrap`` their progress in language acquisition. However, one must remember that although our social context provides support for language acquisition, it does not directly provide the knowledge that is necessary to acquire language; and this, perhaps, is where a child's innate abilities come into play.

Conclusion

From these theories of language acquisition it is understood that with proper effort and environment second language learning becomes rewarding. Learners need to have a Growth mindset and become Gritty about their language learning. It is a well-known saying that learning a foreign language is like a marathon, not a sprint. It takes time, progress is slow and incremental, and there can be many setbacks along the way. Language learners need to develop persistence and even in the face of challenges, be able to roll up their sleeves undeterred and tackle problem areas all over again with renewed vigour – that is grittiness. To have grit, language learners first need to have a growth mindset. This

is when they believe that their abilities in learning a language are not fixed but can be developed. Not all learners will reach the same level of proficiency. However, with the right kind of effort, strategies, and investment of time and will, every learner can improve. However, if a learner holds a fixed mindset, believing that language learning competencies stem primarily from a fixed ability, then they are more likely to give up easily, and in some cases not even try to succeed. These learners feel helpless, believing there is little they can do to improve or overcome difficulties. In contrast, those with a growth mindset are typically willing to put in the effort to improve and explore a range of possible pathways to proficiency.

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IMPACT OF SOCIAL MEDIA ON EMOTIONAL WELLNESS

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Introduction

Social media has gotten a bad rap lately: it's been blamed for growing feelings of low self-esteem, loneliness, and bouts of depression. Still, people rally behind their beloved Instagram's, Face book's, and Snap chat's or they at least keep signing on. They insist that they've either adapted healthier user habits or that social media doesn't have a negative impact on them at all, instead it's a positive influence on their everyday lives. Social media allows to stay connected with distant friends and relatives and it can be used to promote positive and productive ideas; it can serve as a creative outlet.

Social media is a catch-all term for a variety of internet applications that allow users to create content and interact with each other. People who are emotionally healthy are in control of their thoughts, feelings, and behaviors. They are able to cope with life's challenges. It helps them to interact

with other people and contribute productive work to society. Social media interactions can help decrease negative emotions and boost emotional well-being. But using social media has its risks. Hence this paper focuses on overview of social media and emotional wellness, its effectiveness, impact and emotional benefits of using social media.

Emotional Wellness

Emotional wellness inspires self-care, relaxation, stress reduction and the development of inner strength. It is important to be attentive to both positive and negative feelings and be able to understand how to handle these emotions. Emotional wellness also includes the ability to learn and grow from experiences. Emotional well-being encourages autonomy and proper decision making skills. It is an important part of overall wellness.

Social Media

Social media is the collective of online communications channels dedicated to community-based input, interaction, content-sharing and collaboration. Websites and applications dedicated to forums, micro blogging, social networking, social bookmarking, social curation, and wikis are among the different types of social media. Social media

is becoming an integral part of life online as social websites and applications proliferate.

Emotional Benefits of Using Social Media

Social media interactions can help decrease negative emotions and boost emotional well-being. The researchers found that people who feel nervous during one-on-one conversations find refuge in social media especially during trying times. “When people feel badly, they have a need to reach out to others because this can help reduce negative emotions and restore a sense of well-being. But talking to someone face-to-face or on the phone might feel daunting because people may worry that they are bothering them,” explained Eva Buechel, a professor at the University of South Carolina. Buechel explains social media can be beneficial especially for the socially apprehensive: “There is a lot of research showing that sharing online is less ideal than having communication in person, but these social networks could be an important communication channel for certain individuals who would otherwise stay isolated.”

- **Social Media can be Detrimental to Emotional Health**

  Some of the undesirable effects of social media on emotional health are:

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❖ **Depression**

The young adults spend longer time on social media, the more likely they are to be depressed because of the false lives they create and curate online.

❖ **Loss of Focus**

The feeling of people get from likes and comments on their posts is addictive, and this Pavlovian-like conditioning makes them go back again and again to ring that proverbial bell. Over time, people lose focus, changing the way their brain works so they can't give full concentration to longer form task

❖ **Prevalence of Eating Disorders**

The young adults who spent the most time on highly visual social media had over two times the risk of eating and body image concerns.

❖ **Bye to Memories**

peoples are losing their memories when they trust digital devices to store information and remember things for them.

Effect of Social Media on Emotional Health

Relieve social isolation and loneliness by opening up new communication pathways

Social media offers the chance to connect with others, and offers enough anonymity to allow people with emotional illness to express themselves without revealing their identities. In other words, it allows self-expression without the danger of stigma.

Inspire healthy lifestyle changes

Social media can be used as a motivational tool to achieve healthy lifestyle goals such as quitting smoking or attending the gym on a regular basis. Announcing a goal via social media and regularly posting about it promotes accountability to others, creating positive reinforcement from friends and stimulating an online "social support system" which may lead the aspirant to form or join other communities dedicated to similar pursuits. This is a classic case of "positive emotional contagion."

Make social support and interventions possible

An increasing number of websites are now offering support through social media channels. These sites often provide anonymous forums for people to connect, share personal experiences, and many even allows them to sign up for an SMS service to receive daily advice, motivational messages, and information useful for seeking or promoting recovery.

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Build community by Joining Local Meetups

Meetup is one of the most popular and widely used. Meetup is not the only place to connect with local organizations, groups, and clubs, or to network with people having similar interests. Twitter has a feature called Tweetups, which are face-to-face meetups that are organized online involving people with similar interests. These may range from people who share a love of playing bridge to groups of recovering addicts.

Strengthen existing relationships

Social media can help manage relationships, especially with those who live far away from each other, thus breaking down geographical barriers. Far from increasing isolation, social media can provide alternative means of finding support, even helping to lift depression, and as Tweetups have shown, provide a healthy excuse to go outside rather than stay cooped up indoors or hunched over a computer.

Provide teens with opportunities to develop technical and other skills needed to function in society

More and more young people are turning to the internet for health advice, including topics such as contraception, acne treatments, etc. Many teens will post online what they are

reluctant to share with their parents. For troubled youth, this makes early intervention by concerned friends and peers more possible. For others, it provides a rich opportunity to experiment with different modes of creative self-expression, which is in itself therapeutic. While it is impossible to deny the dangers of social media, parents may choose to focus on the positive uses of online media in order to promote better online habits in their children.

Impact of Social Media on Emotional Wellness

Social media can have positive and negative impact on emotional wellness:

Negative Impacts: Most people who use social media want to put their best foot forward. Often, this means they are presenting a skewed view of their life that is all about happiness and achievements. This can lead their friends to compare their own lives to this "perfect" scenario which can have a negative impact on their emotional well-being.

Positive Impacts: Social media could be used to spread happiness. Posting happy, encouraging, and uplifting posts may lead others to do the same. The original goal of social media sites was to create an easy way for people to connect

to others. This is a good tool for friends or family who don't live nearby to keep up with what is happening.

Another positive impact could be the ability to help identify certain emotional illnesses. One in particular is social anhedonia which is the inability to enjoy normally enjoyable activities.

Conclusion

From the above, it is concluded that emotionally healthy does not mean they are happy all the time. It means they are aware of their emotions. They know how to manage their negative feelings. Social media may help improve emotional health by boosting self-esteem and providing a source of emotional support.

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INTEGRATION OF TECHNOLOGY IN TEACHING AND LEARNING PROCESS

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Introduction

Integration of technology in education is refers to the use of technology to enhance the learning experience of students. Utilizing different types of technology in the classroom, including a virtual classroom, creates learners who are actively engaged with learning experience.Integration of technology is to the use of technology resources like smart phones and tablets, digital cameras, social media platforms and networks, software applications and Internet. Successful technology integration is achieved when the use of technology likes Routine and transparent, accessible and readily available for the task at hand and supporting the curricular goals and helping the students to effectively reach their goals. When technology integration is at its best, a student / teacher doesn't stop to think that he or she is using

technology tools. And students are often more actively engaged in projects when technology tools are a seamless part of the learning process. However, technology integration guides students towards greater understanding of all concepts covered in class.

In this 21st century, the term technology is an important in every field especially in education. Because the technology has become the knowledge transfer highway in every filed. Nowadays, integration of technology goes through innovations and it transforms our societies that totally changes the way people think, work and live. On the other hand, all schools which are supposed to prepare students to live in a knowledge society that needs to consider the integration of technology in their curriculum. Integration is the blending of computer related learning activities into curriculum to have students acquire, organize, demonstrate and communicate information.

Integration of technology means technologybased teaching and learning process that closely relates to the utilization of learning technologies in schools. Due to the fact of technology that students are to be familiar with technology and they will learn better within technology based

environment. Because, the usage of skill in teaching contributes a lot in the educational facets in which the application of technology will lead to effective learning with the help and supports from technology elements and components. It is right to say that almost all subjects likes mathematics, science, languages, arts and humanistic and additional main arenas can be well-educated more effectually through skill based tools and equipment. In addition, technology provides the help and complementary supports for both teachers and students where it includes real education with the support of the processors to help the purpose of knowledge aids.

The need for integration of technology in education is crucial, because with the help of technology, teaching and learning is not only happening in the school atmosphere, but also can occur even if educators and pupils are actually in distance. However, integration of technology is not a one-step learning process, but it is a continual process of learning that provides proactive teaching-learning environment.

Integration of technology was employing the internet, computers, CD-ROMs, interactive media, satellites,

teleconferencing, and other scientific resources in teaching to maintenance, improve, motivate and create knowledge. Using the various technologies available, technology integration in the teaching/learning process can be accomplished by using approaches cited in a report by the National Centre for Education Statistics (2000).

Some of the benefits of using the various approaches to integration of technology were cited in the National Educational Technology Plan (Office of Technology, 2000)

- Helping the students to comprehend difficult-to-understand concepts;
- Helping the students to engage in learning;
- Providing the students with access to information and resources; and
- Better meeting to the students' individual needs. (p. 25)

The National Education Policy (2020) mentions that technology integration is needed "to support teacher preparation and development; develop education, knowledge and assessment methods; improve educational access to deprived collections; and rationalize instructive preparation, administration and management".

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Consequently, technology integration has inferences connecting to numerous features of education knowledge. Some other aspects substantiating integration of technology in teaching learning process are as below.

- ❖ Enhances student autonomy and individualised learning practice.
- ❖ Helps the students to actively engage in learning.
- ❖ Students get opportunity learns beyond classroom hours.
- ❖ Education is lithe and suitable.
- ❖ Supports for wherever, anytime education.
- ❖ Access to superiority knowledge resources.
- ❖ Decreases the rate of tutoring.
- ❖ Develops pupils' boldness in the direction of knowledge.
- ❖ Benefit students with special needs and enhances students' quality of work.
- ❖ Formulate pupils for upcoming professions by emerging ICT skills.
- ❖ Supplements teachers' instruction and helps to plan and mange activities of educational institution.

Therefore, the teachers have to guide to the students on how to use technology safely and stay protected while surfing the internet. Educators' eagerness for retaining skill in the

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instructive process has a strong influence on their pupils' inspiration and arrangement through the education development. There is a deep relation between teachers' motivation and their students' motivation in terms of the potential to learn.

Types of Integration of Technologies in the Classroom Teaching

Many learning technologies boost a teacher's ability to engage students learning and interest. Some of the technologies are as given below.

Computers and Tablets

Teachers can take advantage of computers, laptops, and tablets, allowing students to play educational games and interact with new media. These devices also give students access to the internet to conduct research, access databases, and visit educational websites.

Smart boards

Teachers can keep the learning environment as interesting and maximize efficiency by using smart boards in the classroom. With an interactive whiteboard, teachers can

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bring up supplementary imagery readily, play videos, allow students to collaborate in real time on the display, and share notes on a class in website. A smart board can make lessons more engaging and can make it easier for students to return to the notes when class is over.

Virtual Reality

Virtual reality is increasing commonly, as its applications in the classroom. Other forms of immersive media, such as organizing virtual field trips to historic sites, can give students to new perspectives and deeper understandings of subject matter. Interactive virtual reality games can also offer new exciting ways to teach to all subjects.

Social Media

Teachers can leverage social media to create groups, hashtags, on the other opportunities for their students to interact with other. Because, the teacher to create a social media group such as Face book, Instagram and LinkedIn group where they post discussion topics about all subjects, giving students the chance to ask questions or comment as they read the play. Teachers can invite students to upload their own video and others education related to a specific theme in the play.

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Level of Integration of Technology

SAMR, which stands for substitution, augmentation, modification and redefinition, to represent the four levels of technological integration.

Substitution

At the substitution level of technological integration, teachers might replace a traditional tool with a digital equivalent without changing the goals of the lesson or activity the tool supports. Substitution is the most affordable level of technological integration and might be appropriate for large classes with different levels of access to technology.

Augmentation

The augmentation level of technological integration, uses of technology is to add extra features or resources, like spell-checking and grammar correction tools in a word processing program. The goals and activities of a lesson plan might stay the same, but students have access to additional content through the technological delivery method.

Modification

The next level of technological integration is modified, in which a teacher might change parts of an activity to reflect

the capabilities of a technological medium. Educators might also use scientific alteration to acclimatize in-person undertakings to a remote or fusion medium. Video-conferencing software often features chat and poll features, which can allow students to ask their teacher questions anonymously.

Redefinition

The highest level of technological integration is redefinition, where a teacher might use technology to design activities and shape lesson plans. This level is appropriate for classrooms where students have equal access to digital tools and where educators have significant experience using technology to teach.

Categorization of Integration of Technology in Classroom Teaching

Teachers can integrate technology into instruction in so many ways that can be categorized into different levels are as given below.

A. Simple / Basic Integration

- Using LCD or OHP projectors to show pictures in class

- Allowing students to do projects in Microsoft Office tools such as Word, PowerPoint, and Excel to achieve more presentable outputs

B. Middle Level Integration

- Introducing simulation games and computer-based materials to introduce a topic
- Presenting the subject using a software
- Allowing students to search for information from the Internet
- Producing leaflets, flyers, and simple printed materials using various computer software

C. Central Instructional Tool

- Production of newsletter by the students
- Holding video conferences among students from different schools

A teacher can always make the classroom instruction level up through the use of technology more than just for the presentation of lectures but for the further honing of the skills of her students.

Five Major Reasons to Integration of Technology into Curriculum

- **Experiences of Students Learning-**Students are

growing up in a digital world, it is important that technology integration is part of education. Pupils want knowledge skills to be applicable. For this to occur, accomplishments essential to take in the use of knowledge to obtain, validate, apply and transfer info.

- **Prepares Students for the Future**

  In addition, teachers have an obligation to prepare students adequately with the skills they need to be successful. It is important to realize that the classroom has dramatically transformed. With the internet, students are no longer tied to a physical location to complete their work. Instead, wireless technology can be used to check email, research information and etc from a mobile device. Students need the skills to thrive in this type of inside and outside of the classroom.

- **Develops Essential Skills**

  Students are competent users of technology, often their knowledge and skills are limited. They tend to use of technology to communicate with others. Teachers need to provide learning opportunities that have students expand their knowledge and skills to broaden their understanding of technology can be used in our learning purpose.

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- **Provides Fair and Equal Opportunities-**As well, it is important to acknowledge that although students have technology skills, many do not. Because, the education must provide equal access to technology resources and provide instruction to make sure all offspring have the expertise they need to become creative members of civilisation.
- **Promotes Digital Citizenship-** Moreover, it is essential to recognize that just because students possess some technology skills this does not mean they have a strong understanding of their moral or safe practice. Education plays an important role and students become responsible participants in the digital era.

Challenges of Integration of Technology in Teaching Learning Process

Some of the challenges of integration of technology in teaching learning process are as given below.

- Fear of technology and scared to experiment with new technologies.
- Some schools have technology, but it remains unused.
- Lack of training opportunities and lack of technology support.

- Lack of time to attend training to learn new technologies.
- Lack of time to create lesson plans that incorporate technology.
- Certain educators run-through a educated dependence.
- Inability to allow students to know more than the teacher.
- Lack of technology in the school.
- No teachers' development time and no support from administrators.

Conclusion

Technology in education and the right devices in students' hands help to prepare them to their career and technical skills. They need to be successful todays and tomorrows. Though making, students can gain these skills, hone their problem solving and critical thinking skills for the 21st century.Technology should be used currently in conjunction with classroom teaching.Integrationof technology is a comprehensive process of technology to the educational system to improve teaching and learning process. Its success depends not only on the availability of technology, but also pedagogical design. Though there is no formula for determining the optimal level of technology integration in the educational system, creative teachers at all levels of

education have always found ways to incorporate innovative teaching aids and strategies in their classes. It can also help school education systems to enhance the experience of all students and teachers with a holistic solutions approach that focuses on technology to enable personalized learning, connected, and efficient classrooms, and a secure and infrastructure. Teachers must be properly trained and supported through ongoing professional learning resources and communities.

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HOLISTIC EDUCATION: A NEW APPROACH TO TEACHING AND LEARNING PRACTICES

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Introduction

Holistic education focuses on the fullest possible development of the person, encouraging individuals to become the very best or finest that they can be and enabling them to experience all they can from life and reach their goals (Forbes 2003). Robin Ann Martin (2003) describes, "At, its most general level, what distinguishes holistic education from other forms of education are its goals, its attention to experiential learning, and the significance that it places on relationships and primary human values within the learning environment." A holistic way of thinking tries to encompass and integrate multiple layers of meaning and experience rather than defining human possibilities narrowly. Holistic education is a fairly new movement, which began to take form as a recognizable field of study and practice in the mid-1980s in North America (R, Miller 2004). It emerged as a response to the dominant worldview

of mainstream education, often referred to the "mechanistic" or "Cartesian-Newtonian" worldview. Rather than attempting to provide a model of education, holistic education seeks to challenge the fragmented, Reductionist assumptions of mainstream culture and education (R, Miller2000a, Schreiner2005). In other words, holistic education is concerned with "underlying worldviews or paradigms in an attempt to transform the foundations of education (Nakagava2001).

Holistic development is a comprehensive approach to learning which aims to develop multiple facets or abilities of a human brain. Conventional educational and learning systems aim at the development of intellectual capabilities only. But holistic growth aims at the development of physical capabilities, intellectual abilities, cognitive or mental abilities, emotional abilities, and social skills.

Holistic education has its roots in humanistic and progressive education, but differs from the approaches in that it includes the spiritual dimension. It focus is on wholeness, and its attempts to avoid excluding any significant aspects of the human experience. The primary assumption of holistic education is that we should nurture

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this spiritual part of being as well as the intellectual, physical and emotional.

Holistic education challenges the present approach to education and its obsessive focus on standards and testing Holistic educators see this approach as reflecting a materialist and consumerist culture that has reduced schooling to the training of individuals to compete and consume in the global marketplace. In fact, the present thrust can be seen as abandoning any attempt to educate the whole human being. It reduces schooling to training for the workplace that can be easily accessed through standardized tests.

Why holistic education

Holistic education broadens and deepens the educational process. It represents a planned approach that encourages personal responsibility, promotes a positive attitude to learning and develops social skills. These are essentials in the modern world in which we live. The identification of the outcomes of holistic education has advantages. These outcomes clarify the purpose of this educational approach for students, teachers and parents. Furthermore, it allows

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parents and students to make an informed choice when they are confronted with different educational systems.

The educational characteristics of the IB programmes have much in common with the outcomes associated with a holistic approach to education. If parents favour a holistic approach to the education of their children, then the IB programmes offer such an approach

The implications of holistic education

Holistic education is a clear departure from the knowledge transmission approach to education that has been familiar in the past. Holistic education prepares a student for lifelong learning in which the educational focus moves towards the life skills, attitudes and personal awareness that the student will need in an increasingly complex world. The commitment to the subject knowledge of the student is maintained but is complemented by learning how to learn, the critical evaluation of knowledge gained and the use of this knowledge in a broad range of contexts; it is these that represent the education currency of the future.

Consequently there is an emphasis on a broad educational approach that addresses the intellectual, personal and interpersonal development of the student and puts in place

many of the values, attitudes and skills that will serve the student well throughout life. Such a broad development cannot be claimed by the knowledge-laden education systems that have dominated for so many years. It brings closer the realization of "learning to be" and "learning to live together" that have been identified in the Delors report (UNESCO 1996: 14). This broad development of the student must be carefully planned at the individual level and has obvious repercussions on teaching strategy, curriculum design and the assessment of progress.

The evaluation of the "soft" personal skills such as integrity, care, consideration, negotiation and active listening has never been easy, but these are new challenges in educational assessment. The skills and attributes will constantly be in dynamic development as various situations and scenarios present themselves in which these skills are necessary and appropriate.

Evaluative information must be sought on behaviours and actions from a number of sources and in a range of situations and these fed back to the student in a constructive and supportive manner. These behaviours lend themselves to peer review and informal assessment. This could be

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problematical and brings into focus the importance of the relationship of the teacher and student and between groups of students. Simply offering an assessment in terms of effort and a grade will no longer suffice; such "soft" skills cannot be graded on any scale.

Holistic education calls for students to take ownership of their own development. This ownership will take different forms at different ages and levels of student maturity. Nevertheless, it is a key element within holistic education and teachers will need to be at the forefront of driving this issue and encouraging this ownership. The supportive role of the parent within holistic education is essential. The behaviours identified in the student profile will also manifest themselves outside the classroom and parents should recognize, encourage and praise such positive behavioural changes. Holistic education is a radical endeavour. The educational journey starts the process of self-actualization and self-realization through relationships, and interconnectedness with other individuals, groups and the world around them is an integral part. Formal education is merely the starting point of this lifelong process.

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Holistic education: Implications for the teacher

Holistic education represents a new journey for both student and teacher and one in which both parties will grow and critically examine perhaps strongly held values and beliefs. For the educator this could be an unsettling experience; the teacher is moving out of the comfort zone of subject specialization into areas of personal uncertainty. No longer is the teacher depending on subject expertise but is guiding students in developing and examining their own values and prejudices, their critical thinking and behaviours and confronting opinions that are new to them without clear demarcation of right or wrong. This is uncertain territory. Frequently this may be a joint journey of discovery for both student and teacher, with the teacher bringing their greater life experience to the learning process. Holistic education challenges teachers to think differently about student cognitive and affective development and to examine critically how they practise their craft. The working relationship between the student and the teacher changes; it becomes more inclusive, dynamic and egalitarian. The appropriate pedagogical approach will become one of active,

planned interventions that are developed for students to meet their development needs.

The teacher's skills of facilitation, guidance and mentoring will feature strongly in promoting learning and understanding at both the academic and social levels. The aim is for students to understand, for example, the importance of relationships, the different ways of regarding knowledge and its evaluation, the importance of life skills and the impact that the students have on others around them. Teachers must also examine the learning culture within their school so that it is conducive to creating an inclusive learning community that stimulates the growth of a person's creative and inquisitive engagement with the world. The aim becomes the development of healthy, curious individuals who can learn what they need to know and apply it in any new context in which they find themselves and who are self-motivated and confident learners.

The holistic teacher seeks the integration so that what the child encounters becomes part of him or her. Too often in school, knowledge is acquired for a test and quickly forgotten. Holistic learning is not satisfied with this approach.

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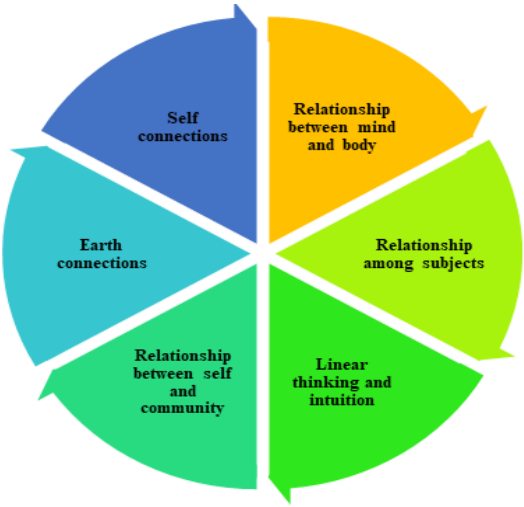
Figure-1. Showing the six types of connections are described below that attempt to facilitate holistic learning:



Four 'Pillars of Learning' in Holistic Education

For methodological purpose only, holistic education has noted four pillars of learning in the twenty –first century. UNESCO has also indicated these same four pillars, although with slight differences. (Nava2001).

Figure-2.Showing the Four pillars in Holistic Education

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Learning to Learn

This starts with learning to ask. To ask is a natural act of consciousness in its search for knowledge. Its real purpose is not so much for the question to be answered as to be explored.learning to learn means empowering the attributes of consciousness to exercise skills such as paying attention, listening, perceiving, and developing curiosity, intuitiveness, and creativity. Learning to learn means having the ability to direct and take responsibility for ones own learning, for keeping one self up-to-date, for knowing where to look for knowledge. It is particularly to scientific awareness. (Nava 2001).

Learning to Do

Learning to do is linked learning a profession and to productive work: learning to adapt to the needs of work and ability to work in a team, along with the strategic use of

knowledge to resolve problems and make rational decisions in generating quality goods and services. learrning to do means knowing how to take risks as well as take the initiative.(Schreiner2005). This pillar of learning implies in the first place for application of what learners have learned or known into practices; it is closely linked to vocational-technical education and work skills training.

Learning to Leave Together

This means learning to live responsibly, respecting and cooperating with other people and, in general, with all the living organisms on the planet. Learning must overcome prejudice, dogmatism, discrimination, authoritarianism and sterotypes, and all that leads to confrontation and war. The fundamental principle of this pillar of learning is interdependence, that is, knowledge of the network of life. (Nava 2001). This pillar implies an education taking two complementary paths: on one level, discovery of others and on another, experience of shared purposes throughout life.

Learning to Be

Learning to be means the discovery of true human nature, and encounter with the essence of oneself, which goes beyond the psychic apparatus of thoughts and emotion. It is

learning to belong to the whole. It is the discovery of our universal dimension, where genuine human values, not individual human values, reside. It is the discovery of ones own being and the inner wisdom achieved through self knowledge. Holistic education nurtures this learning in a special way, by recognizing the human being as a basically spiritual being in search of meaning (Nava2001).

Conclusion

Holistic education is an approach to pedagogy that can meet the needs of all types of learners, that can be a source of fulfilment and gratification for teachers, and that repairs future citizens who will contribute a concern and mindfulness for others, for their communities, and for the planet. It is compatible with both global education and environmental education, which are also based on the principles of interdependence and connectedness. Based on this interdependent perspective, holistic education seeks to create a society where we live in harmony with the surrounding environment. It rejects consumerism as the dominant mode of being in modern society. Instead, it seeks an education that is rooted in the fundamental realities of nature and existence. Holistic education seeks to connect the

part with the whole. We have tended in education to forget the larger vision of wholeness and connectedness, and holistic education calls on us to restore that vision. Such a vision, of course, is a primary goal of Education for Sustainability.

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EQUITABLE DIGITAL ACCESS

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Introduction

In this technology-enabled world, every difficulty is an opportunity to invent and improvise. This pandemic has challenged us to look for different modes of teaching apart from the usual in-person traditional mode. The National Education Policy 2020 acknowledges the value of utilising technology and any potential downsides. While implementing NEP is essential, it also calls for measures to mitigate its downsides. To meet the present and future challenges of providing high-quality education for everyone, we must optimise the already-existing digital platforms and ICT-based educational initiatives. One of the prime challenges is eliminating the digital divide in the country. For such, we require concentrated efforts like the Digital India campaign and the accessibility of computing

equipment. Bharti Wadekar et al. (2022) proposed that the technology used in online and digital education must appropriately address issues related to equity.

Digital Learning

Digital learning is the innovative incorporation of modern technology and digital tools to assist the progress of teaching and learning. It is also known as Technology Enhanced Learning (TEL), Digital Learning or e-Learning. Digital education is the way forward to seeking education through the means of technology and digital devices. Digital learning has the following merits over traditional learning.

- **Individualized Learning Experience-**In the traditional education system, many students experience a lack of interest when they are not able to cope up with the rest of the class. Whereas the digital format allows teachers to customize the study material based on an individual's learning speed and ability.
- **Students Become Smarter -**When students are exposed to new learning tools and technology, they develop effective self-directed learning skills. It also enables them to analyze what they need to know to access online resources. It plays

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a vital role in enhancing their efficiency, learning ability and productivity.

- **Unlimited Information**-The world of the internet is vast and is loaded with information, most of which is freely accessible. Earlier, students would rely only on limited sources of information but now the unavailability of the required information is no longer a barrier in seeking knowledge. The emergence of digital education has made it possible for students to explore and use this treasure of knowledge.
- **Smart Classrooms-** Through tech-savvy methods of teaching, students understand that learning can be innovative and fun. The classrooms are equipped with a TV or a projector which makes it easy to shift from a regular classroom session to an interactive digital session. This increases the attention span of the students as they are extensively acquainted with the digital world.
- **Digitally Updated-** As the world is ever-evolving in terms of technology, information can easily become outdated. Equipping students with updated information and other subject related topics is no longer a matter of choice, but a mandatory process. Students spend most of their time on

their phones and laptops, so they must be technologically sound.

- **High Learning Engagement**-The traditional education system provides limited scope for engagement as it include limited factors like textbooks and hand-written notes, whereas the digitized education system offers a wide range of choices to learn from. The unlimited availability of resources makes every session extremely innovative and engaging.
- **Ease of Sharing**-The traditional education system would rely on students maintaining notebooks containing information provided by teachers in the classroom but the modern digital education system changes everything. Now preserving and sharing information is just a click away which saves students a lot of time and physical labour.
- **Accountability in Students -**The digital education system incorporates real-time evaluation and system-generated performance report which increases the transparency of assessment. It enables students to analyze their performance and come up with required solutions on their own. They no longer remain dependent on their teachers and parents to spoon-feed them with information.

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Technology in the classroom

Technology use is becoming a more crucial component of public education. Technology is crucial in the classroom to improve learning and as a subject of knowledge in which students must become proficient. The difficulty of providing equitable and high-quality access to technical resources is one that educators must overcome. Access to hardware and a reasonable schedule for using technology can be boiled down into two primary concerns regarding the fair use of technology in the classroom.

Access to Equipment

Access to relevant devices with comparable capabilities should be available to students. All students should have access to the most excellent gear available to foster technological competency. The complexity of putting this idea into practice belies its apparent simplicity. High quality and fair access might not coincide. There will always be some students with more modern or powerful gear, even in "one-to-one" institutions. To meet this criterion, tasks must be modified to match widely accessible hardware, or alternate access to the hardware must be provided to offset

any relative disadvantage across students (Barseghian, 2013).

Establishing a Reasonable Schedule

It will be necessary to set aside class time for the use of technology in order to ensure that all students have access to it equally. Many students may require guidance when using technology. This is especially important for students whose families have less access to technology. By its very nature, some hardware will only be available in restricted quantities. This applies to digital technology just as much to dissection samples and microscopes. A schedule to be maintained to provide equal access when the hardware is constrained. In addition, Diekmann, J. & Villarreal (2001) mentions that depending on the classroom setting, it might be beneficial to ban all technology use or just certain kinds of technology at particular times.

Technology use by students should be left up to their discretion in order to accommodate various learning preferences. Students must, however, also gain specific competencies with particular form of technology. Allocating time for both more organised technology use and

unrestricted use of the students' preferred technology will help strike a balance between these objectives.

Initiatives to provide Equitable Technology Access

The following initiatives are to be taken by the teachers to provide equitable technology access in the classroom.

- ❖ Be familiar with and follow the school's acceptable use policy
- ❖ Be aware of the challenges each of the student may face
- ❖ Allocate class time for technology use in order to support all students
- ❖ Give students considerable latitude in how they use technology
- ❖ Offer organised instruction on how to use technology
- ❖ Keep a usage schedule that permits universal access when the hardware is unavailable
- ❖ Ask students for their opinions on the kind of technology they would like to use and how it should be applied

Technology Access for All

The way that education is provided and received is radically changing as a result of the digital revolution. All students do not, however, have equal access to technology. All students should have equal access to technology and information,

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regardless of their racial or ethnic background, socioeconomic standing, age, level of physical fitness, or any other characteristic. Giving every student a chance to learn and acquire the knowledge and skills they need to become tech-savvy citizen is essential. Students who do not have equal access to technology and information miss out on learning opportunities and have fewer options in the future. It is crucial to note that ensuring students have access to technology involves more than just giving them gadgets and the internet. Additionally, Sharma (2008) proposes ensuring to use technology for learning. India has the second-largest educational system in the world. Since the quest for a digital education has recently made the "digital gap" in society more apparent, equitable access to technology is essential. There is still a sizeable portion of the population with limited access to digital technology.

The future of education in India will be heavily influenced by digital learning. As a result, measures must be implemented to guarantee and encourage fair access to technology. Equity issues in online and digital education were addressed in the National Education Policy 2020. To address the present and upcoming problems in delivering

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high-quality digital education to everyone, it was advised that existing digital platforms and continuing ICT-based educational programmes be optimised and expanded (Guido, 2017).

Acquisition of equitable Digital Education

To achieve equitable digital education in the future, the focus should be on the policies that bridge the digital divide, addressing the challenges mentioned. Uninterrupted power offered to each household can guarantee the adoption of digital technology by one and everyone. Low knowledge rates and accessibility of comparatively cheaper handsets can facilitate dealing with inequities. Digital acquisition must be addressed for the productive adoption of technology in education (Kamalakkannan et al., 2021). The educational officers should set up educational initiatives for schools that combine digital pedagogy with fundamental teaching and learning concepts. With digital acquisition programmes, students should be encouraged to adopt a good attitude toward technology, gain the fundamental skills necessary to engage with it, exhibit safe online behaviours, and adhere to cyber-security guidelines. Only digital technology identifies

a set of programme areas where our students would be prepared to benefit from a digitally enhanced education.

Telecasts and broadcasts for people with limited access to digital media should be widely used in the current mass media, including radio, television, and community radio.

To meet the diverse needs of the student population, such academic programmes should be developed and made available 24/7 in various languages. Appropriate digital devices, like tablets with preloaded content, should be thought of, developed, and provided to students and academicians. Cost-Effective Digital learning is a value-effective manner of education as compared to ancient learning. In digital Learning, there may be a reasonable probability that one does not need to pay extortionate amounts of cash to purchase textbooks. As textbooks typically become obsolete, e-learning is undoubtedly an effective learning method attributable to the reduced cost (Sharma, 2008). Comfort zone time may be established in digital learning as one can study at the time that suits one. In digital education, the students will study at a time of his comfort (Devaraj, 2022).

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Challenges of Digital Learning

With time, digital learning has become increasingly in. It is observed, "Digital learning ought to be far more about the human bit than simple computers," and they had a point (Barseghian, 2013). However, implementing digital learning has its own difficulty in sustenance. Always changes brings improvement which in turn leads to development and advancement, while the other side pertains to particular difficulties in putting this improvement into practice. One of the biggest obstacles to digital learning is that the aversion of some teachers towards technology. People typically oppose change, even when it is better than the alternative. They might not believe using technology to learn is as effective as talking to an instructor. It has been demonstrated that using e-Learning will result in significant changes inside a classroom. Also the implementers will face some resistance. To beat this resistance, specific measures may be taken (Bharti Wadekar et al., 2022).

❖ Refresher Courses

The feature of multimedia system learning permits making the system much more participative and easier to assimilate. During the refresher course, learning materials are at their

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fingertips once they need them. This may alter to complete the training within a span of our time and effectively take it forward in their classrooms.

❖ **Effective communication skills**

Communication is critical to effectively include digital learning programme. It is vital that teachers ought to apprehend what edges digital learning offers them and what the objectives are, among alternative aspects. One of the common challenges in digital learning is that they are left to their own devices. Teachers might need to explore the course material and properly present to the students. For which sound communication skills is required.

❖ **Providing Incentives**

Enfranchisement of the courses and certification offers teacher a tangible goal that edges themselves additionally. Any professional development programme that may cause career advancement or resume building is practical for today's teachers. This will motivate the teachers to implement the acquired knowledge in their regular teaching.

❖ **Creating Interest**

One of the most straightforward strategies to encourage teachers is to create interest in using the e-Learning

resources. The Digital Learning courses developed are visual and appealing to the attention. Taking a glance at the infographic, wherever one can get concepts on the way to build e-Learning is much more engaging (Kaili, 2019).

Conclusion

Digital Learning can help reduce inequities between students, but digital learning can also perpetuate and exacerbate existing inequities. When digital learning occurs at schools we must ensure that every student has access to devices and reliable internet. In conclusion, digital education is the future of India, and it is here to stay, and it will elevate the nation to a new level of socioeconomic development and wealth. Therefore, it is crucial to comprehend and consider the digital difference. To remedy these disparities, careful planning steps must be taken. Due to the complexity of the gap, closing it may seem challenging, but every step we take will get us closer to achieving universal access to equitable digital education.

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ENFORCING EFFECTIVE POLICING BY HIRING CRIMINOLOGY PROFESSIONALS

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Introduction

Education is nothing but gaining knowledge to develop ourselves through formal / regular or vocational Training or distance learning. The role of education is to uplift our existing status and to eradicate our ignorance. There is a beautiful quote which clearly states about the above word ignorance" *The ignorance of the Law is no excuse*". In the Pre Independence period, Education plays a vital role to make our people to know the value of education and fight against Britishers for Independence legally. The Freedom fighters Dr. B. R Ambedkar, M.K. Gandhi were the best example for using knowledge of education to ignite the minds of Indian people about Purna Swaraj. After the Independence, Education slowly turns from service to business for earning money. The importance of education

turns into a status. In the 20th Century, those who completed 8th Standard were eligible to become a teacher, those who completed Pre-University Course were eligible to become a College Professor, those who completed Medical Course were eligible to become a Medical Physician, those who completed Law Course were eligible to become an Advocate. If anyone want to become a police officer apart from educational qualification, Physical fitness is important. Even if a person didn't have required educational qualification but have required physical fitness, he may become a police officer. Days passed, now we are in 21st Century, many changes have made in the professional courses which includes if a person have a bachelor of education degree with TET and TRB, he / she is eligible to become a school teacher. If a person has M.Phil. / Ph.D. / NET he is eligible to became a College Professor. The Scholars placed minimum eligibility because of the knowledge gained by our involvement and from the professional degrees. Once a Greek Philosopher Heraclitus said that "The Only Constant in Life Is Change" Likewise, Criminology graduates is eligible to become a Police officer. From early periods, Policemen were the guardians of law.

They were recruited to protect the innocent people and nab the criminals those harm others.

The role of education is to uplift our existing status and to eradicate our ignorance. Crime is an act of Commission or omission committed by a person or group in violation of law in force. Criminology is the Scientific Study of Crime and criminal behavior. Criminal Justice System plays vital role in protecting the society. The recruitment process was divided into 4 Categories Police Constable, Sub-Inspector of Police, Deputy Superintendent of Police in State level and IPS officers in National level. In Tamil Nadu, Dy. Superintendent of Police is recruited by Tamil Nadu Public Service Commission (TNPSC). Tamil Nadu Uniform Services Recruitment board (TNUSRB) is recruiting Police Constables and Sub Inspector of Police. Public and Police relationship is important to maintain Law and order. Many Universities were providing a Master's degree in criminology (M.Sc. Criminology & Criminal Justice Sciences). The affiliated colleges functioning under these universities were providing Bachelor's Degree (B.A Criminology & Police Administration) in Criminology. The Criminology course is a Professional course especially

framed for Police Force. They trained both Mentally & Physically to protect the society. Before recruiting they know about Law subjects and its ancillary subjects. In this Paper, we addressed various ideas and suggestions to improve the policing in India.

History of Police

Police Force was not formed in a single day. Many Landholders have valuable things and property, to secure them and their property they hired persons especially men who have required physical fitness. Later, the security was expanded to their whole family members. In 1829 the home secretary Robert Peel introduced the Metropolitan Police Act which formed the basis of the Metropolitan Police Force widely considered as the first organised English police service. Police constables were also known as ‘peelers’ after his surname. (Police Recruitment, n.d.). In 1780, Post of Superintendent of Police was created to supervise the markets and to reduce the prices of provisions. In 1929, Madras City Police re-organised with functional divisions of Crime, Law and Order and Traffic. In 1971, Special Cell CID was formed to deal with extremist's activities later known as Q' Branch CID. In 1973, Women Constables and

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Women SI recruited in Tamil Nadu Police for first time (Tamil Nadu Police, n.d.).

History of Criminology-Crime is evolved from ancient to existing digital era. Crime is an act of Commission or omission committed by a person or group in violation of law in force. Criminology is the Scientific Study of Crime and criminal behavior. It is a combination of all fields. Criminology includes the process of Making the law, Breaking the law and reacting towards breaking a law. Criminal Justice System plays vital role where it's pillar Legislative wing, Enforcement wing, Judiciary wing and Correctional wing makes us to behave in a moral manner. About 1764, Cesare Beccaria states that People commit crime for free will and punishment for the crime should fit the crime. He is called as Father of Criminology. Now Criminology was widely spread in many countries.

Liaison between Police Force& Criminology

Police Service is a 24/7 service. They live to protect and die to serve for the entire country. Like India's Armed forces, Police department is responsible for Internal security. The Police job is a Professional service. Many procedural laws and detecting the crime is based on criminological theories.

The criminological theories propounded by many criminologists such as Cesare Beccaria and Cesare Lombroso. One of the renowned theories is Routine Activity Theory (RAT). In the RAT theory, theorists Cohen and Felson clearly states the major ingredient of Crime which was Suitable target, motivated offender and Absence of Capable guardian. Here a lady is a suitable target, A Thug is a motivated offender, A Police officer is a Capable guardian. Imagine a situation where a lady is standing alone in a bus terminal, a thug is trying to harass the lady while a police officer in night patrol came there and saved the lady. If any one of the above major ingredients is absent then the chances of happening a crime is too low. Criminological theories and its crime prevention methodology is binding on every Police official.

Police Recruitment Board

To recruit an energetic and service minded police officers. The recruitment process was divided into 4 Categories Police Constable, Sub-Inspector of Police, Deputy Superintendent of Police in State level and IPS officers in National level. Indian Police Service was formed and recruiting IPS officers through Union Public Service

Commission (UPSC) throughout India. Especially in Tamil Nadu, Dy. Superintendent of Police is recruited by Tamil Nadu Public Service Commission (TNPSC). Tamil Nadu Uniform Services Recruitment board (TNUSRB) was established in 1991and recruiting Police Constables and Sub Inspector of Police which includes Sub-Inspector of Police (Taluk, AR, TSP), Sub-Inspector of Police (Technical) and Sub-Inspector of Police (Finger Print). The minimum age limit is 20 to 30 years, The educational qualification is A Bachelor's Degree from any University recognized by UGC / Government. Here the recruitment was categorized into 3 Written examination, Physical (Measurement, Endurance &Efficiency) Test and Interview. Before the recruitment of any degree candidates apart from criminology degree in Police force, they don't know about any Laws and the perspective of crime.

Training of Police Officials

Training is very important for each and every one to improve themselves. To become a Guardians of people, the police should sustain the rigorous training provided by respective police academy. In National level, Sardar Vallabhbhai Patel National Police Academy (SVPNA) was established on

1948 at Hyderabad, Telangana to provide Training to IPS Officers. The training divided into Indoor & Outdoor where indoor training is based on the following 15 subjects Police in Modern India, Indian Evidence Act, 1872, Indian Penal Code 1860, Code of Criminal Procedure, 1973, Special Laws, Crime Prevention & Criminology, Investigation – I & II, Forensic Medicine & science (Theory & Practicals), Maintenance of Public Peace & Order, Internal Security, Police leadership and Management, Ethics and Human Rights, Information & Communication Technology while outdoor training is based on the following outdoor subjects Physical Fitness, Drill (Including Ceremonial drill & Sword drill), Weapon Training & Firing, Yoga, Unarmed Combat, Swimming, Field Craft, Tactics & Map reading, Equitation, First Aid and Ambulance drill, Riot Control, Scuba Diving, River rafting, Archery, Weapon training. The trained officers will be posted as Assistant Superintendent of Police (ASP) in respective states.

In Tamil Nadu, Tamil Nadu Police Academy (TNPA)and Police Training School (PTS) were given training to their state Police force. The indoor training includes, Indian Evidence Act, 1872, Indian Penal Code 1860, Code of

Criminal Procedure, 1973, Local & Special Laws, Case Studies, Penology, Forensic Science and outdoor trainings such as Advance weapon simulator, Net climbing, Swimming, Drill with weapons, Trekking in Forest, Rescue drill and Escort. The trained officers will be posted as Sub-Inspector of Police in respective Police Station. The ruling DMK government on Friday on its budget allocated Rs 10,285 crore to the Tamil Nadu police department and another Rs 496.5 crore to the fire department. The state police department has received Rs 1385 crore more from the previous year budget and the fire department has received Rs 91 crore than the last year (Lobo, 2022.).

Time to reinforce Public-Police liaison

Public and Police relationship is important to maintain Law and order. In many cases people helped the police to nab the criminals and acted as a friend of court. In 1935 "Village Vigilance Committees" constituted to enlist public Co-Operation in Tamil Nadu. The CB-CID on Wednesday arrested a sub-inspector of police along with booking six people on murder charges in connection with the death of father-son duo Jayaraj and Beniks, allegedly tortured to death at the Sathankulam police station in the southern

district of Tuticorin in Tamil Nadu. CB-CID sources said. Both the sub-inspectors have been charged Section 302 (punishment for murder) of the Indian Penal Code (Lobo, 2020). The Tamil Nadu government has enhanced compensation for deaths due to custodial torture, firing and rape and permanent incapacitation by police to Rs 7.5 lakh from Rs 5 lakh. The compensation has also been increased to Rs 3 lakh from the existing Rs 1 lakh for custodial deaths, where torture could not be established like negligence in giving treatment. In May last, chief minister M K Stalin, said no custodial death would happen in the state. He said adequate instructions were given to the police to prevent custodial deaths. (Mariappan, 2023). Local policing – more responsive and accountable enforcement: There are several policing functions that concern the day-to-day life of common citizen and are very local by nature e.g., patrolling, traffic regulations, prosecution for offences like public nuisance or eve teasing. The enforcement to panchayat or citizen committees. This local force will have a small area under its jurisdiction, resulting in better interaction and involvement with citizen. Also transfers are

commonly used as a revenge tool against officers as a pressure tactic. (Thakur, 2010.).

Role of Criminology in Society

In Tamil Nadu, the Criminology course was first started by University of Madras, Chennai followed by Manonmaniam Sundaranar University, Tirunelveli. Both Universities were providing a Master's degree in criminology (M.Sc. Criminology & Criminal Justice Sciences) for more than 22 years. The affiliated colleges functioning under these universities were providing Bachelor's Degree (B.A Criminology & Police Administration) in Criminology for more than 10 years. This is the only emerging Social Science course that specifically serves the public. In these courses the students acquired intelligence about Police Administration, Police Investigation, Police Station Management, Criminal Laws, Criminal Justice System, Child Protection, Juvenile Justice, Penology & Correctional Administration (Prison Administration), Forensic Science and Cyber Crime. Today it is one of the moral & inevitable courses for every country. By considering the future of the Tamil Nadu society many affiliated colleges have started the Criminology course.

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Placing the Criminology students in the Criminal Justice System & Government agencies helps to reduce the primitive & contemporary crimes in the society. The Academic Professors, Associate Professors and Assistant Professors have an incredible knowledge about the training of Indian Police Officials, State Police Officials & Prison Officials. In the Uniform services Training of Deputy Superintendent of Police, Sub-Inspector and Special Sub-Inspector (Inservice Training) imparting the foundation classes is one of the parts for the Police trainees. The subject includes Criminology, Penology, Indian Evidence Act, Indian Constitution & some of the Contemporary Laws in India (Special & Local laws).

In the Outdoor Training Physical training for police officers were giving in the academic side. As a Criminology professional, they know about procedural law deals with legal procedures. According to Cr.P.C Sec 357 Orders to Pay compensation and Sec 357a Victim compensation scheme - Victim compensation will be provided swiftly through effective policing. They know very well about the modus operandi of the crime which makes it easier to spot the accused.

Absence of effective Policing in Society

The Police come under enforcement wing, they produce the law violators before court of law by detecting the Crime, Preventing the Crime and protecting the vulnerable groups. The absence of effective Policing in society mainly affects the public and leads a way to those who are ready to commit a crime both Mens rea (guilty mind) and Actus reus (guilty action).

According to National Crime Records Bureau (2021) A total of 4,28,278 cases of crime against women were registered during 2021, showing an increase of 15.3% over 2020 (3,71,503 cases). A total of **1,49,404** cases of crime against children were registered during 2021, showing an increase of **16.2%** over 2020 (1,28,531 cases). A total of **31,170** cases have been registered against Juveniles during 2021, depicting an increase of **4.7%** over 2020 (29,768 cases). The crime rate depicts an increase from 6.7 in 2020 to **7.0** in 2021. Crime against Child and Conflict with law children are increasing more in recent years. Likewise, the TNPSC's *Notification No: 08/ 2022 Dated: 01.04.2022* for the post of District Child Protection Officer, states that A degree in Sociology or Social Work or Psychology or Child

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Development or ***Criminology*** of any University or Institution recognized by the University Grants Commission or Institution recognized by the Government is eligible for the above post. Government should announce that B.A Criminology & Police Administration / M.Sc. Criminology & Criminal Justice Sciences are the two courses eligible to apply for Sub- Inspector of Police, Deputy Superintendent of Police and Indian Police Service. The preferential qualification should be given to PG degree M.Sc. Criminology & Criminal Justice Sciences only.

Conclusion

The Criminology course is especially framed for Police Force. Students joined in criminology course by passion and involvement. Recruiting Criminology students will save a lot of public money spending for Training police alone because they have been trained both physically & psychologically by Law subjects and Unarmed Combat. By knowing the criminal behavior, they can easily handle them. They will be a moral support to the victim of crimes. UG & PG criminology students were trained more than 3 years. Like Prevention is better than cure, Government should focus on recruitment process rather than increasing

compensation to the victims of custodial death. Child Welfare Police officer (CWPO) is in every station is existing in a document but not enforced efficiently, These CWPO should move on child friendly approach rather than treating them as adult. Many new theories will be formed by criminology professors to study and solve the problems in Society. Government should take initiative to make criminology students as a part in Police force.

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MULTILINGUALISM AND THE POWER OF LANGUAGE BASED ON NEW EDUCATION POLICY 2020

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Introduction

Today, many countries have more than one national or official language, with any number of smaller linguistic groups within them. Governments make difficult decisions on which language or languages to promote in education and which to omit form the school curriculum. Currently, the major language of international communication and education is English. Some countries have encouraged an exclusively English-medium education, meaning there is danger of the loss or near loss of their national or local languages. Others preserve the use of their own languages in education, treating English as a separate subject. Many people feel strongly that their first language is part of their identity, yet if the current dominant language is neglected, learners may have difficulty accessing information and

entering the job market. This situation poses serious questions for education policy. How can national and local languages be preserved while educating young people so that they can learn and function in the wider world? Is it more effective to teach and learn in English, students' first language, or a combination of these? How effective is multilingualism in education? language learning will aim to be experiential and enhanced through art, such as music, poetry, and theatre. There will be a major effort from both the Central and State governments to invest in large numbers of language teachers in all regional languages around the country, and in particular all Schedule 8 languages. States, especially states from different regions of India, may enter bilateral agreements to hire teachers in large numbers from each other, to satisfy the three-language formula in their respective states, and also to encourage the study of Indian languages across the country.

As Nelson Mandela said "If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart." In present days, to claim that "multilingualism is no longer the exception but the rule" (Sánchez 2019) may seem uncontroversial. From a

terminological point of view, defining the term 'multilingualism' and distinguishing it from other language contact and learning situations such as bilingualism or second language (L2) acquisition is a different and more complicated matter (Cenoz 2013). A common misconception stems from the lack of clarity when it comes to distinguishing bilingualism and multilingualism and the interchangeable use of the two terms made sometimes in the literature. For example, some authors have defined multilingualism as "the acquisition and use of two or more languages" (Aronin & Singleton 2008: 2; emphasis added). By the same time, the term second language viewed as a "cover term for any language other than the first language learned by a given learner or group of learners irrespective of the type of learning environment and irrespective of the number of other non-native languages possessed by the learner" (Sharwood Smith 1994), and the term bilingual is used when referring to those "who use two or more languages in their everyday life" (Grosjean 2010).

The Role of First Language

The great advantages in the use of more than one language in education. It leads, to the question of which language or

languages to prioritise. first language, at least during the first six years of school, giving them a strong foundation for the learning of further languages from secondary education onwards. Pinnock & Vijayakumar (2009). "Mother-tongue-based multilingual education". This is defined as "Learner centred, active basic education which starts in the mother tongue and gradually introduces one or more other languages in a structured manner, linked to children's existing understanding in their first language or mother tongue." The gradual introduction of new knowledge based on what is already known and has been consolidated by the learner is supported by brain imaging, and the field of education. In learning in general, new information needs to be linked to what is already known, in other words fitted into the learner's existing schemata, in order for it to be understood and recalled. "Requiring a child to learn abstract or academic concepts through a process which expects them to first link new second language to the corresponding words in their first language, and then to process, retain and use that academic language - all in the same amount of schooling time that another child would be given simply to learn the

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concepts in their first language - involves a huge cognitive demand.

Learning in a second language

second language as the medium of instruction may in fact require more time for successful learning rather than less, compared to a curriculum taught in the learners' first language. Students to learn as quickly in a second or foreign language as they do in their first language. Learning to perform a task in two different ways needs more time than learning to perform it in one way. More than one language is used in education, second way is processing time is needed for the skills and information to be consolidated in learning so that they can be recalled and built on later as further learning takes place.

Advantages of second language learning

- Enhanced Problem-solving skills
- Improved verbal and spatial Abilities.
- Improved Memory Function (long &short term)
- Enhanced Creative thinking capacity
- Improved attitude towards the target language and culture.

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Strength of multilingualism

It is a known fact that learning a language develops great skills such as communication, listening and improving your memory. The jobs and opportunities that suddenly become more available to you, if you are a speaker of another language or better still, three languages. Following reasons are why investing valuable time in learning a new language may be worth it.

Greater job opportunities

Bilingualism can improve your competitiveness in the job market. You will be a valued candidate for many jobs over someone who speaks one language. The demand for bilingual speakers has more than doubled in the last 5 years. Your future prospects will be enhanced in many sectors including government, business, medicine, law, technology, military, industry and marketing. The reason is that companies realise that bilingual speakers help to communicate with more clients from different backgrounds and offer the right level of service. Being bilingual helps to expand the company's customer base. You can become a global asset. You have a greater advantage in the global market and opportunities abroad will be open to

you**.** Obvious ones might be those that involve the travel and tourism industry, however many companies have international offices and production lines and seek employees that can communicate effectively with customers and clients.

Earn more money

Bilingual and multilingual speakers can expect to earn **5–20% more** than monolinguals (people who speak one language) as they are often seen as unique candidates that add more value to a company for their additional skills.

Higher brain functions-Being bilingual has positive effects on the brain. According to research, speaking a second language can mean that you have a better attention span and multi-tasking ability. This is because being bilingual means you are working on two different structures at the same time by constantly switching from one language to the other.

Tests have also shown that you have higher problem-solving skills and mental flexibility allowing you to switch from one concept to another frequently. Further to this, bilinguals possess a stronger working memory due to the nature of the

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study (memorizing vocabulary and rules) and therefore are able to recall lists, events and sequences better than others.

Protection against health risks

Research has shown that Alzheimer's disease and dementia develop later in life for speakers of multiple languages. This is due to the constant mental control of operating two or more different languages, which exercises the brain and helps it from degeneration. Other research has also shown that cognitive impairment is slower for those who speak more than one language compared to those who don't. There is also a lower risk of stroke and faster recovery should one suffer the illness.

Diversity and cultural wisdom

Being multi or bilingual can bring new perspectives on the world, religion and traditions. The study of cultures can boost your confidence and develop your wisdom and understanding of people. You will also become more diverse in your thinking, opinions and interests. Your travels can also become a more enriching experience as you are able to communicate fluently and manage your own trips without the need of a translator or a book.

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Significance of Multilingualism and NEP 2020

- It is well-understood that young children learn and grasp non-trivial concepts more quickly in their home language/mother tongue. Medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/mother-tongue/local language.
- High-quality textbooks, including in science, will be made available in-home languages. In cases where home-language textbook material is not available, the language of the transaction between teachers and students will still remain the home language wherever possible. Teachers will be encouraged to use a bilingual approach, including bilingual teaching-learning materials, with those students whose home language may be different from the medium of instruction. All languages will be taught with high quality; a language does not need to be the medium of instruction for it to be learned well.
- Multilingualism has great cognitive benefits to young students, children will be exposed to languages early on (but with a particular emphasis on the mother tongue), starting from the basic Stage onwards. All languages will be taught in an enjoyable and interactive style, with plenty

of interactive conversation, and with plenty of early reading and subsequently writing in the mother tongue in the early years – with skills developed for reading and writing in the other two languages in Grade 3 and beyond.

- language learning will aim to be experiential and enhanced through art, such as music, poetry, and theatre. There will be a major effort from both the Central and State governments to invest in large numbers of language teachers in all regional languages around the country, and in particular all Schedule 8 languages. States, especially states from different regions of India.
- The three-language formula will continue to be implemented while keeping in mind the Constitutional provisions, the need to promote multilingualism and national unity while providing for greater flexibility may enter bilateral agreements to hire teachers in large numbers from each other, to satisfy the three-language formula in their respective states, and also to encourage the study of Indian languages across the country.
- Students whose medium of instruction is the local/home language will begin science and mathematics, bilingually in Grade 6 so that by the end of Grade 9 they can speak

about science and other subjects both in their home language and English. In this regard, all efforts will be made in preparing high-quality bilingual textbooks and teaching-learning materials.

- The home/local language and/or the second Indian language will be enhanced with the reading of and analysis of uplifting literature from the Indian subcontinent, ancient to modern, and by authors from all walks of life, as well as through other arts, such as by playing and discussing music or film excerpts, or engaging in theatre in these languages.
- The home/local language and/or the second Indian language will be enhanced with the reading of and analysis of uplifting literature from the Indian subcontinent, ancient to modern, and by authors from all walks of life, as well as through other arts, such as by playing and discussing music or film excerpts, or engaging in theatre in these languages.
- The importance, relevance, and beauty of the classical languages and literature of India also cannot be overlooked. Sanskrit, while also an important modern (Schedule 8) language, possesses a classical literature that

is greater in volume than that of Latin and Greek put together, containing vast treasures of mathematics, philosophy grammar, music, politics, medicine, architecture, metallurgy, drama, poetry, storytelling, and more, written by people of various religions as well as non-religious people, and by people from all walks of life and a wide range of socio-economic backgrounds over thousands of years. Sanskrit will thus be offered at all levels of school and higher education as an important, enriching option for students. It will be taught in ways that are interesting and experiential as well as contemporarily relevant. Sanskrit textbooks at the foundational and middle school level may be rewritten in Simple Standard Sanskrit (SSS) to teach Sanskrit through Sanskrit (STS) and make its study truly enjoyable.

- India also has an extremely rich literature in other classical languages, including classical Tamil, as well as classical Telugu, Kannada, Malayalam, and Odia, in addition to Pali, Persian, and Prakrit; these classical languages and their works of literature too must be preserved for their richness and for the pleasure and enrichment of posterity. When India becomes a fully

developed country, the next generation will want to be able to partake in and be enriched as humans by India's extensive and beautiful classical literature which contains great intellectual and cultural treasures.

- In addition to Sanskrit, the teaching of all other classical languages and literature of India, including Tamil, Telugu, Kannada, Malayalam, Odia, Pali, Persian, and Prakrit, will also be widely available in schools as options (possibly as online modules), through experiential and innovative approaches, including by integration of technology, in Grades 6-12, with the option to continue from middle level through secondary education and university.
- In addition to high quality offerings in Indian languages and English, foreign languages, such as Korean, Chinese, Japanese, Thai, French, German, Spanish, or Russian will also be widely offered at the secondary level, for students to learn about the cultures of the world and to increase their global knowledge and mobility according to their own interests and aspirations.
- The teaching of all languages will be enhanced through innovative and experiential methods, such as gamification

and apps, and by weaving in the cultural aspects of the languages, with the teaching-learning of various subjects and with real-life experiences through films, theatre and storytelling, art and music, local literature, etc. Thus, the teaching of languages will also be based on experiential learning pedagogy.

- ❖ Indian Sign Language (ISL) will be standardised across the country and National and State curriculum materials developed, for use by students with hearing impairment. Local sign languages will be respected and taught as well, where possible and relevant.

Conclusion

It examines the effects of learning more than one language at a young age, and the power of multilingualism based on NEP2020. A large number of schools worldwide currently teach English to speakers of other languages from an early age. Discusses the degree to which such early foreign or second language teaching is actually useful or effective. And significance of the use of multiple language. In many parts of the world, it has also become popular to teach mainstream or even all curriculum subjects in English. Some, however, have found this to be detrimental in several ways and have

therefore reverted to teaching subjects in their national language. Many are concerned about the possibility that languages with a small number of speakers are doomed to being lost and replaced by a national language, or that their national language could eventually be replaced by English. This could have important repercussions both on local cultures and on international relations, given the emotive aspects of one's first language.

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INTEGRATION OF TECHNOLOGY IN EDUCATION

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Introduction

Technology is everywhere, touching almost every part of our lives, our communities, our homes. Technology lends itself as the multidimensional tool that assists the process of teaching and learning in education. Whenever integrating technology in the teaching-learning process the selected technology must support and suit the pedagogy and content. This makes learning more effective and meaningful for learners.

Technology integration means teaching a subject which exists in the curriculum via technology as an instructional tool (Misirli, 2016).So, technology is a tool to transact the curricular content. "Technology integration is the application of technology to facilitate learning through different mediums, provide opportunities for student-centric learning, engage learners, and allow for differentiation and learning preferences" (Yemothy, 2012). Davies & West (2013) defines technology integration "as the effective

implementation of educational technology to accomplish intended learning outcomes. We consider educational technology to be any tool, piece of equipment, or device-electronic or mechanical-that can be used to help students accomplish specified learning goal".

Substantiating integration of technology in teaching-learning process

Substantiating integration of technology in teaching-learning process is as follows:

- Enhances student autonomy and individualised learning practices.
- Helps students to actively engage in learning.
- Students get opportunity to learn beyond classroom hours.
- Learning is flexible and convenient.
- Helps for anywhere, anytime learning.
- Access to quality learning resources.
- Reduces the cost of education.
- Improves student's attitude towards learning.
- Benefit students with special needs.
- Enhances student's quality of work.
- Prepare students for future jobs by developing ICT skills.
- Supplements teacher's instruction.

- Helps to plan and mange activities of educational institution.

Challenges of technology integration

Das (2012) describes challenges of technology integration as follows:

- Infrastructure-related: This relates to the inadequacy of infrastructural facilities.
- Teacher-related: Some of the teacher-related challenges include unawareness about technologies, busy schedules, shortage of time, negative attitude towards technology use, etc.
- Capacity-building related: This relates to the inadequacy of professional development programmes for enhancing the skills required to organise technology-enabled learning environment.
- Technical-support related: Some of the technical-support related challenges includes shortage of technical facilities, support services etc.
- Language and content-related: Many ICT related teaching-learning resources are developed in English. The dearth of ICT learning resources in regional language is an also challenge. The content quality also matters.

- Sustainability related: The economic, social and environmentally friendly nature of the technologies needs to be considered to maintain ecological balance but without compromising the quality and needs of the present-day students.
- Equality-related: The divide between rural and urban, rich and poor, mainland and remote people, male and female, etc, are some of the challenges that hinder the ICT use.

Technologies for Integration in Teaching-Learning

There are many technologies that can be used for teaching and learning. The technologies includes both digital devices (electronic equipment's) and digital tools (includes websites, applications, educational softwares, etc). Digital devices includes, computer, mobile phone, laptop, tablet, camera, television, radio, smart board, projector, etc

When technology is effectively integrated into the curriculum, technology tools can extend learning in powerful ways. These tools can provide students and teachers with access to up-to-date, primary source material, Methods of collecting/recording data, Ways to collaborate with students, teachers, and experts around the world, Opportunities for expressing understanding via multimedia,

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Learning that is relevant and assessment that is authentic, Training for publishing and presenting their new knowledge. When technology integration is at its best, a child or a teacher doesn't stop to think that he or she is using a technology tool, it is second nature. Students are often more actively engaged in academics when technology tools are a seamless part of the learning process.

Types of Technology integration in education

- **Project based Activities Incorporating Technology**

  Project based learning (PBL) is defined as "a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks."

- **Online learning and blended classrooms**

  Online learning where instruction and content are primarily delivered via the internet or systems like a video-enabled classroom. Blended learning is the concept that includes framing teaching learning process that incorporates both face to face teaching and teaching supported by ICT. Blended learning incorporates direct instruction, indirect instruction, collaborative teaching,

individualized computer assisted learning.

- **Learning with Mobile and Handheld Devices**

  The shift to new media literacies and the need for digital literacy that encompasses both technology and media literacy will continue to shape the world in which young children are developing and learning (Linebarger & Piotrowski 2009; Flewitt 2011;Alper n.d.).

- **Instructional Tools like Interactive Whiteboards and Student Response Systems**

  In many educational institutions, the days of green chalkboards are over. Nowadays these whiteboards are more efficient in intimating the messages of tutors to students.

- **Web-Based Projects, Explorations, and Research**

  One of the first, and most basic, ways that teachers encouraged kids to use technology was with online research, virtual field trips, and web quests.

- **Collaborative Online Tools**

  Connecting with others online can be a powerful experience, both for teachers and for students and this can be done with collaborative online tools.

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❖ **Social media engagement**

Social media in education helps students, teachers and parents to get more useful information, to connect with learning groups and other educational systems that make education convenient.

Some of the popular technologies or digital tools used in teaching and learning

Instructional Tools

E-learning Tools- Adapt, Adobe Presenter, Easygenerator, eXe, Geobra, Learn Bubble, Sway, TEDEd, Vyond, Xerte, PowToon, Lectora, ISpring, isEazy, HiHAHo, Evolve Authoring, EDPuzzle, Camtasia, Brachtrack, Articulate, Adopbe captivate

Quizzing and Testing Tools- Quizlet, ClassMarker, Easy Test Maker, Exam Buddy, Hot Potatoes, MyGradeBook, Online Exam Builder, Respondus, Test maker

Learning platforms & LMS- Axonify, aNewspring, Blackboard, Canvas, Curatr, D2L, Degreed, Edmodo, Google Calssroom, Mahara, me:time, Moodle, PebblePad, Schoology, Thinkific, Totara Learn.

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Content Development Tools

❖ **Documentation Tools**

Apple Pages, Bean, Google Docs, Libre Office, Open Office, Publisher, Word, Wordle, Zoho Docs, Writer, AbiWord, Dark Copy, Desktop Author, Scribus, Visme, Writer

❖ **PDF & Flipping Book Tools**

Sumnotes, Adobe Acrobat Pro, Adobe inDesign, Booklet Creator, FlippingBook, Google Docs, LibreOffice, PDFCreator, PDF Pro, Uniflip, ZonePDF

❖ **Presentation Tools**

Apple Keynote, Google Slides, Haiku Deck, LibreOffice, OpenOffice, PowerPoint, Prezi, SlideShare, Sway, VoiceThread

❖ **Spreadsheet Tools**

Excel, Google Sheets, Libre Office, NeoOffice, OpenOffice, ThinkFree, Abiltiy Office, SoftMaker Office, Glide, FluSuite, Ability Office

❖ **Clip Art, Image and Phot Sharing platforms**

Flickr, Free Foto, iStock, Pixabay, Shutterstock, Unspalsh, Absolutely Free Clipart.

❖ **Blogging Tools**

21classes, b2evolution, Blogger, Edublogs, Medium, Pebble, Serendipity, Tumblr, WordPress, Soup, Penzu, Blog.com.

❖ **Web Pages/Site Tools**

Adobe Coldfusion, Arachnophilia, Drupal, Firebug, Google Sites, Homestaed, Mozello, PmWiki, Serendipity, Strikingly, Wix,

❖ **Form, Polling & Survey Tools**

2ask, addpoll, Epic Poll, Fo Space, Google Forms, Key Survey, Microsoft Forms, Orbeon Forms, Pollhost, SISSurvey, SurveyMonkey, Typeform, Web Online Surveys, Zoho Survey

Social Tools

❖ **E-mail Tools**: Gmail, Mailchimp, Outlook, Yahoo Mail, 10 Minute mail, ActiveInbox, AwayFind, eyejot, MyEmail, Pobox, Roundcube, Thunderbird.

❖ **Messaging Apps & Chat Tools**: AIM, Allo, ChitChat, eBuddy, Franz, GroupMe, HipChat, Messenger, Pidgin, Remind, Skype, Telegram, WhatsApp, Yahoo Messenger, Zoom

❖ **Discussion Forum & Web Chat Tools**: 99Chats,

AVchat, Bravenet, Chatandgo, Chatzy, Discourse, Groupboard, MyBB, PanFora, Phorum, Vanilla Forums, YellBox, Zoho Chat

- **Audience Response and Backchannel Tools**: Class Pager, Classtime,Glisser, Google Slides, Kahoot, Mentimeter, Plickers, Poll Everywhere, Sli.do, Socrative, Wooclap
- **Webinar, Web Meeting & Virtual Classroom Tools**: Adobe Connect, AnyDesk, Appear.in, Blab, BlueJeans, Cisco WebEx, Drum, Flipgrid, Google Hangouts & Meet, GoToMeeting, Mikogo, TeamViewer,TeamLink,Uberconference, Zoom
- **Social & Collaboration Platform & Spaces**: Asana, Basecamp, BoostHQ, BuddyPress, Confluence, COYO, Elgg, G Suite, Google Groups, Google Spaces, Jive, Microsoft Teams, Ning, Podio, Rizzoma, SharePoint, Slack, Smartsheet, Trello, Yammer
- **Public Social Networks**: Facebook, Instagram, LinkedIn, Snapchat, Stack Overflow, Twitter, Xing, Foursquare, LibraryThing, Knack, Meetup
- **File & Resource Sharing Tools**: Dropbox, Google Drive, OneDrive.

- **Group Organisers, Task managers & Scheduling Tools**: Doodle, Google Calendar, Timebridge, WhenIsGood.
- **Collaborative Online Brainstorming & White boarding**: Lino, Padlet, SpiderScribe

Search & Research Tools: 43marks, BibMe, Bing, Cite This for Me, DeeperWeb, Duckduckgo, Google Search, Google Scholar, Kartoo, Mahalo, Mendeley, Quora, SimilarSites, Wikipeadia, Wolfram Alpha, Zotero.

Conclusion

Integrating technology shows deepen and enhance the learning process. In particular, it must support four key components of learning: active engagement, participation in groups, frequent interaction and feedback, and connection to real-world experts." Technology helps change the student/teacher roles and relationships: students take responsibility for their learning outcomes, while teachers become guides and facilitators. Technology lends itself as the multidimensional tool that assists that process. Technology integration positively affects student achievement and academic performance.

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EARLY CHILDHOOD CARE AND TEACHERS ROLE IN EDUCATION

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Introduction

The developmental research has provided us with a picture of the normal development of children. Although each individual child develops at her own pace, yet all children pass through an identifiable sequence of developmental stages i.e., physical, cognitive and emotional growth and change. Within these stages, they often share characteristics common to many children of the same age. However, a child may reach these stages of development sooner or later than other children of the same age i.e. there are some children who are advanced in one area or domain such as language, but slow or behind in another such as motor development. The teachers and parents need to know these characteristics in order to meet their needs adequately and appropriately. When we understand the young children's needs we can provide a theme based Programme that: provides opportunity to every child; promotes their overall

development i.e. physical, motor, social, emotional, cognitive and language development; ensures that every child is safe, secure and feels valued; is balanced, flexible and purposefully planned; allows children to develop and learn at their own pace; provides a stress free stimulating and enabling learning environment; allows children to explore, observe and experiment; helps children to develop their skills and abilities; builds experiences on children's previous experiences and learning; provides them time to respond; promotes active play and learning; provides lots of opportunities to learn through play.

Role of Teachers

The caregivers/ teachers are facilitators who engage children in multiple experiences to foster their all round development. They play the following roles: Observe children to identify their interests, needs and capabilities and the pace of their development.Plan integrated, developmentally appropriate, and challenging learning experiences built around a theme, to ensure that they meet the objectives of the curriculum. Adapt experiences to suit the learning abilities of children with special needs. (E.g., a visually challenged child could be given multi-sensorial experiences) Organise a supportive

learning environment by taking care of aspects such as the physical environment, equipment, scheduling of learning experiences and events and the grouping of children.Respect the child and the social environment the child comes from.Focus not only on planning and conducting the themes but also on the continuous process of assessing the children's progress, and using the assessment to modify/review the teaching strategies.Create nurturing and positive relationships in the classroom.Interact with children in a calm, respectful and friendly manner. Ensure social inclusion of children with disability in the classroom

Developmental Domains

Young children's growth is better understood in five developmental domains.A child who is tired, tense, under stress and whose emotional and social well-being are threatened is not likely to listen carefully, cannot express freely and cannot learn as the one who is happy and confident.

Creative and Aesthetic Appreciation

Dewey also believed that early childhood educators need to provide students with opportunities to experience aesthetics for cognitive, social, cultural, and psychological

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development.Rudolf Steiner's anthroposophy movement on aesthetic development states that children need intellectual, creative, moral, and spiritual development. Abigail Housen believed that people grow aesthetically through distinct stages. These five stages of aesthetic development include:

- **Accountive** - senses and experiences help people make observations of art and figure it out
- **Constructive** - how people perceive things affects their view in how they look at art
- **Classifying** - by understanding art's history and categorizing it, people gain a deeper understanding
- **Interpretive** - people look for the underlying meaning in art
- **Re-Creative** - long history of viewing and reflecting art

Dramatic play /Fancy dress/Mime

To help preschoolers make sense of the world. Arts and craft activities encourage self-expression and decision-making, music and dance makes kids to enjoy moving creatively in response to the lyrics of the songs they sing. All these activities inspire to express their innermost feelings or personal thoughts. We provide hands on experiences

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through different science experiments which help the learners sensory attributes like (hot, cold, sticky, dry)

Language Development

Language development supports many other aspects of development, like cognitive, social and literacy development.Language development starts with sounds and gestures, then words and sentences.You can support language development by talking a lot with your child, and responding when your child communicates.Reading books and sharing stories is good for language development.If you're worried about language development, talk with a child health professional.

How to encourage early language development in children

The best way to encourage your child's language development is to do a lot of talking together about things that interest your child. It's all about following your child's lead as they show you what they're interested in by waving, babbling or using words. Talking with your child from birth, talk with your child and treat them as a talker. The key is to use many different words in different contexts. For example, you can talk to your child about an orange ball and

about cutting up an orange for lunch. This helps your child learn what words mean and how words work. When you finish talking, pause and give your child a turn to respond. As your child starts coo, gurgle, wave and point, you can respond to your child's attempts to communicate. For example, if your baby coos and gurgles, you can coo back to them. or if your toddler points to a toy, respond as if your child is saying, 'Can I have that?' For example, you could say 'Do you want the block? 'When your child starts using words, you can repeat and build on what your child says. For example, if your child says, 'Apple,' you can say, 'You want a red apple? And it's the same when your child starts making sentences. You can respond and encourage your child to expand their sentences. For example, your toddler might say 'I go shop'. You might respond, 'And what did you do at the shop?'When you pay attention and respond to your child in these ways, it encourages them to keep communicating and developing their language skills.

Reading with child .

Reading and sharing books about plenty of different topics lets your child hear words used in many different ways. Linking what's in the book to what's happening in your

child's life is a good way to get your child talking. For example, you could say, 'We went to the playground today, just like the boy in this book. What do you like to do at the playground?' You can also encourage talking by chatting about interesting pictures in the books you read with your child. When you read aloud with your child, you can point to words as you say them. This shows your child the link between spoken and written words, and helps your child learn that words are distinct parts of language. These are important concepts for developing literacy. Your local library or mobile library is a great source of books.

If your family speaks two languages, you can encourage your child's language development in both languages – for example, English and Spanish. Bilingual children often have language skills similar to their peers by the time they're in primary school.

Cognitive Development

Recall Piaget's second stage of cognitive development: preoperational intelligence. Early childhood is a time of learning to use thought to solve problems and learning to know and communicate about the world through the use of symbols, primarily language. Erikson views early

childhood as a time of building on autonomy and taking initiative. The child wants to think of an activity and carry it out without interference of others. The videos and resources below illustrate the important role that early childhood providers play in supporting children's cognitive development. By carefully preparing materials and the environment, thoughtfully planning learning experiences, providing scaffolding as needed, and taking advantage of teachable moments, adults can help children develop the skills to understand the world around them and eagerly approach learning opportunities. Some of the concepts covered in these videos include:

Encouraging problem-solving in the classroom

- Making planful choices when arranging the classroom environment
- The value and importance of play
- Using active music and play experiences to support infant and toddler thinking

Providing Opportunities for Experimentation and Problem-Solving-In this "Reflection from the Field" video, preschool teacher Karen DelMastro describes how she purposefully plans experiences to provide children with

opportunities to experiment and solve problems. Through supplying a variety of materials and intentional creation of "problems" for the children to solve, she offers rich experiences for her students.

Physical Development

From kicking and squirming, to holding objects, crawling and standing, the development of fine and gross motor skills starts in the early years.Fine motor refers to small muscles groups, including hands, wrists, fingers, feet and toes. Gross motor skills are to do with large muscle groups; including the coordination of arms, legs and other large body parts. Your child will also develop hand-eye coordination as they use their vision to control movements and actions of small muscles.Early physical skills develop through regular movement and activity. Each child will develop physical skills at their own pace and like all areas of development, each individual child will show strengths and abilities in different areas.

- Moving, reaching and grasping-putting it all together
- Babies will begin reaching and grabbing toys and objects, practicing hand eye coordination, as well as fine and gross motor skills.

- Encouraging your child to reach and grasp their toys helps them learn to control their motor skills.
- Art and craft activities allow children to practice reaching, moving and placing objects through expressive play, learning about depth and muscle control.
- Moulding and manipulating material like playdough allows children to challenge themselves by making new shapes and textures, building fine motor skills.
- Simple tasks, like turning the pages of a board book or pressing buttons encourage hand eye coordination and motor skill control.
- Don't forget to rest, Remember, as your child is growing, they can get tired from short periods of activity, so rest time is also important.

Social and Emotional Development

Social-Emotional Experiences of Early Childhood- Throughout the toddler years, temper tantrums are quite common. There's a good reason why people often refer to this stage as the "terrible twos"!.Toddlers tend to have rapid mood swings. While their emotions can be very intense, these feelings also tend to be quite short-lived. You might be

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stunned at how your child can go from screaming hysterically about a toy at one moment to sitting in front of the television quietly watching a favorite show just moments later.Children at this age can be very possessive and have difficulty sharing. Learning to get along with other children is an essential skill, however. In just a few short years, your child will go from spending most of their time with family and close friends to spending a large chunk of the day interacting, learning, and playing with other kids at school.Emotional development and social skills are essential for school readiness. Examples of such abilities include paying attention to adult figures, transitioning easily from one activity to the next, and cooperating with other kids. Social competence not only involves the ability to cooperate with peers; it also includes such things as the ability to show empathy, express feelings, and share generously. Fortunately, there are plenty of things that you can do to help your kids develop these all-important social and emotional skills.

Model Appropriate Behaviors

Observation plays a vital role in how young children learn new things. If your child sees you sharing, expressing

gratitude, being helpful, and sharing feelings, your child will have a good solid understanding of how to interact with other people outside the home.You can model these responses in your own household with both your child and other members of the family. Every time you say "please" or "thank you," you are demonstrating how you would like your children to behave.

Reinforce Good Behavior: Most importantly, be sure to offer praise when your children demonstrate good social behaviors. Helping your children feel good about themselves also plays an important role in developing a sense of empathy and emotional competence. By creating a positive climate where children are allowed to share their feelings, children will naturally begin to become more generous and thoughtful.Reinforcement not only makes young children feel good about themselves, but it also helps them understand why certain behaviors are desirable and worthy of praise.

Teach Empathy- Parents can also boost empathy and build emotional intelligence by encouraging their children to think about how other people feel. Start by inquiring about your child's own feelings, asking about events in your child's

life. "How did you feel when you lost your toy?" "How did that story make you feel?".Once children become skilled at expressing their own emotional reactions, begin asking questions about how other people may feel. "How do you think Nadia felt when you took away the toy she was playing with?"By responding to questions about emotions, children can begin to think about how their own actions might impact the emotions of those around them.

Teach Cooperation- Cooperation is one skill that benefits tremendously from direct experience. Giving your child the opportunity to interact and play with other kids is one of the best ways to teach them how to relate to others. While your toddler may find playing with peers frustrating at times, since kids often lack patience and the ability to share, things will gradually begin to improve with age and experience.

As children play and interact, they also begin to develop social problem-solving skills. Early attempts might involve plenty of arguments and conflict with siblings and peers, but eventually, kids learn how to negotiate and compromise with other children.

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Conclusion

Development is an ongoing process. The rate of development can be slow or fast depending on the age, but it never stops. Development takes place in stages and each stage influences the next. Each child is unique and grows and develops at her/his own pace. All the aspects of development are inter-related and one aspect affects the other. There is a particular duration for the proper development of each and every aspect. Environment and experiences have specific influence on development. ECE is a child-centred programme in which maximum learning takes place through playway techniques. It plays a valuable role in the overall development of a child. Early childhood care and education encompases a variety of services relating to Health, Nutrition,education, health check up, immunization etc as all these are essential for all round development of thechildren. Thus Early childhood care and education containing health,neutration, education should be given adequate attention. Early childhood care andeducation combines the elements from the field of child development, early childhood education,stimulation, health, nutrition, community development and parent education

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ONLINE EDUCATION :AN OVERVIEW

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Introduction

Online education is a procedure of attaining skills and knowledge through electronic devices like computers, mobiles, laptops, etc using the internet. Online education makes it possible for instructors or mentors to reach all the students more resilient and teach them the pertinent skills more efficacious. The students who can not take part in traditional regular classes now can also learn anything from anywhere using the internet.Online education becomes a great origin of education that is available 24/7 for the students. Through the spectacular creation of devices (like mobile phones) or technology and the accessibility of the internet, it was very easy for students to learn everything from at any time and any place. This kind of learning flexibility can not be reached during traditional classroom

learning as the students will become four obliged during the face to face learning.

Online education is an docile directional conveyance process that includes any learning that takes place through the internet. Online learning autgorize instructors to communicate with students who may not be proficient of registering in a traditional classroom track and expedite students who need to work on their own program and at their own speed.Online education is known to offer the benefit of collaboration. Here, the pattern working makes room for vigorous transfer between students and the teachers. Through these communications, origin are shared, and an open-ended collaboration develops through a learning process. When each person confers a view or opinion through discussions and comments on others' work course, it benefits the student to learn better. This unique advantage is apparent in a student-centred virtual learning environment that online learning pattern alone can put up.

Education is Rudimentary for accomplishing full human prospective, developing an unbiased society,and advance national development. The Digital India struggle is helping to metamorphose the entire nation into a digitally authorized

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society. Education on one hand will play a critical role in this transformation, technology itself on the other hand, will play an important role in the improvement of educational processes and outcomes. Thus, the relationship between technology and education at all levels is synergetic. The multiplication of digital technologies in recent times is bringing Innate changes in the way education is being delivered and received.

The predominate of educational programs is improving day by day with the digitalization of education. However, the benefits of online education cannot be strength unless the digital divide is eliminated. It is important that the use of technology for online and digital education competent addresses concerns of fairness.This paper explores into the trends of online education in India, equitable access to technology for excluding the digital divide and the various obstruct that Impede and facilitator that promote acquisition of equitable Online education.

Online Education

Online education is one of the major changes in the worldwide education industry after COVID hits the country. Higher education institutions approve online learning as

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well. This article will inform students of benefits and result. Online education is a good option for children to educate them in our own homes.

Online platforms

Following are the few online platforms which is used for teaching learning process are Skill Share,Mind valley, Coursera, Udemy, Brilliant. Org, Edx. Org, Udacity, LinkedIn Learning-(Ex Lynda), Master class, Future Learn, Thinkific, Open learning, Tree house and Khan Academy.

Merits of online education

Following are the few merits of online education are Less in cost, Time saving,Teach shrewd Easy attendance and Self study.

Less in cost- Best part of this online learning is much more Inexpensive contrast to old- Moulded learning. In online Education parents are free to buy uniforms or payout Travelling cost and can save extra money.

Time Saving- In online classes, there is no shuttle included as a student can learn and get a degree while sitting at their home.

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Teach-shrewd- As you are using technology for learning so you can become teach-shrewd by digital Learnings, yet this is a good thing as in today's age of technology.

Easy attendance- Students can give their attendance right from the safeplace of their homes. Therefore they can attend all online classes without fail.

Self study- Online education is often self study where you can do your assignments, projects, works by your own time.

Demerits of online education:

Lose concentration

Without having proper charge for students while online classes by teachers they can easily lose center of attention on studies. Also, virtual classes can be done through phone or laptop where students can easily move to games or videos or YouTube for amusement. This completely makes them astray frim subject studies.

Health issues

Many parents are anxious about their child's health as it is unhealthy to sit for hours in front of a computer screen.

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Looking at the screen for too long can also harm their eyesight. Not only that, back difficulty due to inexact sitting positions may emanate.

Expensive

We know that you have been filled with bewilderment after seeing the disadvantage. As we have said earlier that it is less in cost but it is also big budget for economically weaker students. Parents who are unemployed due to covid can not provide smartphones or computers for students Online learnings. In such cases, online learning may be reachable but it's not readily inexpensive.

Lack of socializing Skills

As there is no socializing included in digital learning several students who study through digital mode cannot obtain socializing skills. Also, it may lead to a reduces in the collaborative skills of a student.

Isolation

While digital education has its revive many students fell a sense of seclusion and become miserable. This is due to little to no human touch and interaction with friends and others. Both students and teachers alike are exposed to alone in virtual learning.

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Importance of online education

- **Supreme for Globally Dispel and Divergent Employees-** preparing programs are recently supreme for workstations having various branch areas and a universal human resource. You can organize a directional course finished the web, allowing evocative working in various branch workplaces to take an interest in the same.
- **Easy Registration and Payment-**Online education can efficient handle a portion of the issues of on location learning. For example, online course registration can be accomplishing and seen without the need to head out long distances to check the same. Online registration ranging gives an immediate survey and filling up of a booking forms, whenever, whenever it might suit one. In addition, delegators can likewise send their registration charges to the class or make ready director by means of a few online payment plan of action. (Google pay, phone pay, net banking and so on).
- **Easy Translation Facility-**Electronic learning/preparing creative offers the potential of making an elucidatins of course materials into local regional languages for easy understanding by stratigraphy dispel individuals.

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- **Create Customized Learning Objects**-Many illuminating formation and trading houses are mannered to create conventional learning objects to meet their students' claims, paying little mind to their link to any stint, progress, institution precise information or positioning.
- **Can easily Update Course Materials**-Advisers as well as instructors, can at whenever update the class or preparing materials to correlate the changing needs of students. Such straightforward online alteration likewise helps in keeping your courses or projects avant-garde and relevant to your evolving business.

Online Education in schools

Online Education with Internet technology has been used vast in school education, but it is somewhat new in schools. It has substantial prospects for amplifying teaching /learning in both traditional schools and home schooling. Although teachers disclosed multiplied assignments and pressure related with addedd duty for composing online courses. Furnishing their technological skills, the teachers discovered many benefits of online education However, development in the oppourtunity and dependability of technology and better

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approach to digital Educational content are required to notice the full prospects of online education in schools.

Online education in Higher Education

In 1989 the University of phoenix became the first institution to begin a fully online collegiate institution that provided both bachelors and masters degrees. In 1996,Glen Jones and Bernaud Luskin started Jones international university, which became the first aithorized and fully web-based university.

Online education involves courses offered by institutions that are 100% virtual online education or virtual classes presented over the internet, is collated with traditional courses taken in a brick-and mortar school building. It is a growth in online Education that dilated in the 1990s with tge spread of the trading Internet and the world wide web. As laws of online education develop digital technologies to support learning and to convert aswell.

Ensuring Equitable use of Technology

In this technology authorized world, every difficulty is an chance to innovate. This prevalent has comfort us to look for different modes of teaching apart from the usual unbiased traditional mode. The national education policy of 2020 grants the importance of clout technology, while also

confessing the prospective snags at the same time. While accomplishing NEP is important, it also calls for measures to be taken to alleviate its drawbacks we need to enhance the live digital programmesand ICT based educational enterprise to meet the current and future challenges in furnishing quality knowlege for all. One of the prime challenge is banishing the digital divide in the country. We need united endeavours such as the digital India struggles and the accessibility of processing devices for that. There is a need to assure that the use of technology for online and digital education should competently address the solicitudes of value.

Equitable use of technology For Tutors and online educators

Effective and suitable online training components need to be insinuated a good teacher in a traditional way might not be able to teach well in an online classroom. There is a need for change needed not just in teaching methods. In online evaluations other than these, there are countless challenges to be in control of online exams such as network and few courses like executing arts and science feasibles that are daring but creative measures can help to vanquish them.

Conclusion

Online Education needs to combine with existential and activity-Based studies. Otherwise, it will endup in diffusing screen-based education with a limited focus on social and mental objects extent of learning. The National Education policy understands these challenges and support technology for teacher learning at different levels, from school to higher studies. Online education is a journey and not a end of the line and to ensemble this journey,a dedicated unit in the Ministry is specified. This unit will ensure the building of online basis digital content,and capacity forming. This devoted unit will look after creating world-class digital foundation Educational digital appease and the competence to look after the E-education needs of both school and higher Education. With technology developing so swiftly, a high-spirited ecosystem has to be cheered to create solutions that solve India's disputes of scale, contrast, equity, and evolve in keeping with the quick changes in technology.

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IMPACT OF CRITICAL THINKING ON STEM APPROACH

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Introduction

Our educational system is tasked with preparing the next-generation to succeed in life. Integrated STEM programs(Sciences, Technology, Engineering, and Mathem atics) engage students in integrated learning about the world. Through the integration of main content and practice skills from these disciplines in the context of emerging technological capabilities, students of all ages find ways to apply critical thinking to situations and problems in our life. STEM component brings a valuable support to a well-rounded education. STEM programs seek to advance more operative, elegant, scientifically based, and technologically sound methods and innovative solutions. New knowledge is needed at an increasing rate in our rapidly evolving technological and global society. STEM authorizes

individuals with the skills to succeed and adapt to this changing world.

Today the world is becoming more and more competitive. Quality of performance has become the main goal in all our events throughout our life. The desire for a high level of attainment creates a lot of pressure and stress on students, teachers and on the total education system itself**.** The critical thinking skills which STEM programs develop are analysis, understanding, inference, evaluation, explanation and self-reflection. These main skills as well as proficiency are vital for solving today's complex problems. The critical thinking attitude which motivates students to apply these skills is grounded in central scientific values such as truth-seeking, curiosity, open-mindedness, and maturity of judgment.

Critical thinking

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information collected from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to confidence and action. Critical thinking refers to the ability to evaluate information and to be aware of biases or assumptions,

including your own. Like information literacy, it involves evaluating arguments, identifying and solving problems in an objective and systematic way, and clearly communicating your ideas.

The 5 elements of critical thinking

- Asking questions and clearing doubt.
- Collect appropriate information.
- Think through solutions and conclusions.
- Consider substitute systems of thought.
- Communicate effectively.

The 4 C's critical thinking-Communication, collaboration, critical thinking, and creativity are considered the four c's and are all skills that are needed in order to succeed in today's world

Importance of Critical thinking

A well-developed set of Critical Thinking skills develop self-empowerment and confidence. It enables us to capably gather knowledge, quickly process information, and intelligently analyze data. Use critical thinking when the outcome makes a significant difference in our business or real life situation.

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STEM Approach

STEM education is one of learning approaches which is suitable to enhance the 21st century skills. It puts critical thinking as the activity which should be done first in 21st century learning. It focuses on the process of critical thinking in solving contextual problems by transforming ill-defined tasks to be well-defined outcomes in teamwork environment. It simultaneously integrates 4 aspects, which are science, technology, engineering, and mathematics with more meaningful learning contexts so that the quality of learning process can improve and that students' knowledge and skills can be created thoroughly. In STEM approach, students can think critically so they can solve problem in a better way, be a more logical thinker, be a more creative innovator, be more independent, and be more literate in the world of technology. It's clear that the implementation of STEM education includes contextual solution, critical thinking, and mathematical and technological aspect is suitable with the demands of the characteristics of the topic of fluid statics.

"STEM education is more than just nurturing young talents to take on STEM-related careers, but rather the competency

of the person that is acquired through a STEM-based education. We, as educators and parents, sometimes neglect the role of education as a way of helping young people see and make sense of the world. STEM helps young people to shape a creative and critical thinking mindset. It instills in our children intrinsic problem-solving abilities, critical thinking skills and a sense of curiosity — qualities that are of the utmost importance to readily take on the future."(Dr. Logendra Ponniah,).

Four components of STEM

Science became an interest to us when we understood that inquiry and critical thinking can explain various phenomena in our environment. Since its existence, technology has been combined into a large part of our lives and has become a tool to solve various real-world problems covering connectivity, trading and business, healthcare, education, and many more. Engineering teaches design thinking and systematic thinking, which make for systematic thinkers and planners who can conceive engineering design principles that are broadly used in many industries. Mathematics, as a subject, should introduce to students methodical, logical teaching to enable them to see outlines that form our world. Critical

thinking and problem-solving skills are essential for students to succeed in STEM (Science, Technology, Engineering, and Mathematics). These skills help students to analyze information, generate ideas, test solutions, and communicate their findings. Here are some tips and strategies to consider.

Use technology

Technology is a tool that can enhance students' learning, creativity, and engagement. Technology can also provide access to information, resources, and tools that help students' inquiry and problem-solving. For example, we could use technology to make simulations, games, videos, podcasts, or websites that is relevant to STEM or to enable students to access online databases, platforms, or communities that offer related to information, feedback, or collaboration opportunities.

Integrate reflection-Reflection is the process of thinking about one's own learning, actions, and outcomes. Reflection helps students to assess their progress, identify strengths and weaknesses, and plan for improvement. For example, we could ask students to write a journal entry, create a portfolio, or present their findings after completing a STEM approach ready them to reflect on what they learned, what they did

well, what they struggled with, and what they would do differently next time.

Encourage collaboration

Collaboration is the process of working together to attain a common goal or outcome. Collaboration helps students to share ideas, learn from each other, and develop social and communication skills. For example, we could assign students to work in groups or pairs on STEM approach help their interactions by providing clear roles, expectations, and norms. Projects that encourage collaboration not only build problem solving and critical thinking skills but also improve social skills like setting clear boundaries, effective communication and how to work with others. This is increasingly important not just in the future workplace but also in a global environment.

Scaffold the process

Scaffolding is the support and guidance that teachers provide to help students achieve their learning goals. Scaffolding can include modeling, questioning, feedback, and differentiation. For example, we could model how to conduct research, ask questions that express students to reflect and justify, provide feedback that highlights strengths

and areas for improvement, and differentiate the tasks and materials according to students' needs and abilities. Talk to students about step-by-step observations and why breaking it down into these steps helps us learn more thoroughly about what we are studying. Ask students if they think studying something in pieces is more beneficial than taking a whole topic all at once. For different topics there will be different answers depending on the student's experiences and what they already know.

Provide authentic contexts

Authentic contexts are real-world situations that connect to students' interests, experiences, and goals. They also motivate students to apply their knowledge and skills to meaningful problems and scenarios. For example, instead of teaching students about the properties of light and sound in isolation, we could ask them to create a multimedia presentation that explains how light and sound affect our insight of reality.

Choose open-ended questions

Open-ended questions have more than one possible answer, require reasoning and evidence, and encourage students to explore different perspectives and approaches. For example,

instead of asking "What is the formula for the area of a circle?" we could ask "How can you estimate the area of a circle using different methods?" or "How can you design a circular object that has the same area as a square object?"

STEM programs challenge students to assess, interpret and apply relevant information to identify and implement innovative solutions. Development of strong critical thinking and problem solving skills is an important STEM learning outcome.

Conclusion

Educating students in STEM subjects organizes students for life, regardless of the profession they choose to follow. Those subjects teach students how to think critically and how to solve problems skills that can be used throughout life to help them get through tough times and take advantage of opportunities whenever they appear. STEM approach can increase students' critical thinking ability which then affects greatly towards the process of decision making and students' mental in solving problem. STEM education has potential to improve upon individual's skills in 21st century, such as collaboration, curiosity, creativity, and critical thinking. STEM education can prepare the students to face global

challenge with exercises in collaboration, problem solving, critical thinking, creativity, and innovation. It's clear that STEM approach can enhance students in Critical thinking effectively.

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EARLY CHILDHOOD CARE AND EDUCATION

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Introduction

Early childhood education is an important area within the lives of the individuals. This education begins, when the child reaches the age of two. It establishes the foundation from where the learning of the child takes place. The main purpose of this research paper is to understand the purpose and significance of early childhood education. Early childhood stage is crucial, where parents at home and teachers in school are required to pay adequate attention towards the children. When they are able to impart efficient knowledge to them regarding academic concepts, play activities, arts and crafts, health, physical exercises, sports, games, environment, communication, good manners and etiquettes, then they would be able to render an effective participation towards learning and acquisition of education. In order to lead to progression of early childhood education,

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teachers and staff members of the educational institutions need to possess adequate knowledge amiable and caring nature and an approachable attitude. They should take care of needs and requirements of young students appropriately.

Early childhood education. Students study the history and contributing theories of the field and the basic aspects important to quality programs for young children. Course content includes studies of child development the types of programs available qualifications for teachers and staff state regulations monitoring programs state Guidance Policy the Massachusetts Early Childhood Standards; career opportunities; special education considerations, and current issues in early childhood education. During a ten hour field experience students make observations in the Children's School Early Childhood Education Lab School and focus on guidance practices children play integrated curriculum practices transitions and routines and appropriate methods for addressing special needs of young children.

Early Childhood Education

The period of early childhood is until the age of eight years. One of the reasons that early childhood is regarded up to the age of eight is to enable him or her acquire a smooth

understanding of the entire education from the level of play group to pre-primary and from pre-primary to the level of primary. The early childhood education is in an organized form to a major extent. The teachers and the other members of the pre- school, who are involved in this education are required to be systematic and methodical in their workings and conduct. It requires efficiency in its format and implication. Within this framework, the term 'care' holds much significance. When imparting any kind of learning, understanding or information to the students, the teachers need to take into consideration, the aspects of care and thoughtfulness. In pre-schools, students are young hence they need to be taken care in terms of various aspects, such as, learning, playing, health, emotions, diet, nutrition, and psychoanalysis. These are important for the overall development of the child.

The main purpose of early childhood education is to lead to effectual growth Education is a comprehensive area. It covers skills, knowledge, attitudes, habits, communication, cognitive skills intellectual abilities, wisdom, astuteness, righteousness and honesty. These factors are essential for the development of the mind- set of the students and it also

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contributes towards their progression. The students have to be well prepared to enter the education system at the formal level. In order to seek admission in formal schools it is vital for the students to possess adequate understanding of academic concepts, so that they can appropriately cope up with the teaching-learning methods provided to them by the teachers and enhance their performance.

Kothari Commission (1964-66)

Kothari Commission (1964-66) has also highlighted the following objectives for early childhood care and education.

- To develop in the child, good health, habits and to build up basic skills necessary for personal adjustment, such as dressing, toilet habits, eating, washing, cleaning, etc.
- To develop desirable social attitudes and manners, and to encourage healthy group participation, making the child sensitive to the rights and privileges of others.
- To develop emotional maturity by guiding the child to express, understand, accept and control his feelings and emotions.
- To encourage aesthetic appreciation.

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Need and Importance

Early Childhood Care and Education is in a state of ferment today. The education of the preschool children has never assumed greater importance in the eyes of the general public. Projects and other programmes for preschool children initiated by the government and by the private bodies have put a measure of urgency upon the extension of the educational opportunities for the young children. National Policy on Education 1986 has taken the lead in suggesting that all children benefit from education in the early years. Early Childhood Care and Education (ECCE) has assumed special significance in the National Policy on Education, 1986. It has rightly mentioned that the National Policy on Children (1974) specially emphasized investment in the development of the young children, particularly children from sections of the population in which first generation learners predominate.

Child development has been taken in a holistic view recognizing all the aspects like nutrition, health, social, mental, physical, moral and emotional development. ECCE has received high priority and been properly integrated with the Integrated Child Development Services Programme

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(ICDS) as far as possible. Day care Centres as suggested by the NPE 1986, would be provided as a support service for universalisation of primary education to enable girls engaged in taking care of siblings to attend school and as a support service for working mothers belonging to poor sections of our society. A full integration of child care and pre- primary education would be brought about both as a feeder and as a strengthening factor for primary education and the human resource development in general. With a view to implementing the NPE 1986, the Programme of Action has work out the ways and means and also discussed the significant parameters of the quality of life which are correlated with ECCE. These are infant mortality rate incidence of malnutrition, the morbidity, and the literacy rates. These parameters show ugly state of affairs in the field of child development.

The need and importance of Early Childhood Care and Education has been highlighted by different commissions and committees like A Wood Committee1937,Central Social Welfare Board 1953,Indian Child Education Conference1955, Education Commission 1964-66 Committees of Members of Parliament of Education 1967,

U.S. Research and Policy Committee for Economic Development 1971, Sergeant Report 1969 Central Advisory Board of the Government of India 1944; Britain Department of Education and Science 1976 UNESCO 1974 etc and eminent educationists and politicians like Evans1975; McDonald 1969 Zakir Hussain 1955 Murlidharn 1969.

Education Commission (1964-66) pointed out that early childhood care and education is essential to develop the child physique; good health habits, social attitudes and manners group participation, emotional maturity to encourage aesthetic appreciation, intellectual curiosity child independence and curiosity child independence and creativity.

Need for early childhood care and education

There are several reasons that emphasize the need for early childhood care and education for a variety of purposes.

- The fast changing living conditions have also necessitated that adequate provision be made for early childhood care and education. Under financial pressure every member of the family seeks job. They need early childhood care and education institutions where their children can be looked after.

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- Arnold Gesell (1925) began to study the learning habits of young children and suggested that early childhood education may be as important as any that follows. He noted that the brain practically reaches its mature bulk before the age of six and that the mind character and spirit advance more rapidly during the formative preschool period than during any other period of growth.
- The preschool years represent a time of unprecedented growth and development, when skills are acquired that provide the foundation for all subsequent learning. That is, the time when teachers can have the greatest impact upon a child and can reduce the potential effects of environmental conditions upon a child.
- Creativity peeks during the preschool years (Torrance 1963; Singh 1989) and that creative abilities not nurtured that time can become more difficult to express later.
- Early childhood care and education prepares a sound base for primary education, thus reducing dropouts, wastage and stagnation in primary education
- Early childhood care and education serves to fulfill effectively all needs of the young children-physical, social, emotional, mental, psychological and

moral.Venkataraman 1984 Mohanty 1984

- Early Childhood Care and Education gives a child the time and the opportunity to express his curiosity in questioning, in exploring in experimenting.
- Early stimulation and educational enrichment can promote creativity in young children. It was felt that early educational intervention providing stimulation and instruction during the preschool years would make a difference in the children school experience.
- Early Childhood Care and Education helps to dispel the old belief that early childhood care and education is injurious to children because it separates them from their family members, impose structure upon them to early and hinder freedom and entertainment of the children.
- Early Childhood Care and Education has changed the attitude of the parents. Now the parents have positive attitude towards early childhood care and education. Sarojini (1971) determined the attitude of parents towards early childhood care and education. The favourable parent's attitude towards early childhood care and education was found.
- Benjamin rare family can provide early training for their

young children. The preschool experience may be speculative for some young children but great bulk of preschool children would be benefited from early childhood care and education.

- From the psychological, sociological and medical point of view early childhood care and education is important. The role of Early childhood care and education in mental, physical, emotional, social, language etc., development and in germination of readiness for the intellectual activities that will come in later years is important
- The early childhood care and education is an arena of play and builds a foundation for primary education.
- Rose Mukerji (1965) believes that the early childhood years are the root years for learning about self in relation to others, for concept formation, for language, and for creativity.
- Education like medicine should be preventive and many learning problems in schools are the result of inappropriate instruction or lack of experiences necessary to profit from instruction. Thus early recognition of an individual child's requirements for learning can preclude many unhappy events during later years in schools.

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The Purpose of Childhood Education

Simply put, the purpose of ECE is to provide children with strategies that help them develop the emotional, social and cognitive skills needed to become lifelong learners.

- **Language and literacy-** Language provides the foundation for the development of literacy skills. Learning to communicate through gestures, sounds and words increases a child's interest in and later understanding of books and reading.
- **Thinking**-Children are born with a need to understand how things work. In their everyday experiences they use and develop an understanding of math concepts such as counting and sorting, and problem solving skills that they will need for school.
- **Self-control**-This refers to the ability to express and manage emotions in appropriate ways and is essential for success in school and healthy development overall. It enables children to cooperate with others, cope with frustration and resolve conflicts.
- **Self-confidence-** When children feel competent and believe in themselves, they are more willing to take on new challenges. Self-confidence is also crucial for navigating

social challenges, such as sharing, competition and making friends. The fact that all of these skills can be developed without homework or tests is still difficult for some adults to believe.

Career Goals in Early Childhood Education

- **Becoming a program director-**Some early childhood educators want to remain in the classroom teaching, but for some, becoming the director of early childhood education is their ultimate career goal. Becoming a director means having some say over how all the classrooms operate in the program can guide other teachers and set the tone for the overall program. This is a goal you can set early in your career and then pursue by taking on additional duties within the school putting forth ideas for school wide policies and continuing your education by pursuing a master degree in early childhood education.
- **Becoming a trainer-**Becoming a trainer of other early childhood educators allows you to mentor new teachers. One way to achieve this goal is to establish yourself as a successful teacher by reaching classroom goals like creating a positive environment for students. Becoming a trainer allows you to not only teach students but influence newer teachers and help

them succeed in their careers.

- **Developing readiness skills-**A career goal for an early childhood education teacher is to prepare their students for future grades. Teachers can give students a strong academic foundation but also help them develop skills that can prepare them for the future. Preschool and early education can help children learn how to sit still during class follow directions and work independently. Early childhood educators can incorporate readiness skills into the early childhood education curriculum.
- **Instilling a love of learning-** A preschool teacher can help shape how a child experiences education for the first time. A common goal is to have children positively view education and to instill a love of learning at an early age. Learning in a fun, safe, educational environment can help achieve this goal. Teachers also can create feedback activities that tell them how the students view their experience, how they feel about their peers and how they view education. They can then set a goal for how students may feel about the educational experience at the end of the year.
- **Continuing Education-**Early childhood educators can always learn and it a great goal you can set for yourself.

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Teachers can join professional organizations and take continuing education classes to stay up to date on the latest developments in their field. Another option is to set a timeline to get an advanced degree such as a master degree in early childhood education.

- **Developing motor skills-**Early childhood educators usually have goals associated with their students developing fine and gross motor skills. Early childhood education teachers work to get students to tie their own shoes zip up their jackets assemble puzzles and develop other skills through play. Teachers can set these goals by assessing incoming students perform certain tasks and then creating a goal for improvement for each student.
- **Building students Confidence-**Helping students develop confidence and independence is an important goal for many teachers in early childhood education. Preschool sometimes is the first time children have been away from their parents for an extended period and operating in an environment on their own. Providing students with tasks to complete and a sense of structure can help students learn to be independent and develop confidence in their abilities.

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Conclusion

Early childhood development is crucial to person develops later on in life. Reasons for a how a person acts, behaves, and thinks can be traced back to their childhood circumstances and environment. Parents also play a very important role in a child development. If they are involved and provide a nurturing and rich environment then they contribute in a positive way to their child development, which will help them later on in life. The human brain is most impressionable in the first several years of life these years are so extremely important and can impact a person life even into adulthood. Unhealthy eating habits and negative social interactions, such as a child being isolated, can lead to a child not developing in a proper way. A child who is raised under these circumstances could suffer the consequences later on in life such as speech impediments or the inability to socialize in a proper and civilized manner. Parents can do many things to ensure their child developmental process is successful such as developing a positive bond with their child surrounding their child with positive influences and encouraging family and friends and attending child development support groups if need be.

Since children truly are the future of any society it is important that each community recognizes the proper steps that need to be taken in order to ensure each and every child is given the opportunity to develop properly. Early childhood development programs are extremely effective and should strongly be considered by parents. These children see better results in school, have better social and more stable emotional behavior and develop stronger relationships with their parents early childhood development is an extremely important issue which needs to gain recognition.

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HOLISTIC DEVELOPMENT OF THE STUDENTS IN EDUCATION

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Introduction

Holistic development is a development of intellectual, mental, physical, emotional, and social abilities in a child so that he / she is capable of facing the challenges of in our day-to-day life. These abilities are vitally important for success in every field especially education. Every student is unique. He / she has unique personality traits, interests, preferences, values, attitudes, strengths, and weaknesses. The curriculum must be able to help every student find his / her unique place in the world in alignment with the uniqueness that he / she has. In order to achieve this, the holistic development of a student is of utmost importance.

Holistic development is a comprehensive approach in learning which aims to develop multiple facets or abilities of a human brain. Conventional in educational and learning

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systems aim at the development of intellectual capabilities only.

Holistic education is an approach to teaching that focuses on the academics and social needs of students. The teachers seek to fulfil the academic requirements of the students. And they teach them the right methods by which they can face the challenges of in our day – to – day life. They try to engage all aspects of the students that include the mind, spirit and body. In this educational approach, the emphasis is on the positive environment of the schools and also, on the thinking abilities of the students with their positive social behaviours.

Components of Holistic Development of Students

The holistic development of students can be understood through its components. They are as follows

Physical development

Physical development is one of the critical domains of everyone from the infant to adult stage. It relatesto growth and skills in the body, including the brain, muscles, and senses. Parents and teachers must encourage toddlers to develop gross and fine motor skills, keeping their security inmind. When they feel secure, they can use their brains,

muscles, and senses to explore the world aroundthem. Moreover, the development of physical bodies keeps them healthy, fit and strengthens their immune system.

Cognitive development

Cognitive development is related to the student's brain development which includes the understanding of different concepts, thinking on the concept, analysing, problem-solving and being responsive about their thoughts. It also includes the language development of the students.

Emotional development

Emotional development refers to expressing and understanding of the emotions. This will help the students to know about the emotions and how they feel. It teaches the child to control their emotions like anger and aggressiveness.

Social development

Social development refers to social relationships. This helps them to build confidence and curiosity. This helps them to know and respect about various cultures and religions.

Moral development

Moral development refers to the development of the understanding of what is good and what is bad. This helps them to build their self-esteem and know their self-respect.

This builds their character. Nowadays the skills of a person are taken into account. So, the holistic development can be achieved at home and at all school. This can be ensured with teaching through play. Students learn quickly when they are interested in what they are doing.

Hence, it is important to understand what makes a child attracted to a certain work and what makes them interested in it and also it enriches the student confident, build self esteem which helps them to face the world filled with challenges.

Role of Curriculum in Holistic Development of Learners

Contemporary curriculum and content should provide the bridge between education and development. It must be supported by good infrastructure for its implementation and maximum utilisation of resources must be ensured. Therefore, the contemporary curriculum and content should provide the bridge between education and development which are based on the four key aspects of Sustainable Development Goal such as that education should be i. Inclusive and equitable, ii. Characterized by quality learning iii. Promoting lifelong learning and iv. Relevant to holistic development. Hence the curriculum represents a conscious

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and systematic selection of knowledge, skills and values: a selection that shapes the way teaching, learning and assessment processes are organized by addressing questions such as what, why, when and how students should learn.

Curriculum should not only be limited to the five or six academic subjects, rather, it should go beyond textbooks and provide directions to teachers and paths to students. Contemporary curriculum should help teachers to Design various co-curricular activities,Utilize available resources wisely, Update evaluation systems, and Manage time effectively

For successful achievement of educational standards, curriculum should be made Student – Centredwhere emphasis should be on the child's interests, age and needs. It should help in development of the students Moral values and standards, Behaviour and attitude Spiritual, emotional and aesthetic sense, and Critical thinking and problem solving approach.

An effective curriculum should be one that creates an atmosphere in all schools which ensures learning of teachers and students as well as promotes positive attitudes amongst all. Some of the few key points on curriculum effectiveness

- ❖ It should enable students to develop wisdom for decision making and foresee the outcomes of the same.
- ❖ It should allow students to think critically and creatively. Students should be challenged to think 'out of the box.'
- ❖ Contemporary curriculum, apart from academic learning, should equip students for effective communication to build and develop strong inter personal relationships in life.
- ❖ In today's stressful life, students should also be taught and trained to cope up with distress and negative emotions. They should be able to handle situations with poise and confidence.

The contemporary curriculum is interdisciplinary, project-based and research driven. Project-based learning helps to the students in collaborating and connecting with global community. Classrooms have gone beyond the four walls where curriculum is not textbook driven or fragmented but is thematic, project-based and integrated. This helps the students to be self-directed where they can work independently and interdependently. The curriculum should challenge all students and provide for differentiation. The skills and contents are not taught as an end in themselves,

but the students learn through their research and application in their projects.

A quality curriculum describes and promotes new roles for the teacher. The teacher's approach shifts from 'I am here to teach' to 'I am here to lead and enable effective learning'. The teacher becomes a facilitator in imparting learner-centred education where the teacher understands the needs and potential of each learner. They also provide specifically targeted feedback to each student. The teacher's role becomes manifold to create critical thinkers.It is very important for a school to keep track of the changing scenarios in the education worldacross the globe and keep improvising on the curriculum which helps to develop young students with competencies, values, citizenship responsibilities and as lifelong learners.

Academic content should be upgraded year on year and term on term which should let children explore new avenues for their future. In this case, school curriculum should be designed and developed in a way that it should generate awareness for realistic approaches and guidance in students, which in turn enable them to make suitable and confident career choices. It should also promote the development of

skills that are aligned with their interests and abilities.The learning environment should be open and free without any boundaries defined. Children should be given opportunities to set their own objectives. This allows them to self-evaluate and set achievable goals.

How to Promote Holistic Development in Students

Some of the techniques for promote holistic development of students are given below.

Hands-on Experience - Schools are focused on experiential learning provide hands-on educational experiences. Students work in groups exploring different learning styles to determine which styles are most effective for them. Holistic, experiential techniques often include problem-solving exercises to address community problems or create innovative products.

Self -Guided Learning -Teachers allow students to learn at their own pace in the style that best suits them. The self-guided culture allows for personalization to mitigate the inadequacies of one learning model. Curriculum's content and pace are regulated by low stakes assessments. Classrooms are smaller and contain students of different ages and ability levels.

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Schools as community -Schools are based on the idea that people find meaning through connections with their surroundings. Teachers partner with community members, including families, residents, organizations, and officials, to provide integrated support and expanded learning opportunities. Schools are a hub of the community bringing together academic, social, development, and engagement activities.

Interdisciplinary Curriculum -Cognitive growth is improved when multiple subjects are addressed together. Some schools are creating integrated programs where teachers from different disciplines come together to teach thematic courses that address issues from multiple perspectives. Coursework might also include independent research, travel, fieldwork, and internships.

Strong Student-Teacher Bond -When teachers are able to form strong bonds with students, performance and engagement is positively impacted. Allowing students to develop classroom rules and take on leadership roles helps encourage trust and communication among students and enhances their motivation to succeed.

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Encouraging Self-Confidence -Teachers must recognize students' unique strengths, weakness and treat equally all students. Student's motivation can be enhanced by making sure that lessons are relevant to students' lives and focus on realistic issues. A holistic curriculum enables teachers to recognize students' unique strengths and treats them all equally. It provides a supportive learning environment for individual learning styles. Students have a better chance of emerging with self-awareness, confidence, and a sense of social responsibility. Students are taught to reflect on their actions and how they impact the global and local community and thus contributing positively to the future of the world.

Why Holistic Development is Important for Students

- The holistic development of children is important for the following reasons:
- Student can develop a good personality.
- They become innovative in their work.
- Know how to deal with their problems.
- Student develop how to communicate with the world.
- They grow healthy.
- Recognize, control their own feelings and understand other's emotions.

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- Student develop the values of what is correct and what is wrong. It also helps them to analyse things before reacting to any situation.
- It helps the Student work in cooperation and coordination that is, teamwork.

Conclusion

A schooling system that helps a student to understand by himself / herself, emotions, and mental stress while teaching him / her, how to build up healthy and functional relationships as well as develop resilience and team spirit is the true form of education.Such a system boosts the morale of a student so that they can go on to achieve greater heights in their careers while becoming upstanding citizens of the society who contribute to the growth and development of the nation. Hence, the holistic development of students is very important right from the beginning of school-going years. At the same time school teachers must ensure that the school curriculum is integrated with various co-curricular activities to ensure the holistic development of students. School teachers may take expert advice from career counsellors as they understand the skills required for future success in life.

The contemporary curriculum is designed to promote oneness and equality in terms of education which has come a long way. But with effective planning and sticking to the aim of education, we can provide our forthcoming generations a better education system which explores and enhances their subjective knowledge along with their qualitative skills, and give them great opportunities in future. A student must be happy when he opens a book, his excitement should reflect his happiness and then we can say that the contents of the subjects have served their purpose. Moreover, it is the need of the hour that our contemporary curriculum must be supported by good infrastructure for its true implementation, and maximum utilisation of resources must be ensured.

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ROLE OF ICT IN EDUCATION

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Introduction

"Technology can become the "wings" that will allow the educational world to fly farther and faster than ever before – if we allow it" – Jenny Arledge. All need to technology to make learning more engaging. Because when the learners are occupied and they are interested, that's where learning take place. Engaged learning is one of the key benefits of using technology in education. The integration of ICT in the schools and colleges practice have not to do with simple improvements of the traditional instruction but to a radically new pedagogy; shift from the traditional instruction model of knowledge transmitting towards autonomous, active, and collaborative learning through learners' engagement in ICT-based learning environments and shared learning resources. It refers to the extent to which information and communication technologies have been adopted into the

educational environment and the degree of impact on the educational organization and pedagogies.

The level of integration is determined by the interplay between infrastructure, teacher motivations, innovations and development of e-pedagogies. In this context, "ICT integration" and "adoption of computer use" in education will be used as interchangeable concepts. Using ICT to facilitate and enhance effective teaching and learning process. The effective integration of ICT alongside the curriculum is associated with a new pedagogy which changes the role of the teachers and increases learners' control of their learning, self-regulation, and collaboration. This presupposes a shift from traditional lesson formats, based on transmitting information philosophies, towards learner-centered approaches that promote active engagement, help them to control their learning, and support collaborative learning and meaningful understanding.

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), ICT "can contribute to achieving universal education worldwide, through the delivery of education and training of teachers, improved professional skills, better conditions for lifelong learning,

and the potential to reach people that are outside the formal education process."

ICT in education refers to the use of educational technology in the scientific methods. ICT is the idea of teaching learning termed the information of education. ICT in education can fundamentally change the focus and goals of education. Whatever maybe as educationist we should know the role of ICT in education.

Information Communication Technology is known globally by its acronym ICT. This paper presents the role of ICT in education. In particularly it has argued that ICT has impacted on education in small ways but that the impact will grow considerable in year to come and ICT will become a strong change among many educational practices. The 21st century is knowledge based technology-driven and fast changing the world. The use of ICT in education is increasing very rapidly in various aspects. In India one of the most common problems of using ICT is to base choices on possibilities in technologies rather than educational needs. ICT refers to the integration of computing technology and communication. It can be defined as "anything which allows us to get information, to communication with each other, or to have

an effect on the environment using electronic or digital equipment". ICT has contributed immensely to social and economic improvements, such as higher employment and productivity, increasing access to a higher quality of life.

The aim of ICT should be to engage students at three levels.

- Technical
- Practical and
- Critical

Students should not only learn to use technology but they should also be able to use it in other activities referred to as its practical aspect as also at the critical level, where students must learn to evaluate the appropriateness of the message, audience and method used. ICT methods in education also indicate that new skills are required from the workforce.

Conference Board of Canada(1991) refers, New skills for the workforce,

- Good communication skills (reading, writing, speaking and listening).
- Ability to learn independently.
- Teamwork skills.
- Social skills (ethics, positive attitude, responsibility).

- Ability to adapt to change circumstances.
- Thinking skills (problem solving, critical, logical and numerical skills).
- Knowledge navigation (knowing where to go and how to process information).

Needs of ICT

Use of ICT is making major difference in education. ICT can facilitate learning of learners. It has been used to support various learning style i.e. traditional method and e-learning method. It develops the learning and teacher and learner. This technology can stimulate the development of intellectual skills. It can contribute to the way of learning attitude, knowledge, skills and attention although this is dependent on previously acquired knowledge and the type of learning activity. Educationist are using ICT can more the effective from traditional methods in education. The following reasons are some reasons to use educational technologies,

- It has been shown to enhance learner's level of understanding and attainments
- It creates thinking skill effectively.

- It can provide both the resources and the pedagogical framework for enabling learner become independently.
- ICT places all on equal footing.
- ICT enables the research to experiment with changing aspects of a model, which impossible for them to do otherwise.
- ICT keeps alert throughout.
- It enables long term retention.

According to Sukanta Sarkar (2012), The Information and Communication Technology (ICT) curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact of ICT on self and society.

Technology is about the ways things are done; the processes, tools and techniques that alter human activity. ICT is about the new ways in which people can communicate, inquire, make decisions and solve problems. It is the processes, tools and techniques for:

1. Gathering and identifying information
2. Classifying and organizing
3. Summarizing and synthesizing
4. Analyzing and evaluating

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5. Speculating and predicting

Use of ICT in Quality of Education

Improving the quality of education and training is a critical issue, particularly at a time of educational expansion. ICT can enhance the quality of education in several ways: by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing training. ICT is transformational tools which, when used appropriately, can promote the shift to a learner- centered environment.

Teachers' usage of ICTs

Teachers most commonly use ICTs for administrative tasks

Teachers most often use ICTs for 'routine tasks' (record keeping, lesson plan development, information presentation, basic information searches on the Internet).

More knowledgeable teachers rely less on "computer-assisted instruction"

-Teachers more knowledgeable in ICTs use utilize computer-assisted instruction less than other teachers who use ICTs, but utilize ICTs more overall.

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How teachers use ICTs is dependent on their general teaching styles

Types of usage of ICTs correlate with teacher pedagogical philosophies. Teachers who use ICTs the most and the most effectively are less likely to use traditional 'transmission-method' pedagogies. Teachers who use more types of software tend to practice more "constructivist" pedagogies.

Teaching with ICTs takes more time

Introducing and using ICTs to support teaching and learning is time-consuming for teachers, both as they attempt to shift pedagogical practices and strategies and when such strategies are used regularly. Simply put: Teaching with ICTs takes more time (estimates vary on how much extra time is required to cover the same material; 10% is a common estimate).

Disadvantages

- Setting up the ICT devices can be very troubles some.
- Too expensive to afford.
- Hard for researcher to use with lack of experience using ICT tools.
- Technical errors hinder researcher schedule of work.

- It frequently gets breakdown and repairing it is costly.
- It is consuming time
- Its cannot keep up with the concept as the pace of the research is much faster

Conclusion

This paper indicated that the educationist have ICT needs, and are engaged in work that lends itself to e-learning, disadvantages. ICT is contribution of knowledge, particularly its generation of useful information to support future development in the use of computers in educational system. In ICT the learners have new understanding of education. ICT into education seems to be a necessary issue for educationist in the world. However, if educationist cannot make good use of the ICT tools, money and time spent on the ICT is going to be a waste.

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Holistic and Multidisciplinary Education aims to cohesively develop diverse capacities of human beings, including intellectual, aesthetic, social, physical, emotional, and moral abilities. It helps to create multifaceted, versatile and well-rounded individuals well-equipped with twenty-first-century skills. Multidisciplinary Education will steer the learners through a lifelong, continuous process of self-awareness, self-discovery and self-actualisation. Holistic and Multidisciplinary Education is needed in Higher Education to lead India into the 21st century and the fourth Industrial Revolution.

"Holistic development centered around quality education is the need of the hour"- Aadesh Kumar Jain.S