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About the Journal

The *Journal of Indian Education* is a peer reviewed periodical published in May, August, November and February by the National Council of Educational Research and Training, New Delhi.

The NCERT encourages original and critical thinking in education. The JIE provides a forum for teachers, teacher educators, educational administrators and researchers through presentation of novel ideas, critical appraisals of contemporary educational problems and views and experiences on improved educational practices. Its aims include thought-provoking articles, challenging discussions, analysis, challenges of educational issues, book reviews and other related features.

The Journal reviews educational publications other than textbooks. Publishers are invited to send two copies of their latest publications for review.

The views expressed by individual authors are their own. They do not necessarily reflect the views of the NCERT or the views of the Editors.

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CONTENTS

Editor's Note

The National Education Policy (NEP) 2020 with a motto to educate, encourage, and enlighten aims on transforming the education system of India making it more flexible, multi-disciplinary and holistic in learning, complementary to the 21st century skills and in line to 2030 agenda for sustainable development. To achieve this integration milestone and to modernise the prevailing education system, the policy highly recommends learner centred pedagogies supported by multi-lingual approach, experiential learning and constructivist approach away from traditional practices of rote learning. Emphasis is also laid on upgrading the competencies of teachers through continuous professional development programmes, orientations and workshops to pace with the demands of technology based education. The policy highly believes in value based education for character building of the future leaders for peaceful, and inclusive societies. The present issue of *Journal of Indian Education* (JIE) provides deep insights on these objectives and recommendations through various research papers, articles and case studies to lend a hand in revolutionising the process of Indian education system.

The pacing era of advancement has completely metamorphosed the conventional education system by making it more technology driven, globally integrated and dynamic, and this transfigured contemporary curriculum has roused the need for Global Citizenship Education (GCED) with the chief aims of promoting peace, sustainable development and human dignity. Varada Nikalje has tried to centralise the attention on this noteworthy subject of Global Citizenship Education by reflecting the topic from the mirrors of NEP 2020 recommendations and sustainable development goals.

Teachers' role is not merely confined to curriculum transaction but they add face value to process of teaching and learning by sculpting the future of the students and nation, and therefore, their perception is very critical for the efficient implementation and realisation of the NEP 2020 policy proposals. The paper written by M Sowmya, D Thammi Raju, K Akhila and S Senthil Vinayagam submerges deep into the subject to emblazon on the perceptions and awareness of the school teachers in respect to the fundamental principles of National Education Policy 2020, sub scaled on philosophical, curricular, and teachers' aspects, measured on a 3-point continuum. The study advocated on the need for orchestrating NEP 2020 orientation-cum-awareness programmes with capacity building programmes for teachers to map their competencies in specificity to the policy recommendations.

Process–writing approach is a nexus between thinking, reviewing, reflecting, and sharing which adds a voice to the writer's thoughts, emotions

and expressions. Nidhi Kunwar through her study explored the effectiveness of process–writing approach with Middle School Children in developing Hindi language compositions. The study demonstrates on how the students' initial understanding of writing equated with copying exercises in their notebooks transformed into well written compositions strengthening their writing skills by making writing an enjoyable experience for them. Both NEP 2020 and NCF 2005 highly recommend constructivist approach for efficacious and fruitful learning. An instructional model provides a blue print for the strategy while setting up the stage for the learners' creativity and novelty. Rupa Gupta, Vikramjit Singh and Elizabeth Gangmei examined the effect of the 5E (Engage, Explore, Explain, Elaborate, and Evaluate) based instructional approach on the achievement and interest of students in the subject of social studies. The findings proposed that the approach not only motivates the students' interest in the course leading to their active and fervent participation, but also, facilitates their knowledge construction, thus, accruing their gross academic scores.

Shree Deepa through her study 'Thought Seeds in Anthrogogic Learning Contexts' endeavours to provide an insight on two epoch-making paradigms: 'anthrogogy' traced to andragogy and 'thought seeds', developed through tasks. The paper tries to canvas the concept of thought seed for higher education learners by strategically outlining its characteristics by moving the frame simultaneously from a theoretical argument to practice and finally exemplifying on the differences between tasks and matured thought seeds through some scrutinised critiques of tasks. The study by Sreeja Sukumar in light of learner centered curriculum recommended under quality improvement initiatives of NEP 2020 attempts to measure the approximation to which the contemporary learner centered pedagogical approach has been adopted in higher secondary schools of Kerala. The projection is made using ordinal logistic regression scale considering the type of schools, teaching experience, teacher-student ratio, basic entry quality of students, vast syllabus, training effectiveness and the subject taught by the teacher as the influential factors. With the advent of digital era, it has been seen that traditional classroom practices are now taking the back seats with trending shifts to innovative pedagogies adding a cutting edge to the long-established customary education practices. To row in the same direction, Vandana M and Haseen Taj did an experimental research to investigate on the effectiveness of flipped instruction on students' learning engagement and academic achievement in the subject of Chemistry and the drawn inferences favoured the context with enhanced post test mean scores of the experimental group of students indicative of their progressive learning engagement and academic achievement.

A distilled feedback in the teaching-learning process is a must to follow on efficacious remedial sessions which indeed needs judicious assessment. The study by Palnaty Vijetha, Alok Kumar and Anil Abbur on the title 'Implementation of Grade Level Assessment Tool in Social Sciences (GLAT-SS) for Grade VI of Karnataka State Education Board' highlights on how GLAT-SS could prove itself to be a handy evaluative tool for teachers to meticulously guide the process of efficient remedial teaching while systematically identifying the performance levels of Grade VI students in Social Sciences subject. The study—'Critical Reflections on Assessment Approaches in School Education—Minimum Levels of Learning, Continuous and Comprehensive Evaluation and Learning Outcomes' calls for attention on the subject of assessment. Authors Vandana and Aejaz Masih attempt to provide a glimpse of post independence journey of transformation in school level assessment procedures in the country.

Lovely Sarkar and Surendra Yadav did an intensive review on subject of 'Problems of Teaching English Language in Nagaland' underscoring the stumbling blocks of English teaching adding their own tight spots and struggling stories to the list. The paper not only spreads the light over the sticky wickets but also recommends feasible and tactical strategies for effectual and fruitful classroom transactions. Educational television serves as a crucial device for disseminating education widely among the masses. A study by Abhay Kumar, Deepty Gupta and Amarendra Behera titled, 'A Study of SWAYAM Prabha DTH TV Channel (*Kishore Manch*) in Secondary and Senior Secondary Schools in India' reports that there was limited awareness about the channel and accesibility is also a challenge.

Yeasmin Sultana and Munmi Borah investigated the academic resilience of adolescent students during COVID-19 pandemic situation with reference to their socio-economic status and demographic locations. The lead inferences of the study implies that a headlong swapping to online mode of teaching-learning for being the only handy alternate in the intractable pandemic situations caused detrimental effects on the academic resilience level of the both urban and rural adolescent students but the impact was proportionately high on rural population of students due to the inadequacy of apt resources and financial constraints to avail the facilities of technology based learning. 'Cyber Bullying in Online Teaching During COVID-19—Experiences of Female Educators in India' is a noteworthy concern raised by Debjani Chakraborty and Chhavi Garg. The authors tried to highlight and exhibit the grey areas and dark spots of the technology and cyberspace misemploy in e-learning during the COVID-19 pandemic traversing through the literature review of existing newspapers, media coverage and contents on social media platforms in addition to the view points, experiences,

narratives and apprehensions of female teachers on the different avenues of the concern.

Pankaj Das attempts to understand the rationale for dilapidation of Santali girls' education in tribal areas of Mayurbhanj district in the state of Odisha leading to a lacuna in the gender parity index. The major accusations for the fall offs included inadequate infrastructure, non-conducive learning environment, deplorable socio-economic conditions, apathy of teachers, and exclusion of tribal girls from elementary education due to their socio-cultural disparities with several others sinks down the list. The author prescribes for the total revamp of tribal education following a purpose oriented outlook to knock out the stumbling blocks at the elementary stages.

Journal of Indian Education is a quarterly journal published by NCERT in line with themes of school and teacher education providing free rein for educational partakers' discussions. The article titled as 'Analysis of Articles Published in Journal of Indian Education (2015–2020)' authored by Alka Bankra and Vijayan K focuses on the thematic reflection of the published studies from February 2015 to November 2020 to bring an insight upon the transforming educational practices in the diversified zones of interest of the researchers, readers and scholars during the period. The aim of the authors is to facilitate the revamping process of learning and exploring in continuum to the changing needs and trends of education sector.

We expect that our readers would be able to relate their personal experiences with the issues or concerns discussed by the authors of these articles or research papers presented in the current issue. We invite our readers from different levels of school education and teacher education to contribute in the journal by sharing their knowledge in the form of articles, action research reports, theoretical papers, book reviews etc. Your valuable suggestions and comments for improvement of the quality of the journal are welcome.

Vijayan K
Academic Editor

Global Citizenship Education and the National Education Policy 2020
Some Insights

Varada M Nikalje*

Abstract

It is being increasingly recognised across the world that addressing challenges to peace, and human and fundamental rights is important for the stability of societies. This requires increased levels of dialogue and cooperation among countries which will result in mutual benefit. It is also being recognised that the role of education in building just and peaceful societies and trust in institutions cannot be underestimated. This is particularly true when such learning begins at a young age and is reinforced throughout the educational trajectory in school. This is achievable through a combination of character attributes, such as being respectful, honest, helpful, and above all, developing the ability to listen. These traits are learnt over time. As the world is becoming increasingly interconnected, Global Citizenship Education (GCED), a response to contemporary global challenges that empowers learners to become aware of and understand global issues and to become active promoters of more peaceful, and sustainable societies, has become a matter of interest to educators. Indeed, the education policy of many countries has included GCED in their curricula. The National Education Policy of India, released on 29 July 2020, envisages many changes in education. One of them is the inclusion and integration of the concept of GCED, which resonates with the Indian concept of Vasudhaiva Kutumbakam, meaning, 'the world is one family'. This paper examines GCED in the context of the New Education Policy at school and higher education levels.

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INTRODUCTION

The boundary between the words 'national' and 'international' is getting blurred. World leaders have emphasised that to build a sustainable world, there is a need for collective action. There are issues and concerns such as climate change, environmental laws, displaced populations, and others that transcend national boundaries.

These cannot be solved by any one country acting alone; it is neither feasible nor desirable. A dialogue will encourage goal-directed behaviour towards peace, while cooperation will combine energies to work towards a common goal. Not surprisingly, the concept of global citizenship is being explored with increased intensity and, as might be expected, there has been a corresponding and growing interest among educators in various parts of the world to strengthen the global dimension of citizenship education (GCED) in school curricula at all levels. (UNESCO, 2010)

Educational reforms and school improvement efforts have become globalised, moving at a pace that would have been inconceivable in the 20th century. For many policymakers, a degree of consensus has been attained on what knowledge matters most, how it should be measured, and how countries should compare their progress with one another. For instance, in September 2000, India was among 189 member states of the United Nations that came together to adopt the Millennium Development Goals, which acknowledged education as an indispensable means for people to realise their capabilities, and prioritised the completion of a primary school cycle. In 2009, India became one of the 135 countries to make education a fundamental right of every child. At the international level, the Global Education First Initiative (GEFI) was launched in 2012 by the UN Secretary General. It includes global citizenship education as one of its three priorities, along with access to education and quality of education. With GEFI, the world education community entered a new era in which education is expected to contribute not only to the fulfilment of individual and national aspirations but also to ensure the well-being of humanity and the global community. In 2015, global citizenship education was included as one of the topics of Target 4.7 of the Sustainable Development Goals (SDGs) on education that countries must promote and address. These two developments provided the impetus for the world community to pay attention to this particular area at the policy level. According to UNESCO's International Bureau of Education, the curriculum represents a conscious and systematic selection of knowledge, skills and values, which shapes the way in which teaching, learning and assessment are

organised by addressing questions such as what, when and how people should learn. (IBE, 2016)

NATIONAL EDUCATION POLICY (NEP) 2020

The National Education Policy (NEP) 2020 was released by the government of India on July 29, 2020. It is a 66–page document that talks about the vision of education in the country for ECCE (Early Childhood Care Education), school education, higher education, and professional education. It is a comprehensive framework for elementary education, higher education as well as vocational training in both rural and urban India.

The NEP 2020 replaces the previous National Policy on Education 1986. It may be mentioned here that the previous policies on education in India had focused largely on issues of access and equity. Furthermore, as mentioned earlier, a major development since the last policy of 1986–1992 has been the Right of Children to Free and Compulsory Education Act 2009 (which came into force on 1 April 2010) that laid down legal underpinnings for achieving universal elementary education.

The NEP 2020 reiterates India's commitment to the global education development agenda reflected in Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015, which seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030. Such a lofty goal will require "the entire education system to be reconFig.d to support and foster learning so that all the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved" (NEP 2020, Introduction).

The NEP 2020 envisages many changes in education. It also includes new and contemporary issues important for school education as well as for higher education, such as climate change, environmental concerns, artificial intelligence, and global citizenship education. The philosophy of GCED is rightly placed in the vision of the policy which reads as follows:

The vision of the Policy is to instil among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen. (NEP 2020)

Moreover, the NEP 2020 very adeptly puts forward this issue in the Higher Education section:

As the world is becoming increasingly interconnected, Global Citizenship Education (GCED), a response to contemporary global

challenges, will be provided to empower learners to become aware of and understand global issues and to become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies. (NEP 2020, p.25)

Global Citizenship Education (GCED)

The idea of global citizenship states that one's identity transcends geography or political borders and that responsibilities or rights are derived from membership in a broader class: that of 'humanity'. This does not negate one's nationality, or sense of patriotism. Extending this concept to education, GCED bases itself on the principle of respect and appreciation of various cultures, different forms of expression, and diverse human realities, to ensure an equitable educational environment. GCED attempts to achieve these through global consciousness and by developing competencies to address global issues.

Research (Krysan and Moberg, 2016; Schafer and Shaw, 2009; Plaut, 2010, Schuman, Steeh, Bobo and Krysan, 1997; Verkuyten, M. and Yogeeswaran, K., 2017) has found that those who are high in global human identification are less prejudiced towards many groups, and care more about international human rights, worldwide inequality, global poverty, and human suffering.

They are more likely to take the next step— proactively attempt to alleviate poverty and suffering.

GCED offers students and teachers—

• an approach which takes into account the whole of human society and the environments;

• an emphasis on the future, the dynamic nature of human society, and each person's capacity to choose and shape preferred futures, and

• an opportunity to explore important themes such as change, interdependence, identity and diversity, rights and responsibilities, peace-building, poverty and wealth, sustainability and justice;

• an emphasis on critical thinking and communication, and

• an opportunity to develop positive and responsible values and attitudes, important skills, and an orientation to active participation.

GCED and NEP

Central to the GCED policy and practice is its transformative potential: either as a framing paradigm for education policy, or as a way of strengthening and enhancing the educational experience of learners and educators. Therefore, the values that inform GCED, such as justice, equality, dignity, inclusion, and respect, should be reflected in GCED policy development processes, which should be collaborative and open,

so that diverse backgrounds and perspectives could be included.

GCED focuses on three aspects of learning— cognitive, socio-emotional and behavioural.

- Cognitive: Knowledge and thinking skills necessary to better understand the world and its complexities;
- Socio-emotional: Social skills, along with values that promote harmony and peaceful co-existence, and
- Behavioural: Conduct, performance, practical application, and engagement.

The NEP 2020 acknowledges that the gap between the current state of learning outcomes and what is required must be bridged by undertaking major reforms in all stages of education.

Thus, as times change, and societies adapt themselves to new challenges, education systems are redesigned. The National Education Policy (NEP) 2020 of India reflects this metamorphosis; it is an approach that takes into account the whole of human society and the environments, yet maintains an identity rooted in Indian values. Another key step is to determine whether GCED can be integrated into existing policies or whether a new policy needs to be developed. In both cases, it is important to consider the objectives of mainstreaming GCED in education, the outcomes it is expected to deliver and the consequences of not mainstreaming GCED. (APCEIU, 2017)

There are two ways of including GCED in an education system— to develop a curriculum for GCED and introduce it at all levels, or to integrate GCED through a holistic approach at all levels of the education system. The NEP has chosen the latter.

The NEP elaborates the fundamental principles that will guide both the education system at large, as well as the individual institutions within it. The principles are stated as follows—

- creativity and critical thinking to encourage logical decision-making and innovation;
- ethics, human and constitutional values like empathy, respect for others, cleanliness, courtesy, democratic spirit, the spirit of service, respect for public property, scientific temper, liberty, responsibility, pluralism, equality, and justice;
- promoting multilingualism and the power of language in teaching and learning;
- life skills such as communication, cooperation, teamwork, and resilience, and
- respect for diversity and respect for the local context in all curriculum, pedagogy, and policy, and being aware that education is a concurrent subject. (NEP 2020)

Implementation of GCED in the NEP

In India, the NEP 2020 has emphatically included GCED with other contemporary issues. The document clearly states that "Concerted curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Artificial Intelligence (AI), Design Thinking, Holistic Health, Organic Living, Environmental Education, Global Citizenship Education (GCED), etc. at relevant stages will be undertaken to develop various important skills in students at all levels."

The NEP stresses that students will be taught at a young age "the importance of 'doing what's right,' and will be given a logical framework for making ethical decisions" (NEP 2020, 4.28). In later years, this would then be expanded along the themes of cheating, violence, plagiarism, littering, tolerance, equality, empathy, etc., with a view to enable children to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. "As a consequence of such basic ethical reasoning, traditional Indian values and all basic human and constitutional values such as ahimsa, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity will be developed in all students." (NEP 2020, 4.28)

Furthermore, the NEP states that the school curriculum will include, early on, materials on human values such as respect for all persons, empathy, tolerance, human rights, gender equality, non-violence, global citizenship, inclusion, and equity. It would also include more detailed knowledge of various cultures, religions, languages, gender identities, etc. to sensitise and develop respect for diversity. Any biases and stereotypes in the school curriculum will be removed, and more material will be included that is relevant and relatable to all communities. (NEP 2020, 6.20).

In addition to high-quality offerings in Indian languages and English, foreign languages, such as Korean, Japanese, Thai, French, German, Spanish, Portuguese, and Russian, will also be offered at the secondary level, for students to learn about the cultures of the world and enrich their global knowledge and mobility according to their own interests and aspirations (NEP, 2020 para 4.20).

As with the GCED policy development process, a key step in curriculum development is identifying and reviewing existing teaching materials. The Ministry of Education (MoE), Government of India, has initiated the task of curriculum development for school

education by asking all States/Union Territories of the nation to develop a draft curriculum for their state/UTs, based on the NEP, reflecting the needs and concerns of the people. These would serve as input for the National Curriculum. The States/UTs are aware of a fact mentioned in the NEP which states:

While students must have a large amount of flexibility in choosing their individual curricula, certain subjects, skills, and capacities should be learned by all students to become good, successful, innovative, adaptable, and productive human beings in today's rapidly changing world. In addition to proficiency in languages, these skills include scientific temper and evidence-based thinking; creativity and innovativeness; a sense of aesthetics and art; oral and written communication; health and nutrition; physical education, fitness, wellness, and sports; collaboration and teamwork; problem-solving and logical reasoning; vocational exposure and skills; digital literacy, coding, and computational thinking; ethical and moral reasoning; knowledge and practice of human and constitutional values; gender sensitivity; Fundamental Duties; citizenship skills and values; knowledge of India; environmental awareness including water and resource conservation, sanitation and hygiene; and current affairs and knowledge of critical issues facing local communities, states, the country, and the world. (NEP 4.23)

Some key aspects are elaborated as follows:

Inclusive Education

The Persons with Disabilities (PWD) Act, 1995, was a landmark legislation, which ushered in a new era for the education of children with disabilities in India. In the field of education, this is reflected in the concept of inclusive education, which implies that all learners, with or without disabilities, are able to learn together through access to a common educational setting that would include a diversity of abilities and backgrounds. This would include textbooks in schools and children's literature in libraries and perhaps in home settings as well.

By default, classrooms across India are multilingual in nature. Decisions about language(s) of instruction are loosely governed by India's national language in education policy: the Three Language Formula. Policy documentation, including the legally binding Constitution of India and its recent amendment, the Right to Education Act (Ministry of Law and Justice 2009), champions the multilingual nature of India and recognises the need for its preservation.

Role of ICT in Supporting GCED and Value Education

The media includes print, audio and visual sources of information; it also

includes TV serials, advertisements, talk shows etc. loosely classified as entertainment. The images, symbols and narratives become embedded in minds, thereby influencing thinking, active vocabulary and behaviour. A teacher, or teacher educator, would have to use ICT judiciously: in providing inputs for critical thinking, and to facilitate children to move away from 'incomplete knowledge and an unbalanced picture of culture' (NCERT, 2010) Moreover, value education can be reinforced through traditional methods such as maintaining a Reflective Diary (handwritten or stored in a laptop) with a checklist for self-assessment, as for example;

- Has there been a change in my propensity towards violence?
- Have I become more sensitive to the needs of others?

GCED in the Sciences and Humanities

The Foundational and Preparatory stages of education have an advantage that, since there is no strict compartmentalisation of knowledge, GCED can easily be integrated in the classroom process. In upper primary and secondary stages, concepts such as the globe can be used in mathematics (that all cultures have an understanding of the globe); in geography (to create a sense of wonder that humans can live in such extreme climatic conditions) and usher in the idea that, in spite of a myriad differences, humanity is one.

A whole-school approach, whereby the school culture or community reflects GCED principles, values, and processes, is also more effective than the isolated efforts of individual teachers.

The NEP and Higher Education

Thus, the policy envisages a sweeping redesigning of the curriculum in school education. In higher education too, it has recommended many changes. Prominent among these is focus on inter-disciplinary learning, which is a welcome step. In fact, the setting up of Multidisciplinary Education and Research Universities (MERUs) has been recommended to open up new opportunities for India's youth and promote inter-disciplinary research. The NEP states, "Model public universities for holistic and multidisciplinary education, at par with IITs, IIMs, etc., called MERUs will be set up and will aim to attain the highest global standards in quality education. They will also help set the highest standards for multidisciplinary education across India" (NEP 2020, para 11.11). Further, it will increase an interdisciplinary environment, as made clear through the statement "research collaboration and student exchanges between Indian institutions and global institutions will be promoted through special efforts" (NEP 2020, para 12.8).

A significant aspect of the policy is that it allows Indian universities to open their overseas campuses and encourages top universities to open their campuses in India. The NEP recommends the setting up of a National Research Foundation (NRF) which will initiate or expand research efforts in technology. The NRF may consider advancing international research efforts to address global challenges in areas such as healthcare, agriculture, and climate change using AI (NEP 2020, para 23.9).

The above is quite a long list, which, however, is doable. However, the successful implementation of GCED requires a theory-based understanding of the concept by teachers and teachers' educators, for effective implementation. The integration of GCED is proposed as an interdisciplinary matter. GCED teacher education appears not only as a vehicle for the development of skills but also as a process that may underpin attitudinal change (Tarozzi and Inguaggiato, 2018). Moreover, both initial and in-service teacher education are considered by UNESCO to be enabling factors contributing to the successful delivery of GCED. (UNESCO, 2015) Broadly speaking, the lack of systematic but diffused intervention in teacher education is one of the main causes for the feebleness of educational policies which seek to promote diversity and inclusion. This is recognised by the NEP.

CHALLENGES ON THE WAY AHEAD

India is a very large country with regional, social, economic, cultural, and geographical variations. India is the second-largest education system in the world with an about 350 million students, 2 million educational institutions providing education at various levels, and around 9.5 million teachers. Policymakers should provide support to GCED practitioners, including school administrators, teachers, students, and other local practitioners. First, the educators, the key stakeholders in GCED implementation, must become learners themselves, understanding and embracing GCED fully. Only when they become enlightened can they act as responsible global citizens and become examples and models for students and society. Therefore, GCED's capacity for building key stakeholders, like teachers, should be supported and strengthened. If possible, monetary incentives can also be provided to stakeholders to encourage active participation."

Policymakers may also provide teaching/learning materials for GCED practitioners. Projects to translate the existing materials into local languages may be encouraged, and subsequently, these may be disseminated to the concerned stakeholders.

Conclusion

Through education, we gain knowledge and skills to enhance our lives and environment. The values and attitudes of social responsibility also lead to betterment of individual lives and humanity. Thus, education can transform the way we think and act, and thus promote the creation of just, peaceful, tolerant and inclusive societies.

The important role of GCED was reaffirmed in the vision of education for 2015–2030, or Education 2030, declared at the World Education Forum 2015, co-organised by UNESCO, UNICEF, World Bank, UNDP, UN Women, and the UNHCR in Incheon, Republic of Korea. The Incheon Declaration on Education 2030, focussed on inclusive and equitable quality education and lifelong learning. It emphasised that while foundational literacy, numeracy, and technological skills are essential, they are not sufficient. Education should ultimately result in responsible citizens, who make informed decisions regarding local, national and global challenges. Nations and citizens have to cooperate to solve conflicts and problems of international and global magnitude, such as terrorism, armed conflicts, violence, climate change, and so on, to make informed choices to transform their communities and society towards more peaceful, just, and sustainable orders (Ross, 2012). Furthermore, such global citizens will respect their nations' rule of law, human rights for all citizens, non-violent resolution of conflicts, social and economic justice, and intercultural respect and integrity.

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Perceptions of Teachers on National Educational Policy 2020

M Sowmya*, D Thammi Raju**, K Akhila*** and S Senthil Vinayagam****

| Abstract |

Formulation and implementation of policies are two different aspects that contribute to the overall achievement. The New Educational Policy (NEP) developed over time by engaging different stakeholders requires feedback from actual implementers at the grassroot level to ensure effective implementation in letter and spirit. The data on perceptions of 50 school teachers focused on three important areas–philosophical, curricular, and teachers' aspects apart from awareness of principles of NEP, 2020. Various statistical tools are utilised for meaningful interpretation of findings such as descriptive statistics, 'Pearson's Correlation Coefficient, 'Wilcoxon Signed-Rank', 'Man Whitney U, 'Kruskal Wallis H', t-test etc. The awareness of the fundamental principles of NEP was ranging from 44 per cent. The majority of school teachers were in the medium category of perception on philosophical (64.0 per cent), curricular (66 per cent), and teachers aspects (80 per cent) of National Educational Policy. The changes in teachers' perceptions on New Educational Policy 2020 analysed the possible constraint in the implementation of NEP was discussed and appropriate strategies suggested.

INTRODUCTION

Inclusive and equitable quality education and promotion of lifelong learning opportunities for all by 2030 is envisaged in the 4th Sustainable Development Goal. In this endeavour, education reforms are essential to be implemented for quality education. Based on broad consultation among stakeholders after a gap of

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34 years, the National Education Policy 2020 came into force with a vision, i.e., regardless of economic or social background there should be equitable access to quality education. The major changes in the education system bring the highest equity, integrity and quality from early childhood care (5 + 3 + 3 + 4). The policy aims to transform India's education system into an equitable and vibrant knowledge-based society by providing quality education (National Education Policy, 2020).

The implementation of policy in letter and spirit is a very critical element and often this step receives priority in the last and many challenges are encountered in its implementation. One of the barriers in the implementation of the policy is poor understanding of, and disagreement on objectives (Cambridge et al. 2014). The available resources, human resources, and infrastructure facilities (Jenkin et al. 2013) also impact the implementation. The organisations, institutions, services, and funding arrangements of the system (Buse et al. 2012) are also affected. Other key issues that influence the policy implementation are rapid changes in the technological and scientific advancements, knowledge landscape, need for skilled manpower, climate changes, epidemics, pandemics, etc., also.

However, the role of teachers is critical at the grass root level in the implementation of the policy and the success depends on understanding the philosophy and principles of the stated policy. The present study has twin objectives—(i) to analyse the awareness and perception of school teachers on the national education policy and, (ii) to identify the issues and challenges in its implementation.

Methodology

An exploratory research design was used for the present study and the data were collected through google form as physical activities were restricted due to the COVID-19 situation. Responses received from 50 teachers of six schools were analysed and discussed. The survey instrument on the awareness of school teachers comprised 13 statements related to fundamental principles of National Education Policy 2020. The perception component had subscales on philosophical aspects (4 statements), curricular (5 statements), and teacher (5 statements) and was measured on a 3–point continuum.

The data were subjected to descriptive statistics' 'Man Whitney U', Kruskal Wallis H and discussed accordingly, giving more importance to significant values.

The distribution of sample school teacher based on age revealed that the majority of them (78 per cent) were in the age group of 26–50 years and only 10 per cent were young (less than 25

years), and a few had more than 50 years of age (12 per cent). Females (72 per cent) were more among the sample respondents than males (28 per cent) with equal distribution (50 per cent each) in graduation and post-graduation education, but the majority of them had more than 10 years of experience (32 per cent) and a significant number of school teachers were more or less distributed either in 4–6 and 7–10 years of experience category with 24 per cent and 26 per cent respectively (Fig. 1).
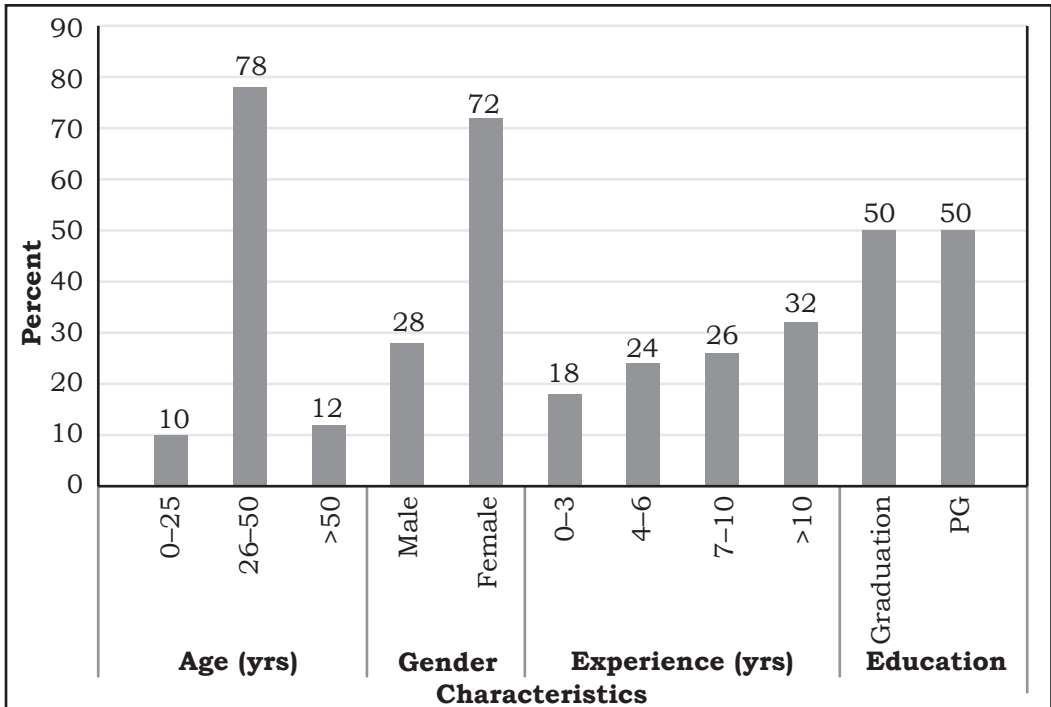
Fig. 1: Profile of School Teachers

Results and Discussion

Awareness of National Education Policy

The awareness of the policies is very important for the better implementation, more so in case of NEP 2020. The consultative process of policy development had involved several of the stakeholders, but, still, it is worth to know the awareness of school teachers who are at the ground level. The awareness on the fundamental principles of NEP was wide ranging from 44–86 per cent (Table 1). Individual items such as 'recognising, identifying, and fostering the unique capabilities of each student for holistic development in both academic and non-academic

spheres' had the highest awareness (86 per cent). Awareness on the 'respect for diversity and respect for the local context in all curriculum, pedagogy, and policies' is about 74 per cent and about 68 per cent had awareness on 'extensive use of technology in teaching and learning and educational planning and management' etc. Among the total respondents, sixty per cent were seen aware on recommendations such as 'provision of flexibility for learners to choose their learning trajectories and programmes', 'no hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams etc.,' and 'multi-disciplinary and a holistic education across the sciences, social sciences, arts, humanities, and sports' with 52 per cent respondents exhibiting awareness of 'emphasis on ethics and human and constitutional values' and 'promoting multilingualism and the power of language in teaching and learning policies". The awareness levels on a few selected items were less than 50 per cent, i.e., 'synergy in curriculum across all levels of education' (46 per cent) and 'according the highest priority to achieving foundational literacy and

numeracy by all students by grade 3' (44 per cent). Understanding the fundamental principles of policy enhances effectiveness and ensures uniformity in its implementation. Among many factors affecting policy implementation, awareness of the fundamental principles is the critical element. Adoption of a policy without compromising core components leads to its sustainability and yields expected outcomes. There is empirical evidence to suggest that successful outcome interventions are determined not only by the inclusion of specific intervention components which leads to behavioural change (Michie et al 2013) but also on the extent to which they are implemented in the real-world setting (Durlak and Dupre, 2008). Orientation of the teachers on the core principles and how to internalise in the implementation would be critical for the success. As 75 per cent of school teachers are possessing a B.Ed. degree, their understanding would be better than others. The proactive role of the school administrator is essential in organising such programmes. In the current digital era, many technology driven options are available for creating awareness on the National Education Policy to the school teachers before its implementation.

Table 1
Awareness of the Fundamental Principles of National Education Policy

S. No.	Are you aware of the following principles? of the National Education Policy?	Frequency (Yes)	Percentage
1.	Recognising, identifying, and fostering the unique capabilities of each student for holistic development in both academic and non-academic spheres.	43	86
2.	According the highest priority to achieving Foundational Literacy and Numeracy by all students by Grade 3.	22	44
3.	Provision of flexibility for learners to choose their learning trajectories and programmes.	30	60
4.	No hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc.	30	60
5.	Multi disciplinarity and a holistic education across the sciences, social sciences, arts, humanities, and sports.	30	60
6.	Emphasis on conceptual understanding rather than rote learning and learning-for-exams.	31	62
7.	Creativity and critical thinking to encourage logical decision-making and innovation.	29	58
8.	Emphasis on ethics and human & constitutional values.	26	52
9.	Promoting multilingualism and the power of language in teaching and learning.	26	52
10.	More focus on life skills such as communication, cooperation, teamwork, and resilience.	31	62
11.	Extensive use of technology in teaching and learning and educational planning and management.	34	68
12.	Respect for diversity and respect for the local context in all curriculum, pedagogy, and policies.	37	74
13.	Synergy in curriculum across all levels of education.	23	46

Perception of School Teachers on National Education Policy 2020

The perception of school teachers was captured on three areas, i.e., philosophical, curricular changes, teachers' aspects pertaining to NEP 2020. The distribution is presented in the following graph (Fig. 2).
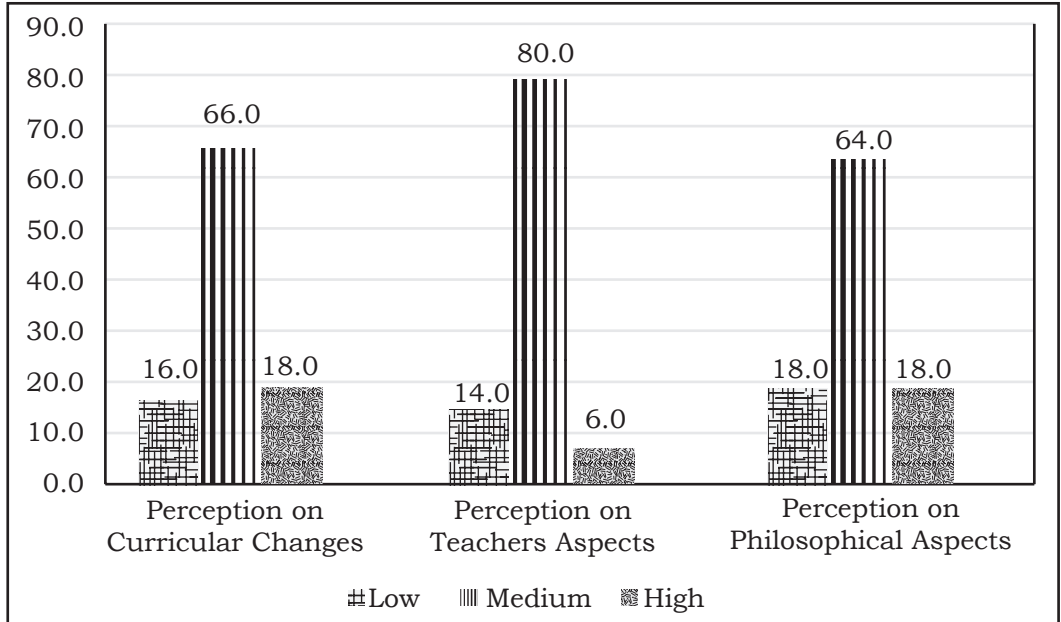
Fig. 2: Distribution of Teachers based on Perception on National Education Policy

The majority of school teachers had medium perception on philosophical (64 per cent), curricular (66 per cent), and teacher (80 per cent) aspects of National Educational Policy, followed by high category except in teacher aspects.

Majority of them had high perception related to teacher aspects (80 per cent). Around 65 per cent each had medium level of perception on philosophical (64 per cent) and, curricular (66 per cent) (Fig. 2). The perception of teachers about the curriculum change enables them to shape their professional life by receiving curriculum and pedagogy freedom within an approved framework (Aithal and Shubhrajyotsna, 2020). The restructuring of the school curriculum will optimise and increase flexibility towards learning which leads to improvement in the quality of education. It can be concluded that with the National Education Policy a competitive environment can be created in respective fields.

Philosophical Aspects

Educational philosophies should broaden teachers' horizon and enhance their awareness on every step relevant to professional skill in the classroom. The statements on perception related to philosophical aspects based on students' overall development, skill development, life skills, the burden to implement etc., were indicated in Table 2. The majority of school teachers were in the 'undecided' category (42 to 70 per cent) for all statements followed by agree (24 to 30 per cent) and disagree (2 to 24 per cent) categories. Majority in 'undecided' category portray the need for more knowledge and empowerment of school teachers on the philosophical aspects, which are the foundations for overall development. The practice of philosophy is continuous which is based on knowledge and understanding. The background knowledge on the philosophy of education helps to understand better the problems arising from educational theory and practice. Relatively a few (30 per cent) had indicated that implementation of NEP 2020 will bring a huge change in the overall development of students. Only 24 per cent of teachers believed that NEP 2020 will be a burden on teachers, students and parents. It helps the children to develop their skills freely instead of completing one degree after another (24 per cent). Bhatnagar and Das, (2014) reported that containing key personnel and resources committed to the change process and strong support systems are essential to change school practices in India which leads to the development of skilled human resource.

Table 2
Perception on Philosophical Aspects of National Educational Aspects

S.No.	Statements	Agree (%)	Undecided (%)	Disagree (%)
1.	Do you think that the implementation of NEP 2020 will bring a huge change in students overall development?	15 (30.0)	32 (64.0)	3 (6.0)
2.	NEP 2020 will provide the children to develop their skills freely instead of completing one degree after another.	12 (24.0)	35 (70.0)	3 (6.0)
3.	NEP 2020 will help in inculcating better life skills in the younger generation.	14 (28.0)	35 (70.0)	1 (2.0)
4.	NEP 2020 will be a burden on teachers, students and parents.	12 (24.0)	21 (42.0)	12 (24.0)

Figures in the parenthesis indicate the percentage

Curricular Aspects

According to the perception of teachers, it can be deduced that a better learning experience resulted from having access to the latest technology in every classroom (Aithal and Shubhrajyotsna, 2020). The statements on perception related to curricular aspects focused on students' vocational training, practical learning, restructuring, curriculum, flexibility, etc., were presented in Table 3.

The teachers' perception of curricular aspects ranged from 34 to 89 per cent. The majority of the teachers are optimistic about all items, except the statement on 'NEP 2020 will increase the chances of more practical learning instead of rote learning'. The emphasis in the present education system is on rote learning which is nothing but memorisation of information based on repetition. The innovative learner centred teaching methodologies are to be adopted which is limited by the quantum of the syllabus to be covered. Generally, learner centred teaching methodologies require competencies, a lot of time and concerted efforts by the teacher. The shortage/inadequacy of quality teachers and lack of teaching competencies are hindering the process of learning.

A significant number of school teachers (84 per cent) perceived that bag less days will help the children to understand the importance of other professions. This perception is to be given importance while developing curricular and co-curricular activities. The choice-based curriculum is voiced as one of the ways to improve the quality of education. The dichotomy between commonality and diversity is always a challenge to balance the choice based curriculum and fixed curriculum. There is a need to develop a road map for the implementation of a flexible curriculum, which should not undermine the talent or merit at national level admissions.

A vast majority (about 89 per cent) of respondents agreed that restructuring the curriculum to 5+3+3+4 design will help to optimise students learning based on cognitive development (Table 3).

Table 3
Perception on Curricular aspects of National Educational Policy

S.No.	Statements	Agree (%)	Undecided (%)	Disagree (%)
1.	The bag fewer days where in the children will be taken out to intern in different fields will help the children to understand the importance of other professions as well which are quite lost in time?	42 (84.0)	5 (10.0)	3 (6.0)

2.	Vocational training will encourage children to move away from social media and engage themselves in real work?	40 (80.0)	6 (12.0)	4 (8.0)
3.	NEP 2020 will increase the chances of more practical learning instead of rote learning?	17 (34.0)	28 (56.0)	5 (10.0)
4.	Do you think that the quality of education will increase due to the provision of flexibility and choice of subjects to study?	38 (76.0)	11 (22.0)	1 (2.0)
5.	"Restructuring school curriculum and pedagogy in a new 5+3+3+4" design will help to optimise learning for students based on the cognitive development of children?	44 (88.8)	4 (8.0)	2 (4.0)

Figures in the parenthesis indicate the percentage

Teachers' Aspects

One of the important focal areas of the National Educational Policy is vocational education, which is directly linked to the career. According to the teacher's point of view, the student's background knowledge and life experiences will allow achieving a successful career path as per the NEP. Majority of teachers (82 per cent) felt the need for pre-service training for the position of the job of early childhood care and about 78 per cent opined that making four years of B.Ed. degree compulsory will make talented teachers lose their jobs and 74 per cent expressed that NEP 2020 decreases the number of unskilled teachers coming into this profession (Table 4). Only 38 per cent thought that regular teachers are able to take up the expertise vocational training. This portrays greater understanding of the competencies and orientation of the teachers towards vocational training. However, the professionalisation/professional development of the workforce helps the teachers to increase confidence, giving them the ability to follow good practices and transfer knowledge. The absence of it is a key challenge and is the most important obstacle to policy makers' efforts (Bhatnagar and Das 2014 and Kay et al., 2021).

Table 4
Perception on Teacher Aspects of National Educational Policy

S.No.	Statements	Agree (%)	Undecided (%)	Disagree (%)
1.	Will regular teachers be able to take up the expertise vocational training like carpentry etc.?	19 (38.0)	13 (26.0)	18 (36.0)
2.	NEP 2020 would increase the demand for quality teachers?	15 (30.0)	31 (62.0)	4 (8.0)
3.	As many of the teachers are employed in teaching field without a B.Ed., making 4 years of B.Ed. compulsory will make talented teachers lose their jobs?	39 (78.0)	8 (16.0)	3 (6.0)
4.	Do you agree that NEP 2020 decrease the number of unskilled teachers coming into this profession?	37 (74.0)	10 (20.0)	3 (6.0)
5.	Do teachers have to go through special training to be appointed for the position of the job of early childhood care?	41 (82.0)	1 (2.0)	8 (16.0)

Figures in the parenthesis indicate the percentage

The perception on teachers' aspect was high (Mean Rank=22.8) among the group of 7–10 years of experience as it was significant at 5 per cent level (H=8.664, P=0.03); which varies with the experience. Experience in teaching empowers teachers in several aspects of teaching perspectives.

The study also revealed that the experience was non-significant with reference to curricular changes (H=3.802, P=0.28) and philosophical aspects (H=2.682, P=0.44). It can be concluded that the teachers had equivalent perception among all academic environment aspects irrespective of experience, except teachers' aspects.

The perception on philosophical aspects (U=235.5, P=0.71), curricular changes (U=213.5, P=0.39), and teacher's aspects (U=216.0, P=0.42) was showing no variation among male and female (Table 5). This can be attributed to the fact that irrespective of the gender of the teachers, aspects like overall development, building skills, inculcating better life skills, undergoing vocational training, practical and experiential learning inherently leads to an increase in the quality of education and eventual optimisation in learning. This reveals that both the genders had equal perception about the academic environment aspects of NEP 2020. According to the perception of teachers,

it can be deduced that the support of parents, teachers, school climate, collaborative planning, individual student support, curriculum and professional development are important, irrespective of experience and gender for implementation of NEP 2020.

Table 5
Perceptual Differences on NEP—Academic Environment

S. No	Perception on	Exp. (yrs) Mean Rank				Kruskal-Wallis H	Gender Mean Rank		Mann Whitney 'U' Test
		0–3	4–6	7–10	>10		M	F	
1.	Philosophical Aspects	19.7	20.4	15.0	11.0	2.682	26.6	25.0	235.5
2.	Curricular Changes	13.5	17.0	21.5	23.0	3.802	26.5	22.7	213.5
3.	Teachers Aspects	18.9	13.5	22.8	1.0	8.664*	28.0	24.5	216.0

Significant at the 0.05 level (2–tailed)

Expected challenges in the implementation of National Education Policy 2020

The possible challenges in implementation of National Educational Policy as perceived by school teachers (Table 6) were lack of infrastructure facilities (80 per cent) followed by assignment of multiple roles to the teachers working at a time (76 per cent), financial issues (72 per cent), lack of proper management (66 per cent), lack of parental support (52 per cent), availability of efficient teachers (40 per cent), lack of awareness on NEP (40 per cent) and lack of standardised testing (24 per cent). Teachers when assigned multiple roles, may not be able to concentrate fully on a single role, leading to decrease in work efficiency and overall educational output. Parents prefer their wards being given individual attention in classrooms which may not be possible when teachers are assigned multiple tasks. Teachers end up working overtime for the same pay which may result in frustration and less job satisfaction. Lack of awareness on NEP would result in fewer or no teachers complying with the NEP which makes the policy ineffective.

Gupta and Choubey (2021) and Bhatnagar and Das (2014) also mentioned similar challenges/ issues regarding organisations, individuals, and facilities viz., time

spent on non-academic activities, lack of institutional and teacher autonomy to make innovations in higher education to attract many students, financial limitations, parental pressure, infrastructure facilities, insufficient mechanisms for career management and progression of faculty and institutional leaders.

Table 6
Challenges faced by the Respondents

S. No.	Challenges	Frequency	Percentage
1.	Lack of infrastructure facilities	40	80.00
2.	Lack of availability of efficient teachers	20	40.00
3.	Lack of proper funding	36	72.00
4.	Lack of standardised testing	12	24.00
5.	Assignment of multiple roles to the teachers working at a time	38	76.00
6.	Lack of proper management	33	66.00
7.	Lack of parental support	26	52.00
8.	Lack of awareness on NEP	20	40.00

CONCLUSION

The teacher plays an important role in imparting quality education to the students. The motivation and empowerment of teachers are the precursor for the best possible future for our children and our nation. The onus also lies on the school administrators for creating an enabling learning environment. Based on the study, it is recommended that awareness programmes on the national education policy should be organised. Teacher competency mapping specific to the implementation of NEP 2020 and organising capacity-building programmes are the key strategic interventions for effective implementation of NEP, apart from the development of required infrastructure etc. The digital ecosystem is also to be developed for uniform curriculum development, implementation and monitoring.

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Effectiveness of Process-writing Approach with Middle School Children in Developing Hindi Language Compositions

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Abstract

The process-writing approach provides opportunities for students to engage with the real process involved in writing. The present paper is based on a research study done with middle school children who developed compositions in Hindi language by following process-writing approach. This qualitative study involved three phases. Each phase respectively documented significant data about participant's initial writing competency, quality of engagement with process-writing, and observed changes in children's approach to writing.

INTRODUCTION

Writing is a medium of expressing our feelings, emotions and ideas. It is a process of reaching out for one's thoughts and discovering them. We write because we have a natural urge to communicate, express, and share our opinions, views, and concerns. Writing is also an important literacy component. Writing is so closely associated with schooling such that one of the objectives of schools is believed to make its students competent writers (Graham, 2019).

However, in our schools, writing is often perceived from an extremely narrow perspective. The term 'writing' is mostly equated with copying content from the blackboard. Traditional writing practices—handwriting, accurate copying exercises, and practicing spelling are popularly used for teaching writing in the classroom. The core factors of writing such as

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voice, desire to convey, and ownership are hardly emphasised in classroom assignments (Graves, 1983; Kumar, 1996). The writing pedagogy followed in classrooms grades accuracy and uniformity higher than content and self-expression.

A closer look at how writing is taught in schools will make the situation more visible. In our classrooms, essays, paragraphs, and letters are written according to pre-determined formats and frameworks. Topics selected for writing are rarely related to children's experiences and contexts. Most of the time, compositions are written on a blackboard, and students are expected to copy the same. Uniformity in writing assignments is extensively emphasised. The scope for experimentation, risk-taking, and expression in writing is often neglected. This exclusive focus on 'correctness' in writing assignments forces students to value factors such as copying, format, and mechanics in writing (Kos and Maslowski, 2001). Applebee and Langer (2011) labeled such writing assignments as 'writing without composing' because children produce compositions without getting engaged in the process of composing.

Teachers too play an extremely limited and conventional role in this scenario. They are often more concerned about the accuracy and correctness of a writing piece rather than the ideas and views expressed. In the words of Lucy M. Calkins (1986):

'It is the most natural thing in the world for the master potter to watch an apprentice at work, noticing what the student does and does not do with the lump of clay. Yet writing teachers are more apt to focus on the final products than on the processes that produce them' (p. 5l). Teachers read students' writing not as a responsive reader but as an item checker.

Further, describing our writing classrooms, Kumar (1996) highlighted that writing is such extensively prescribed in our classrooms that when children are asked to write anything, they look towards their teachers to tell them what to write as 'they do not see writing as a means to say something' (p. 54). Writing instructions in schools does not enable students to understand writing as a medium of expression. The situation needs attention as several children especially in our context depend exclusively on schools to acquire literacy (Sinha, 2010). Thus it is important to explore alternative ways to teach writing.

PROCESS-WRITING APPROACH

Much of the research and academic work in the field of writing has begun to recognise that writers follow a process when they work. Researchers have discovered that writing is a complex process that is made up of various sub-processes that occur in varying patterns. It means that producing a writing piece is not a matter of coincidence but involves

different processes such as thinking, reviewing, reflecting, and sharing. Different researchers identified these sub-processes involved in writing in different ways. Donald Graves (1983) described the process as pre-writing, composing, and post-writing. Linda Flower and John Hayes (1981) explained that the writing process involves planning, translating, and reviewing. Tompkins (2004) defined the writing process in stages such as pre-writing, drafting, revising, editing, and sharing.

Process-writing is based on the philosophy that if children are to learn writing, then they must become active participants in the writing process. Children learn to write by writing (Goodman, 1989). By involving learners in all phases of writing, process-writing emphasises the creativity of the individual writer and pays attention to the development of good writing practices rather than the imitation of models (Tribble, 1996). It makes writing meaningful for students by connecting it with the purposes and interests that energise their lives (Calkins, 1986). The process of writing, as defined by Tompkins (2004), is a recursive pattern of pre-writing, drafting, revision, editing, and publishing. During the pre-writing stage, the author prepares to write. This is the time to select the topic, function, purpose, form, and audience of writing. The writing then goes to the drafting stage, to revising, to editing, and finally, to the publishing stage. The movement is not necessarily a linear one but in a manner that facilitates the development of an effective writing piece.

The process-writing approach helps children in becoming independent thinkers and writers. It values the growth and talent of individual writers and makes them want to continue writing, as they feel good about their abilities. The process oriented perspective is highly meaningful for teaching writing to children, as it gives enough space for children's personal experiences and concerns. Students have rich lives, and teachers can use it effectively as a valuable resource to teach writing (Calkins, 1986).

OBJECTIVES

The present study was undertaken with the following objectives:

1. To establish the present status of middle school students writing in the Hindi language.

2. To establish the relevance of process-writing with middle school students.

3. To help improve the writing of middle school students in a specific area, that is, composition writing in the Hindi language.

METHODOLOGY

A qualitative study was taken up to explore the process-writing approach with middle-school students for developing Hindi

language compositions. As the nature of research required meeting and working with children on regular basis, hence it was decided to conduct the research study in a tuition center rather than a formal school. A tuition center located in New Delhi was selected for the same. All middle school children studying in the tuition center were selected as participants. A total number of eight children participated in the study. The study was divided into three phases which are as follows:

Phase I: Understanding the initial level of students' writing and their concept of writing

In this phase, the focus was on collecting data related to the prevailing notions, ideas, and beliefs of the students about writing, including how they were introduced to writing tasks in school and what they considered writing. The required data were collected from the following sources:

1. Writing interview #1— It was conducted to know what students think about writing, good writers, and other related concepts.

2. School writing samples— Compositions written in students' school Hindi language notebooks were collected and analysed to understand the nature of school writing.

3. Initial writing samples— These are the compositions in the Hindi language written by students without any help from my side.

The data from different sources presented a holistic picture of students' initial beliefs about writing. Further, the collected data also highlighted students' initial competency in writing.

Phase II: Developing students' writing through process-writing

Students developed compositions in the Hindi language by following different stages of process-writing. Detailed observation notes of students' participation in process-writing sessions were maintained. A portfolio record file containing all the writing drafts, from pre-writing to editing, was maintained for every student individually.

The work done in different stages is briefly outlined:

1. Pre-writing— It involved the selection of a topic and gathering information about the topic. It also included making decisions about the prospective audience, purpose, and form of the writing.

2. Drafting— Ideas gathered in the pre-writing stage were transformed and organised into the first draft. Children wrote and refined their compositions through a series of drafts.

3. Revising— The final draft was shared in a peer conference. Feedback focused on the content of the writing and was provided to the writer. Addition, deletion, or

organisation of the content was done by the writer on their own as per the received suggestions.

4. Editing— The entire focus of this stage was on correcting spellings and other mechanics. An editing checklist was provided to assist students in proofreading their work. The checklist included points focused exclusively on the format of writing such as the use of punctuation marks and identifying incorrectly spelled words.

5. Publishing— A magazine was published by compiling different writing pieces developed by students.

Phase III: Changes in students' quality of work and their views about writing

For finding changes (if any) in the students' attitudes and beliefs; the second round of developing writings through process-writing was taken up. This time the focus was on noticing the changes in the way a student selected a new topic, gathered ideas, and approached writing. Detailed observation notes were taken and portfolio records were maintained. Other data sources used in this phase were:

1. Writing interview #2 (similar to writing interview #1)

2. Comparison between first and second rounds of process-writing sessions on a pre-decided basis.

3. Comparison between initial writing samples (written in phase I) with the final writings (compiled in a magazine) on a pre-decided basis.

Findings

Phase wise findings of the study are shared below:

Phase I: Understanding the initial level of students' writing and their concept of writing

The data collected in this phase highlighted six significant findings. Firstly, both in the school writing sample and initial writing samples, middle school children used conventional topics such as Swatantrata Diwas (Independence Day) and Gantantra Diwas (Republic Day), *Delhi ke darshniye sthal* (Places to visit in Delhi). Secondly, the writer's voice was not evident in any writing sample. Thirdly, the language used in the school writing sample and initial writing attempts displayed the use of artificial language. Fourthly, in the writing interview, all children displayed conventional views about writing. They equated writing with handwriting and copying exercises. The areas such as beautiful handwriting, perfect grammar, correct spellings, and neat work dominated students' responses across different questions related to qualities of a good writer, their self-image as a writer, and the areas in which they would like to improve their writing. Next, all of the children confirmed the

dominance of conventional writing pedagogy in their classroom. The use of guidebooks was accepted by all. Lastly, the analysis of school writing samples highlighted restricted feedback by teachers. Comments such as *'Galti sudharo'* (correct your error) or *'Paanch baar likho'* (write five times) or *'Lekhan sudharo'* (improve your handwriting) were only provided as feedback in their Hindi language notebooks.

Phase II: Developing Students' Writing through Process-writing

After understanding the initial level of students' writing and their concept of writing, the process-writing session was started with middle school children. They were encouraged to write about their lives. Children were given opportunities to make decisions and write freely about their selected topic in the Hindi language. Compositions were developed through the various steps of the process-writing approach.

Pre-writing and Preparing Draft #1 — Middle school children were asked to select topics related to their lives, gather ideas, and develop Draft #1. Initially, resistance was experienced from the students' side as they were more concerned about marks and formats. They requested to take conventional topics and copy from guide books rather than writing on their own. However, with constant persistence, they agreed to select a topic related to their lives and write Draft #1 in the Hindi language.

Developing Writing Draft #2 — An informal discussion was done with all the students individually about their Draft # 1. Few questions were asked to students which made them elaborate more on their topics. The discussions made students realise important information which they could add to their compositions.

Developing Writing Draft #3 — A noticeable change was observed in the attitude of the students. They shared their ideas more openly as they knew that there is no 'right' or 'wrong'. Most of the students came up with several new ideas and information which they wanted to include in Draft # 3.

Participating in Peer-conference — In peer conference, students read aloud their Draft # 3 in a group and noted various suggestions provided by others. Some of the major suggestions provided during the conference were related to incorrect information, excessive repetition, elaboration of ideas, and improper sentence structure.

Developing Writing Draft #4 — Before writing Draft # 4, students evaluated the different suggestions provided by their friends, that is, which suggestions are relevant and which aren't. Based on their decision, they prepared Draft # 4. A remarkable positive change was observed.

Children were taking most of the decisions themselves. The following quotes are taken from a discussion with students after peer conference:

- *"Mein dekh raha hoon ki kaun— sa sujhaav mujhe sach muchh theek lagta hai. Jaise yeh birthday wala mujhe theek nahin lag raha. Mujhe nahin lagta iski zaroorat hai. Mera topic gurjeet ki khasiyat ke barey mein hai aur woh mera dost kyon hai? Birthday ka kya kaam isme?"* (I am judging which suggestion is really good. For example, I think this suggestion about a birthday is not correct. I don't think it is required. My topic is about Gurjeet's specialties and, why he is my friend. Information about a birthday is not required).

- *"Mujhe lagtaa hai kee isse pehle wala kagaz maine dhang se nahin likha tha. Isme mein koshish kar rahi hoon kee sabki batayee baatein bhi aani chahiye".* (I think I have not written the earlier draft properly. In this draft I am trying to include all the suggestions provided by others).

Revising and Preparing Writing Draft # 5— A gap of four days was given before this session deliberately. It was done to enable students to revise their work with a fresh perspective. A revision checklist was provided to the children. The checklist included items such as: Have I explained my points clearly? Does my composition have a clear beginning? And are my ideas properly represented? Students used the checklist effectively and discovered gaps in their work. Based on the identified gaps, students prepared Draft # 5.

Editing and Preparing the Final Copy— After the revision checklist, an editing checklist was provided to students to check their draft # 5. The editing checklist included items focused on checking spellings and punctuation marks. Using the editing checklist, students edited their Draft # 5. After proofreading, a final copy was prepared by students for publishing. All compositions written by students were collected and published in a magazine.

Phase III: Changes in Students' Quality of Work and Views about Writing

Findings of this phase are reported based on major themes identified in the compositions developed in the first and second rounds of process-writing. Along with this, a comparison is made between the two rounds of process-writing (Phase II and Phase III), and between the two writings (initial writing attempts and compositions developed in process-writing sessions). Findings of each category are discussed below:

1. **Topic:** Personal life experiences and interests appeared as the basis for topic selection. Students were selected to write on topics that are related to their lives. The major themes selected by students were friends, pet animals, games,

and special incidences. Topics chosen by students were related to their lives and surroundings such as *'Meri Pyari Kali Bhains'* (My lovely black buffalo – pet animal), *'Pitthugram'* (A game), *'Vishwa Cup Ka Bukhar'* (Fever of World Cup), *'Filmon Ka Jaadu'* (The magic of movies), and *'Pariksha Ki Pareshani'* (Problems of examination). Thus, the topics selected were more realistic and closer to students' life.

2. **Writer's Voice:** The essence of the writer's voice was present in all the compositions developed by students. After reading the work, one gets the feel of the writer's ideas, views, and perspective. As all the compositions were written with a clear sense of audience and purpose, that's why reading them becomes an interesting experience. Following examples are taken from the compositions written by students:

   • (While telling about their best friend) *'Usko ghar mein sab chun-chun kehte hain aur school mein uska naam hai Gurjeet, lekin mein usse pyar se K. P. kehta hoon.'* (At home everybody calls him Chun – Chun and in school, his name is Gurjeet, but I call him K. P., with love).

   • *'Maine apni bhains ke saath photo bhi khichvayi hein. Jab hum apne naye ghar mein jayenge, tab bhi hum isse bechenge nahin.'* (I have got a photograph clicked with my buffalo. When we will shift to our new house, then also, we will not sell it).

3. **Language:** The language used in these compositions was very simple, clear, and related to students. It expressed what the child wanted to say. Artificial vocabulary was not used by students in their compositions. Artificial vocabulary refers to complex vocabulary which appears distant from the children, for instance, sanskritised vocabulary found in guide books.

4. **Views about Writing:** A remarkable change was observed in the views about writing expressed by students. They described writing as a medium of self-expression, sharing one's ideas and communicating views. The students focused on the importance of topic selection and ideas expressed in the content as the pre-requisite for writing good pieces. An improvement was also noticed in students' views about themselves as good writers. Some examples from writing interview # 2 are quoted below to show the changes observed in the views of students:

   • *"Likhna hota hai – apne khyal, dil ki baat, jo hum mehsoos karte hem ya sabko batana chahate hai, usse kagaz par likhna."* (Writing is expressing your thoughts, your heart's

voice, which we feel or want to tell others, on a paper.)

- (While discussing areas of improvement) *"Mein kuch baton ke bare mein jyaada hi bata deti hoon jabki topic ke hisaab se to usski zaroorat tak nahin hoti. Mujhe yeh faisala karna aana chahiye kee mujhe kis par dhyaan dena hein kis par nahin"* (I tell about certain issues excessively; while, according to the topic, it is not even required. I must learn to make decisions about which issues should be focused and should not).

- *"Achaa likhne ke liye usse iss cheez ki koshish karni chahiye kee jo usse padhe , usse bhi* *woh hi lage jo usko laga. Aisa tabhi hoga jab woh apne vishya ke bare mein janega."* (For writing well, one must try to make the reader experience the same feeling which they have felt. It can happen only when the writer knows about their topic well).

5. **Comparative Tables:** Changes were observed in terms of students' participation and attitude towards writing. The observed changes are documented in a comparative Table for better clarity. Table 1 highlights a comparison between two rounds of process-writing and Table 2 highlights comparison between initial writing attempts and process-writing sessions.

Table 1
Comparison between the Two Rounds of Process-writing Sessions

S.No.	Basis	Round I	Round II	
		Before Peer Conference	**After Peer Conference**	
1.	Topic selection	Maximum time was spent convincing the students that their experiences are worth sharing.	—	Topics selected by students on their own (related to their life experiences).
2.	Gathering ideas	Only brainstorming was used.	—	Brainstorming, discussion, referring to written documents, and television programs were used.

3.	Focus	Mechanics, spellings, length, and formats were used.	More on content, that is, their ideas and feelings.	Ideas, personal feelings, and reflections were focused.
4.	Need for adult-confirmation	Highly required. Students were not able to make decisions on their own.	Not required.	Not required. Confidence in their abilities started developing.
5.	Interaction with other students	Not present. The ideas of competition, cheating, and marks were restricting their interaction.	Started developing. The focus was on helping each other to improve.	Free and open interaction was visible. A friendly outlook was present.
6.	Importance of experience	Students considered their experiences useless and were completely unsure about their importance	Started considering their experiences as significant	Started considering their experience as worth writing about. A desire to share and write about their experiences was noticed
7.	Ownership of writing piece	Not observed	Developing	Maximum
8.	Ability to consider the reader's perspective	Not present	Developing	Completely present
9.	Level of participation	Limited participation. Students were quite hesitant about sharing their ideas	Increased	Maximum
10.	Self-image as a writer	Most of them considered themselves bad writers. The level of confidence was low.	Improvements were observed. Students' confidence levels started increasing.	Highly improved. Students became quite confident about their image as god writers.

Table 2
**Comparison between Initial Writing Pieces (Phase I) and Compositions
Developed in Process-writing Sessions (Phase II and Phase III)**

S.No.	Basis	Initial Writing Pieces	Compositions Developed
1.	Writer's voice	Completely absent. The desire to share or express was not present.	Present. It tells you what the writer wants to say.
2.	Purpose	Only to give information about certain topics.	To share personal ideas, feelings, and experiences with others.
3.	Language	The highly artificial language was used	The language that is related to a child's life and reflects his/her true the feeling was used.
4.	Content	Appears as an informational text. Some information written in it was even incorrect since it was based only on rote memorisation.	The content was enriched with the personal experiences of the writer.
5.	Originality of ideas	Completely absent. Writers have just written the content memorised from guidebooks	Completely original ideas and interpretations of the writer were present.
6.	Reading experience	Tedious. The content does not establish any link between the reader and the writer.	Highly interesting for readers. It takes into account the reader's perspective.

OVERVIEW

The findings of Phase I suggested that students' initial understanding of writing was quite limited. They equated writing only with copying exercises in their notebooks. Initial writing attempts of students appeared mainly as informational text with a clear absence of the writer's voice. Topics selected for writing were highly conventional and the content was overloaded with artificial vocabulary. The responses provided by students in writing interview # 1 indicated that in classrooms, writing is approached merely as a mechanical skill with no scope for personal expression.

This limited perspective about writing created some problems in the first round of process-writing sessions (Phase II). In the beginning, students focused more on mechanics, spelling, and handwriting; rather than on content and ideas they wanted to share. Issues such as cheating, marks, and competition restricted the interaction within the writing group. However, as the writing session

proceeded, students started taking interest in writing about their own life experiences. The interaction between students improved significantly and the development of a friendly outlook was observed.

The second round of the process-writing sessions (Phase III) reflected clear changes in the attitude, priorities, and approach of students toward writing. Content, ideas, and personal experiences occupied a more important position as compared to other technical aspects. The need for adult confirmation reduced significantly with marked improvement in students' confidence level and self-image as a writer. Students displayed the ability to consider readers' perspectives and developed a sense of ownership of their writings. The data indicated a remarkable difference between the initial writing attempts and the writings developed in the process-writing sessions in terms of the writer's voice, purpose, language, content, originality of ideas, and reading experience. The compositions written in the process-writing sessions appeared better as compared to initial writing attempts, thus, suggesting the significance of the process-writing perspective in making the writing experience meaningful for students.

DISCUSSION

Writing is highly undervalued in our school system by both teachers and students. Unfortunately, writing is equated to mechanical skills, which can be mastered merely by practicing handwriting, memorising spellings, and using proper formats. We must realise that learning to write does not mean 'mugging up' grammatical patterns but involves expression, voice, and ownership.

The present research was undertaken to study the effectiveness of process-writing with middle school children in developing Hindi language compositions. The study was conducted in a tuition center with middle-school children studying in different government schools. This study was divided into three phases namely, the understanding initial level of students' writing and their concepts of writing (Phase I), developing writing through process-writing (Phase II), and changes in students' quality of work and views about writing (Phase III). Different sources of data were used to gather the required information. Findings obtained from the research suggest significant improvement in the quality of writing pieces and students' views about writing. The compositions developed in the process–writing sessions were better than initial writing pieces in several aspects such as writer's voice, originality of ideas, and richness of content. Similarly, a major improvement was noticed in the initial views of students about writing, which was extremely limited and conventional. These findings will raise certain important questions in our minds such as; why school writing samples were suffering from so

many limitations? To understand the reasons behind this question, we need to analyse the stages through which a writing piece passes in a traditional classroom. For better clarification, a simultaneous comparison is done with the work done in different stages of process-writing in Table 3.

Table 3
Comparison between Traditional Writing Classroom and Process-writing Session

S. No.	Stages	Traditional Classrooms	Process-writing Session
1.	Pre-writing (a) Choosing a topic	Topics are given by the teacher, as specified in the syllabus.	The topic is chosen by the children themselves.
	(b) Considering the audience	No scope is provided. Children produce writing only to satisfy the teacher's requirement	The child considers the audience and writes accordingly.
	(c) Considering the form	Decided by the teacher.	The teacher allows children to write in any form selected by them.
	(d) Gathering ideas	No scope is provided. Content is written on the blackboard by the teacher and children are expected to copy the same.	A child gathers ideas through various sources (newspapers, interviewing).
2.	Drafting	The first draft is the final draft. Children are supposed to write in the first attempt correctly. The entire emphasis is on mechanics and neat work.	Children put their ideas and experiences on a rough draft. The entire emphasis is on content.
3.	Revising	No revising stage writing pieces straightly presented to the teacher for correction.	A rough draft is read and shared with others. Ideas and suggestions are provided to the writer.
4.	Editing		The children are supposed to proofread their writing piece themselves and correct all errors.
5.	Sharing	No sharing as all the children have written the same thing.	The children shares their writing piece with other classmates. All children can read each other's work.

This comparison Table clearly shows the reason behind several limitations found in the school writing sample. For example: the absence of a writer's voice. Obviously, how can a child's voice get reflected in their writing piece when, in reality, they just copy the content written by the teacher on the blackboard. It is believed that good writing is a product of good thinking. But, in our context, 'thinking' and 'expressing' are not considered the job of students. All decisions (from topic, content, language to length) are taken exclusively by the teacher. Students are only expected to 'copy' the work 'correctly'.

Krishna Kumar (1996), considered the desire to convey and a sense of audience as the two important aspects of writing. Unfortunately, our excessive focus on mechanics never let our students experience these two aspects. It is a problematic issue that requires serious consideration. As Peter Elbow (1981) explained that focusing entirely on mechanics makes writing 'dead' because it does not allow students' natural voice to come through. This is something that we are practicing consciously in our classrooms. We are continuously making our students' writing dead and lifeless by focusing entirely on mechanics. Personal emotions and feelings are kept miles away from the boundaries of a formal classroom. As a result, we found school writing samples have everything such as standardised vocabulary, plenty of information, conventional topics, and well formed sentences; except one— the writer.

Conclusion

Process-writing approach has special relevance in our Indian context where writing is losing its true significance due to traditional pedagogic practices. Its importance increases more if we consider the multi-cultural context of our country, where teachers find it extremely difficult to provide space for every child's desire to share about their own culture. As there is no particular 'accepted' answer or topic, that's why students can write about the things which are important to them. It helps students to share the richness of their social and cultural backgrounds. Thus, it adds to students' interests, motivation and strength by making writing an enjoyable experience for them.

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Effect of 5E Based Instructional Approach on Achievement and Interest in Social Studies among Grade IX Students

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Abstract

The 5E (Engage, Explore, Explain, Elaborate, and Evaluate) is an instructional model which provides a framework for a constructivist, guided inquiry approach and enables the learners to create or invent different ideas over the conventional one. The study focuses on the effect of the 5E based instructional approach on the achievement and interest in social studies among Grade IX students. The specific design used here was Pre-test or Post-test equivalent group design with the self-constructed and validated tools. The findings of the study revealed that there is a significant effect of the 5E based instructional approach on the interest and achievement in social studies between girls less than 14 years and 14 and above years of age of Grade IX learning through a 5E based instructional approach.

INTRODUCTION

The 5E is an instructional model of constructivism. It was developed in 1980s by the Biological Science Curriculum Study (BSCS), to help students to perceive and apprehend the concepts of science productively. The 5E instructional model promotes new learning and understanding the concepts in depth. As the name suggests 5E which represents five phases, i.e., Engage, Explore,

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Explain, Elaborate, and Evaluate (as illustrated in Fig. 1). Each of these phases contribute to the teacher's well-reasoned and structured instructions. It also enables learners to develop scientific temper and empower them with the required 21st century skills. Priorly, 5E models were used as linear progression.

But as per the new next generation model of 5E, the process is not a linear progression as every step includes basic steps to be followed. For example, engaging itself includes exploration. Explaining also involves components of exploration and there is evaluation involved in each step. So, it is not a linear process as each stage includes the essence of the other steps.

In the engagement phase, students are exposed to a stimulating
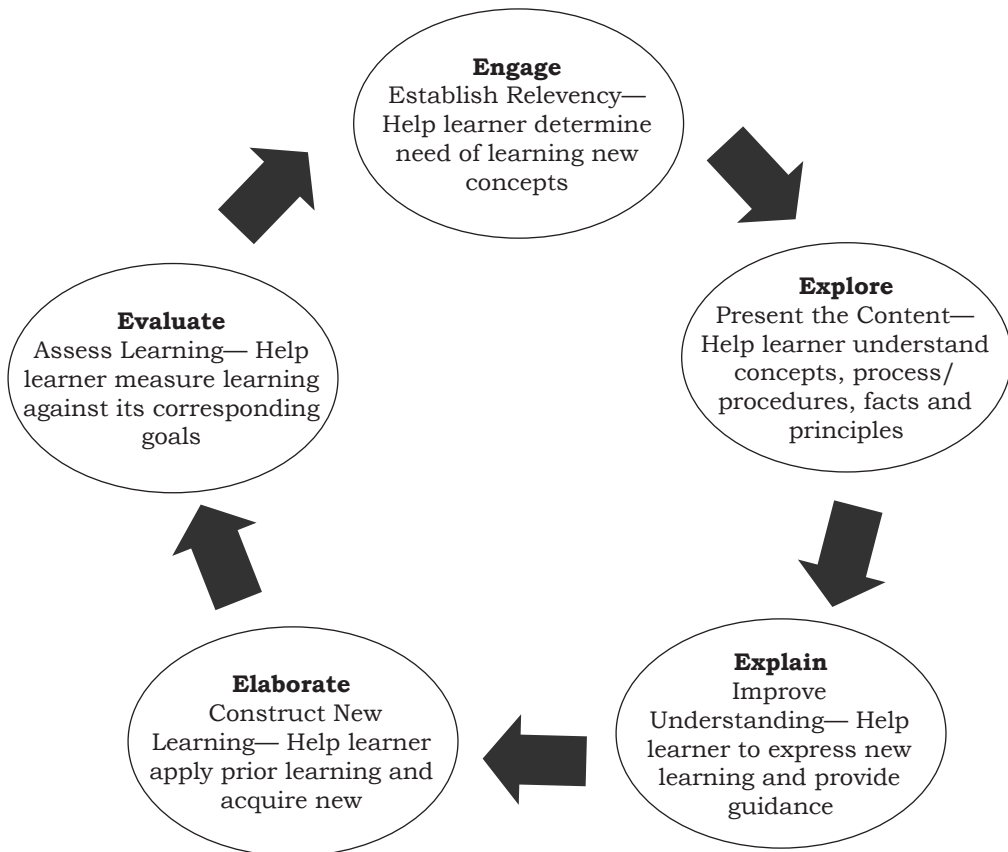

Fig. 1: Showing the process of the 5E Instructional Approach
(Source: Adapted from 5E Instructional Model for eLearning Preferred by NASA http://www.swiftelearningservices.com/5e-instructional-model-for-elearning-a-model-preferred-by-nasa/)

environment or a real-life situation which seeks their attention and generates learning curiosity among them. In this phase, new knowledge or topics are introduced by adopting different activities and strategies such as drama, songs, models, stories, or videos which triggers learners' interest and motivates them to learn. The exploration phase is the phase of learning by doing where hands-on or minds-on activities are performed with scaffolding. The exploration phase is an application of what the students have learned, builds on, or extends their understanding by developing models, drawing, clippings, narratives, or even songs. Teachers pose a question to students to apply what they have learned. Explanation phase is a combination of engagement and exploration wherein a teacher introduces appropriate scientific techniques of the concept in relation to the student's perception and experiences. Students are asked their opinion in different scenarios. Here students can answer higher-order thinking questions. It is a phase of understanding the concepts and deducing it. And, if there is any misconception, that too is cleared in this phase. Elaboration phase is a phase of application of what students learned. By extending the understanding, learners can apply knowledge in real life situations and can explore more to reason their hypotheses. Problem solving tasks, investigation, experimental inquiry, decision making, and thinking skill

activities are very beneficial for students to move ahead and learn more. Evaluation phase is a very valuable phase as it not only assesses the students learning but also assess the process of learning. It shows the learner's degree of understanding at every stage. It answers about what and how students learned. This phase provides complete information on students' mastery of learning.

There are various approaches to facilitate knowledge construction and the 5E model is one of the most effective instructional approaches for teachers to enable student's knowledge construction. Therefore, the aim of this study was to find out the effect of the 5E based instructional approach on the achievement and interest in social studies among Grade IX students. Answers to the following hypotheses were sought within the framework of these overall objectives.

Objectives

1. To design 5E based instructional designs in social studies for grade IX students.

2. To study the effect of the 5E based instructional approach on achievement in social studies of Grade IX students.

3. To study the effect of the 5E based instructional approach on interest in social studies of Grade IX students.

4. To study the age related differences in the achievement in social studies among Grade IX

students learning through 5E based instructional approach.

5. To study the age related differences in the interest in social studies subject among Grade IX students learning through 5E based instructional approach.

HYPOTHESES

1. **Ho 1.** There is no significant effect of the 5E based instructional approach on achievement in social studies of Grade IX students.

2. **Ho 2.** There is no significant effect of the 5E based instructional approach on interest in social studies of Grade IX students.

3. **Ho 3.** There is no significant difference in the achievement in social studies between girls less than 14 and 14 and above years of age of Grade IX learning

through a 5E based instructional approach.

4. **Ho 4.** There is no significant difference among girls of less than 14 years of age and above 14 years of age in Grade IX to learn through 5E based instructional approach.

METHODOLOGY

This study was an experimental one wherein true experimental design, i.e., pre-test or post-test equivalent group design was used. This study considers the 5E instructional approach as an independent variable and achievement and interest as the dependent variables. In addition, the investigators assumed age and IQ level as the intervening variables that could influence independent and dependent variables. To bring equivalency to both the groups the investigators conducted the IQ test.

Table 1
Design of the Study

Random assignment of the group	Matching of one-to-one subject	Pre-test	Treatment	Post-test
Experimental group	Intelligence Test (Nathan Haselbauer, 2005)	Achievement and Interest test in Social Studies	Learning through 5E instructional approach	Achievement and Interest test in Social Studies
Control group	Intelligence Test (Nathan Haselbauer, 2005)	Achievement and Interest test in Social Studies	Learning through traditional approach (lecture method)	Achievement and Interest test in Social Studies

Sample of the Study

The sample of the study was Grade IX students at a Government Girls High School, Patna, which consisted of 80 students; these 80 students were further divided into two equivalent groups of 40 each through one-to-one matching of the subject following Intelligence test (Nathan Haselbauer, 2005). One group was an experimental group, and the other was the control group. The students selected for the study belonged to the lower middle income class.

Tool Used

1. 5E instructional designs in social studies for the Grade IX students were developed by the investigators.

   Development of 5E instructional design: For the 5E instructional approach, investigators have adopted lesson design from the Social Studies textbook in Economics for Grade IX, NCERT. Two instructional designs had been prepared for experimentation from the chapter 'Poverty as Challenge' and 'Food Security in India'.

2. Achievement tests in Social Studies (ATSS): for Grade IX of pre-test and post-test, were developed and validated by the investigators.

   Selection of items for Achievement test in Social Studies (ATSS): Two sets of 50 questions were developed for both pre-test and post-test with the consultations of the experts and the research supervisors to assess achievement in Social Studies. Through pilot testing and item analysis, 35 items were selected for the final form of achievement test in Social Studies wherein, the major objectives were categorised as knowledge, understanding, and applications consisting of 12, 12, and 11 items respectively for both pre-test and post-test.

3. Interest Inventory in Social studies (IISS) for Grade IX of pre-test and post-test, were developed and validated by the investigators.

   Selection of the items for Interest Inventory in Social Studies (IISS): A set of 50 questions were developed with the consultations of the experts and the research supervisors to assess the student's interest in Social Studies. Through pilot testing and item analysis, 35 items were selected for the final form of interest inventory in Social Studies.

Reliability and Validity

Test reliability of ATSS was measured by Kuder-Richardson Formula-20 (KR-20). The reliability coefficient of the ATSS was found to be 0.6828 for the pre-test, the reliability coefficient to the ATSS was found to be 0.7010 for the post-test. The reliability coefficient of the interest inventory was found to be 0.52. The face validity of the achievement test and interest inventory were ascertained with the help of education experts

and their suggestions were carefully incorporated.

The Procedure of Experimentation for the Data Collection

Initially, both the experimental group and control group were administered with achievement and interest tests as pre-tests in Social Studies. The experimental group then learned two topics, i.e., Poverty and Food Security from their Social Studies syllabus through the 5E based instructional designs whereas the same topics were also taught to the control group simultaneously through the lecture method by the investigators. The investigators kept closed observation of the students during the treatment period. After two weeks, both the groups were again administered with post-tests on achievement as well as interest in Social Studies.

ANALYSIS OF DATA

The data collected through the administration of the two tests were analysed through the application of the required statistical methods, i.e., mean, S.D. and t-test.

HYPOTHESES TESTING

Ho 1. There is no significant effect of the 5E based instructional approach on achievement in social studies of Grade IX students.

For testing hypothesis, t-test has been done. The mean, standard deviation, and t-value of the gain score in achievement in social studies between the groups have been shown in the following Table 2.

Table 2
Mean, S.D., and T-Value of Gained Scores showing Achievement in social Studies of Grade IX Students in Learning through 5E Instructional Approach

Groups	N	M	SD	df	t
Experimental	40	7.15	2.15	78	8.489**
Control	40	3.37	1.80		

** t-value is significant at 0.01 level

Table 2 reveals that the number of students in experimental and control groups is 40 each. The mean of the experimental group is 7.15 and S.D. is 2.15. On the other hand, in the control group, the mean is 3.37 and S.D. is 1.80. The calculated t-value is significant at 0.01 level (Table value at 0.01 level is 2.37 for 78 df) so the null hypothesis is rejected. Hence, it is concluded that there is a significant effect of the 5E based instructional approach on achievement in social studies of Grade IX students, i.e., the experimental group has performed significantly better in social studies than the control group. This outcome can also be seen in Fig. 2.

Ho 2. There is no significant effect of the 5E based instructional approach
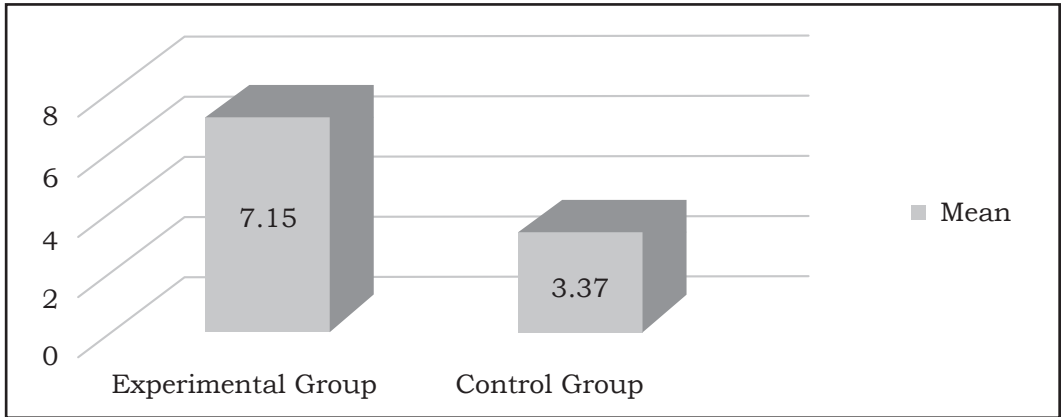
Fig. 2: Mean gain score comparison in achievement in social studies of an experimental group and control group

on interest in social studies of Grade IX students.

For testing hypothesis, t-test has been done. The mean, standard deviation, and t-value of the gained score representing interest in social studies between the groups have been shown in the following Table 3.

Table 3
Mean, S.D., and t Value of Gain Score in Interest in Social Studies of Grade IX Students in Learning Through 5E Instructional Approach

Groups	N	M	SD	df	t
Experimental	40	92.52	13.29	78	28.06**
Control	40	13.27	11.91		

**t-value is significant at 0.01 level

It can be seen in Table 3, the number of students in the experimental and the control groups is 40 and 40, respectively. The mean of the experimental group is 92.52 and S.D. is 13.29. On the other hand, in the control group, the mean is 13.27 and S.D. is 11.91. The calculated t-value is significant at 0.01 level (Table value at 0.01 level is 2.37 for 78 df) so the null hypothesis is rejected. Hence, it is concluded that there is a significant effect of the 5E based instructional approach on interest in social studies of Grade IX students, i.e., the experimental group has performed significantly better in social studies than the control group. This outcome can also be seen in Fig. 3.
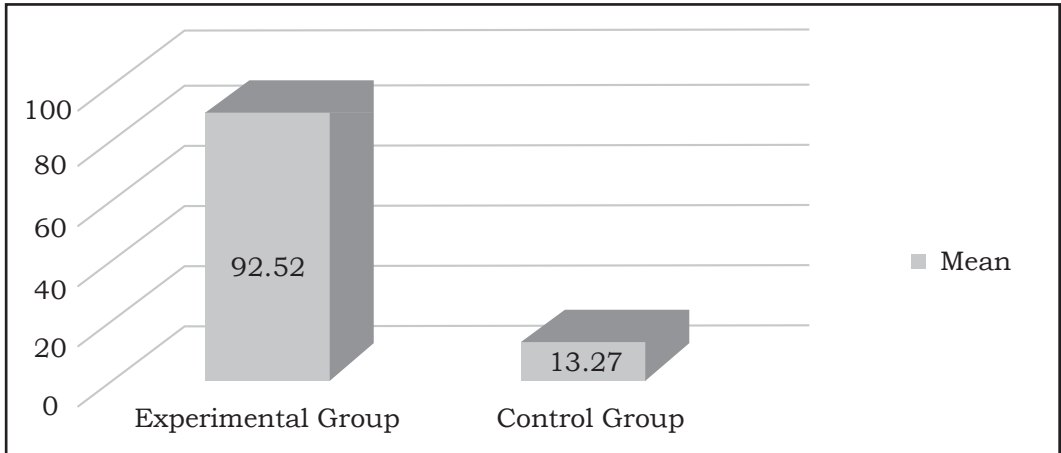
Fig. 3: Mean gain score comparison in interest in social studies of an experimental group and control group

Ho 3. There is no significant difference in the achievement in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach.

For testing hypothesis t-test has been done. The mean, standard deviation, and t-value of the gain score in achievement in social studies between the groups have been shown in the following Table 4.

Table 4
Mean, S.D., and t Value of Gain Score in Achievement in Social Studies of Grade IX Students in Learning Through 5E Instructional Approach

Groups	N	M	SD	df	t
Girls less than 14 years of age	17	33.13	1.46	38	1.75*
Girls having age 14 and above	23	32.26	1.93		

t-value is not significant at 0.05 level

Table 4. shows that the number of girls less than 14 years of age and age 14 and above in the experimental group is 17 and 23 respectively. The mean of girls less than 14 years of age is 33.13 and S.D. is 1.46. On the other hand, the mean for the girls having the age 14 and above is 32.26 and S.D. is 1.93. Here the degree of freedom is 38 and t-value is 1.75. The tabulated value offered at 38 df is 2.02 which clearly shows that t-value is not significant at 0.05 level. So, the null hypothesis is accepted. Hence, there is no significant difference in the achievement in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach. This outcome can also be seen in Fig. 4.

Fig. 4: Mean gain score comparison on achievement of girls less than 14 years of age and age 14 and above through 5E instructional approach

Ho 4. There is no significant difference in the interest in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach.

For testing hypothesis, t-test has been done. The mean, standard deviation, and t-value of the gain score in interest in social studies between the groups have been shown in the following Table 5.

Table 5

Mean, S.D., and t-Value of Gain Score in Interest in Social Studies of Grade IX Students in Learning Through 5E Instructional Approach

Groups	N	M	SD	df	t
Girls less than 14 years of age	17	233.70	8.20	38	0.38*
Girls having age 14 and above	23	234.73	8.87		

*t-value is not significant at 0.05 level

Table 5 depicts the number of girls less than 14 years of age and age 14 and above in the experimental group is 17 and 23 respectively. The mean of girls less than 14 years of age is 233.70 and S.D. is 8.20. On the other hand, the mean for the girls having the age 14 and above is 234.73 and S.D. is 8.87. Here the degree of freedom is 38 and t-value is 1.75. The tabulated value offered at 38 df is

2.02 which clearly shows that t-value is not significant at 0.05 level. So, the null hypothesis is accepted. Hence, there is no significant difference in the interest in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach. This outcome can also be seen in Fig. 5.
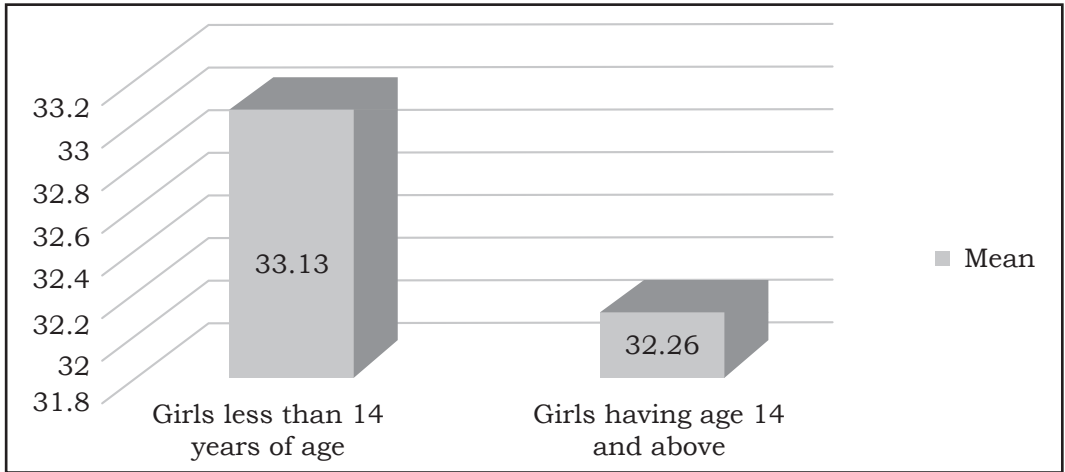
Fig. 5: Mean gain score comparison on interest of girls less than 14 years of age and age 14 and above through 5E instructional approach

FINDINGS ON HYPOTHESES

- There is a significant effect of the 5E based instructional approach on achievement in social studies of Grade IX students.

- There is a significant effect of the 5E based instructional approach on interest in social studies of Grade IX students.

- There is no significant difference in the achievement in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach.

- There is no significant difference in the interest in social studies between girls less than 14 and 14 and above years of age of Grade IX learning through a 5E based instructional approach.

DISCUSSION AND CONCLUSION

In this study, there is a significant effect of the 5E based instructional approach on achievement and interest in social studies among Grade IX students. The study by Oteles, (2020) indicated that using the 5E learning model in teaching Social Studies affects the academic achievement of students positively, similarly in Mathematics by Ranjan and Padmanabhan (2018), Science by Fazelian, Ebhrahim, and Soraghi (2010), Andu (2021) which are in support of the findings. The 5E learning cycle with a cognitive technique consisting of intelligibility, plausibility, and wide applicability could develop efficiency in learning achievement, basic science process skills, and critical thinking of students.

The teachers, therefore, should be encouraged and motivated to implement this approach in teaching environmental education in all grade levels (Buntod, Suksringam, and Singseevo, 2010; Yadigaroglu and Demiricioglu, 2012). A similar study by Borah (2020) has shown that the five phases of the transactional model of knowledge of the 5E model are more interesting for the learners of Social Science than the conventional teaching approach. With reference to age, it is found that there is no significant difference in the achievement and interest in social studies between girls less than 14 and 14 and above years of age of Grade IX learning 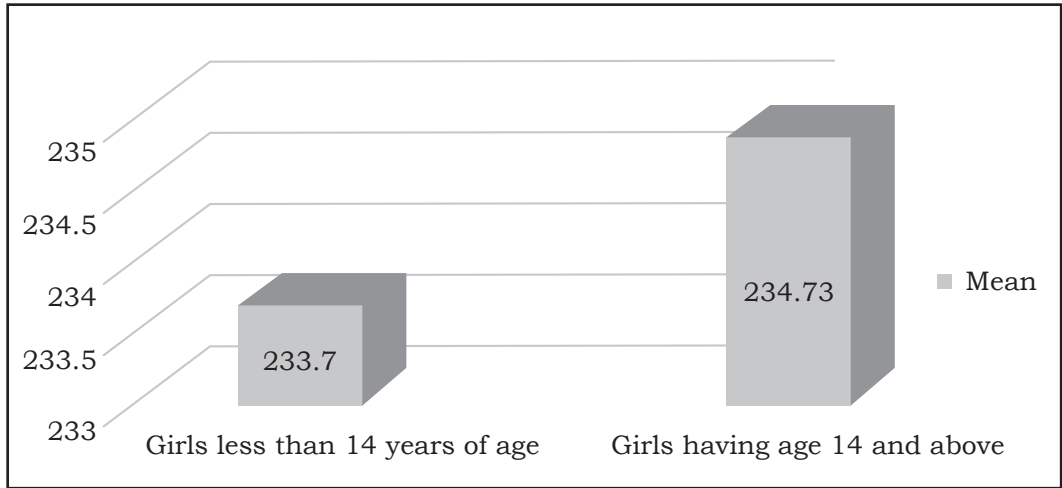through a 5E based instructional approach. This may be due to learners' involvement and active participation irrespective of their age differences. At the same time, it can also be referred that the 5E model lessons can affect achievement and interest during the critical phase of learning. Therefore, it is essential to encourage social studies teachers to introduce and use active learning approaches grounded in research on constructivist learning models in their classes. The same emphasis is seen in the study by Iiter and Unal (2014), Chin and Kayalvizhi (2005) wherein the outcomes of the study proposed that 5E constructivist model applications by teachers increase students' motivation levels and change their feelings and thoughts towards the course.

RECOMMENDATIONS

From the outcomes of the study, the following suggestions are made for further research:

- Further research can be carried out to find out the effect of the 5E instructional approach in understanding and the achievement of students from schools situated in different contexts to have more accurate results based on this generalisation.

- Long term research studies with a 5E learning approach can be undertaken to analyse the effects of interventions on the prevalence of alternative conceptions.

- The 5E learning approach can be undertaken in a parallel mixed methods design of research, in which the data collected by means qualitative and quantitative methods can be discussed, integrated, and interpreted together to give comprehensive findings.

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Thought Seeds in Anthrogogic Learning Contexts

Shree Deepa*

Abstract

This paper reopens and re-examines the argument that there are clear differences between pedagogy and adult learning, against the backdrop of NEP 2020. It introduces two new paradigms: 'anthrogogy' and 'thought seeds' by tracing the former to andragogy and developing the latter from tasks. The paper defines a thought seed, outlines its characteristics, and then goes on to examine the differences between tasks and thought seeds. Moving from a theoretical argument to practice, the paper further briefly scrutinises these contrasts through some critiques of tasks meant for higher education learners and demonstrates how they can mature into thought seeds.

INTRODUCTION

Teacher education in India is teaching adults on how to teach children or young adults in classrooms. NCF 2005 position paper on teacher education and the NCFTE 2009 document acknowledges that there needs to be a difference between teaching adults and children. Adult learners are seen as autonomous and self-directed, with a vast amount of life experiences and knowledge; as pragmatic and goal-directed, who therefore, responds better to problem solving and task-oriented learning than children. The emphasis, therefore as the document states, has to be on developing professional knowledge and capacities through a variety of self-directed tasks including case studies, projects, seminars and research activity. (NCFTE, 2009)

ANTHROGOGY AND PEDAGOGY

The term 'adult education' in India, refers to adult literacy development

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courses though the National Education Policy does recognise that 'pedagogical' approaches to adult learning are completely different from that of teaching children (NEP, 2020) but does not take the argument further into implementation. Here the term 'pedagogy' is used 41 times and refers to adults and adult learning but does not outline how this teaching or learning of adults is different from teaching children though the word 'adult' figures 31 times in the document. Even where adult learners are referred, their learning is associated with the term 'pedagogy' which is oxymoronic in its comprehensible output. The term pedagogy alludes to children and cannot be applied to adult learning, whether it is literacy or higher education. More than half a century ago, a vehement proclamation stated that, "the biggest obstacle to the achievement of the full potential of adult education has been that it has been tied to and..has been hamstrung by the concepts and the methods of the traditional education of children" (Knowles, 1968: 350–351).

Based on this theory, adult learning is commonly characterised by five principles: self-concept, adult learner experience, readiness to learn, orientation to learning, and motivation to learn (Knowles, 1984) and conceptualised as 'androgogic' and not pedagogic in its orientation. However, the term 'androgogy' or 'andragogy' is sexist in orientation and needs to be replaced by a term that is not just gender neutral but also humane, hence the term anthrogogy (Trott, 1991) is better suited for the purpose.

This term as used in this paper adapts from the principles that come from andragogy but is more humane and applies to and from the level of homo sapiens as a species that cohabit the planet in the solar system and expects teachers to function in the same manner in all aspects of life as a form of 'restorative justice' principles.

It is very important to look at all adult learning or teaching as anthrogogic, and therefore orientated toward a peaceful cohabitation with all life forms in a clean and green manner, particularly in the context of the global village, climate change, the great garbage patch/es in the ocean, micro plastics, deforestation, human trafficking etc. The NEP 2020 has expressed the need for this stance and lifestyle uniformly throughout the document, with many abstractions. For example, in section 9.1, it states: "Higher education plays an extremely important role in promoting human as well as societal well-being and in developing India as envisioned in its Constitution—a democratic, just, socially conscious, cultured, and humane nation upholding liberty, equality, fraternity, and justice for all" (NEP, 2020) and goes on to outline these lofty ideals that are worth exploring and developing but the means to achieve them or even an attempt to define them is not

conspicuously found in the document. The means to develop these qualities in children could be done through pedagogic practices but to bring them upfront in adults is not that easy as they come from pluricultural backgrounds and have schemata of their own. The experiential processes of learning will have to take into account these foundations that create the individual that we attempt to view as an 'adult'. While these complications stare at us, all references to adult education in the NEP 2020 and NCFTE 2009 stay with the term pedagogy conspicuously. All arguments with reference to language teaching that are subsumed under the umbrella of NEP 2020 are also a victim of this confusion, misidentification, misunderstanding and misdirection.

This type of a miscalculated and misdirected confusion stems probably from the fact that these policy documents do not make a distinction between the terms pedagogy and anthrogogy: when referring to adult or rather higher education (HE) learners the term 'pedagogy' is used as an umbrella term for indicating all forms of learning experiences particularly of higher education learners. The term 'pedagogy' referring to the teaching or learning of HE learners in the document is used 9 times (NEP 2020: 34, 37, 38, 38, 38, 38, 38, 39, 41) out of 41 times that it occurs in the entire document. The same term pedagogy serves the child and adult learning community with almost

similarly directed inferences and implementation possibilities. This is oxymoronic in its manifestation, understanding and recommendation when used together with teaching or learning in adults and not once has the term 'andragogy' been referred or used. Such a confusion has been percolating down many generations in the post-colonial Indian sub-continent; the policy document acknowledges that even non-literate adults possess experiential skills, knowledge and wisdom, but contradicts itself by requesting for a 'pedagogic' stand and space (NEP, 2020). The term 'adult education' is used 22 times in the NEP 2020 document but is used only to indicate adult learners working on their basic literacy skills with the conspicuous absence of adult learning principles being foregrounded and contrasted with the principles of learning in children. Such a conspicuous absence of explicitly stated learning principles of adults could be a systemic failure due to an improper comprehension of the needs, abilities, experience and integrity of the adult learning community as a whole. This confusion inadvertently created has led many researchers and teachers to adopt or adapt from pedagogic research and with little or no modification applied to HE and teacher education spaces, and that is how major theorists from education and linguistics like Vygotsky (1978), Halliday (1975, 1978, 1994) and

Bruner (1966, 1978, 1976) have sneaked into adult learning spaces.

Vygotsky's six domains or aspects of learning (Vygotsky, 1978) were construed with children in mind but have been extended, in the form of sociocultural theory, to adult education (Lantolf and Thorne, 2006). In similar fashion, Bruner's three modes of thinking or representation, are with reference to children learning how to mean and learn (Bruner, 1966). More importantly, the notion of scaffolding, (Bruner, 1978) which is used very widely in the context of adult education, was an expansion of the work done with a preschooler to enable block reconstruction (Wood, Bruner and Ross, 1976). Added to this conundrum is the list of lofty attributes that are set out to be achieved through education as comprehended in the NEP 2020 as a series of abstractions for both adult and child, pre adult learners.

The various abstractions and attributes of learners as and when applied to adults and child learners as they occur in the NEP (and NCFTE and similar documents) and probably considered as the 'what' aspect: "righteous conduct, gender sensitivity, respect for elders, respect for all people and their inherent capabilities regardless of background, respect for environment, helpfulness, courtesy, patience, forgiveness, empathy, compassion, patriotism, democratic outlook, integrity, responsibility, justice, liberty, equality, and fraternity," (NEP 2020) are piling up

in an IKEA godown like fashion in all similar documents but the modalities of making them concrete or tangible (the 'how' aspect) is elusive in the policy documents and as application in the discipline of teacher education. Tasks are seen as one of the modalities to ascertain this. But they are often pedagogical (giving explicit micro-instructions, of the 'do-this, dont-do-this' type). The NEP 2020 states that it aims at producing individuals with "courage and resilience, scientific temper through creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution" (NEP, 2020). In order to produce such citizens, who are humane in their orientation the term andragogy will not suffice and the new term 'anthrogogy' (Trott, 1991) needs to be used, explored, studied, learnt, and taught so as to make these principles concretely implementable. An anthrogogic perspective and its construed principles when tested and tried can avert further damage to the discipline of teaching or learning of adults. 'Anthrogogy' is defined in this paper as a set of multifarious learning principles that operate on the foundations of unity in diversity of experiential differences, with multilinguality and pluriculturalism as the venous network that acts as the propulsive force from within. These principles aim at treating an adult person (of the body) as a part

of the human species that has the potential of being humane as a default setting, and as those who can think for the well-being of the planet along with themselves. In this context, it is equally important to revisit the notion of a task because they are routinely used in teacher education courses and are usually pedagogic, if they anywhere seem anthrogogic, are so only by accident and not by reflective design.

TASKS AND THOUGHT SEEDS

Tasks in anthrogogic spaces tend to be too narrowed down in their focus as a 'mere' problem solving exercise. The way that adults and children solve problems are different; therefore, they operate at different levels and require different skill sets and a varied knowledge base. Problem solving exercises that are 'tasks' have a clear-cut solution/responses/ criteria for evaluation (generic or in today's world, task specific) because "the essence of task-based teaching is to get the learner to make an effort to comprehend" (Prabhu, 2019: 320) or rather to 'do something'. The 'doing' for adults may be short timelines or long timelines (including lifelong) and tasks do not seem to address this as they aim at context specific 'doing' through 'problem solving'. Very often these problems, used as tasks (Prabhu, 1987; Prabhu, 2019; Candlin, 1987; Nunan, 1989; Skehan and Foster, 2001; Ellis, 2003; Bygate, 2001) are trivial in their applicatory significance when compared to real time/life problems that adults are routinely required to handle and resolve.

Similarly assuming that the adult teacher may lack the ability to carry out task-based teaching in the classroom, explicit instructions are given about what has to be said by the teacher to the students, what has to be done, etc. The processes that have to be followed by the teacher are detailed explicitly. For example, for a task on drama games II, "acting out the word", the instructions to the teacher titled 'process' begins with something as simple as: "call a student to the front of the class to perform: ask her to choose a word card, read it silently", even instructs the teacher to state: "she must then act out the word" and ends with "the other students will have to guess the correct word". (Baruah, 2016). These explicit instructions are like hand holding that some teachers in India need, for they may not have the professional knowledge or the linguistic capability to handle the activity: but the book assumes that through such hand holding, the teacher will also grow. The ability of 'self-learning' and 'independent thinking' (Yashpal: 1993) cannot happen miraculously if thinking opportunities are not included as part of teaching/learning endeavours, in the form of materials, methods, guiding principles and conscious implementation plans. This certainly cannot happen when the teaching/learning orientation is pedagogic. Further, the possibilities

of consensual 'knowledge co creation' will be replaced by puritanically prescriptive 'scaffold' disguises that are actually crutches or orthopedic braces strapped onto minds that aim at convincing these adults that they are dependent on the systemically driven institutions that rely on other 'authoritative' constrictive thoughts that didactically jail the individuality of these freely think-able-worthy adults. Such tall recommendations are not productive in a pedagogic orientation unless it is modified suitably addressing the reality of adult learners and through this the breaking of fresh ground. Such a breaking will facilitate thought seed germination in anthrogogic spaces. This kind of ground breaking exercise can be possible only with the conscious inclusion of thought seed balls in the learning materials in teacher education courses. In order to reforest thoughts and humane thinking into the education system of adults particularly, there is a need of including thought provoking 'seed balls' into the anthrogogic spaces.

The idea behind the term 'seed ball' is Japanese in its origin and is agricultural in its discipline. The ideation of the seed ball concept is simple, yet profound. Seed/s encapsulated in a thick protective jacket of muddy clay, creates a seed ball. Such seed balls, when dispersed across the ground are activated with a rain/wetting/flooding event enough to soak through the muddy clay to germinate the seed. "And that's it.

But that's not all." (Bradley, 2010), The 'not all' and 'that's it' are both important because of the potential that seeds hold within their tiny-ness of recreating a whole forest. So, the seeds in the seed balls are a 'that's it' in terms of effort that is needed to create or toss them into probable fertile grounds. When conditions are favourable the 'that's not all' will be activated as seeds germinate. The original idea of the seed ball/bomb is attributed to Masanobu Fukuoka (1975). This idea of the seed ball became a thought seed in anthrogogic learning spaces. Adult learners come with their own fertile ground of thinking/culture/upbringing/ past/schemata, tools of learning, strategies, patterns of work, pace, awareness of their own strengths, weaknesses, opportunities, threats and goals. Thought seeds that act like seedballs when included in adult learning spaces at a module/topic/ timetabled classroom hour level stand a very high chance of germinating, all the while allowing for freedom of individualities and expression at their own pace and convenience, and conduciveness. The NCFTE document reiterates that the objectives of teacher education programmes can be achieved only by providing learning opportunities amongst others to the teacher candidates to develop a deep sense of understanding the self and others, one's beliefs, assumptions, emotions and aspirations; develop the capacity for self-analysis, self-evaluation, adaptability, flexibility,

creativity and innovation. None of these things are possible with the tempering or garnishing of a few tasks that are often reflective only by chance. Thought seeds would provide and facilitate, and enable/achieve these objectives. The lists of what seems like grammatically sub categorised yet abstract terminology 'catalogues' in both NEP and NCFTE cannot become objects in tasks but function as seeds in a seedball that could germinate whenever conditions are made available and favourable for germination.

What is a Thought Seed?

It is a catalyst (written, spoken, a picture, a meme, a video, an advertisement etc) usually followed by a series of statements and questions which will persuade the teacher/learner to build a thinking platform, process information divergently and go meta over the 'apparentness' found in the trigger. Thought seeds are usually rhetorical in function and do not expect ready answers. They have the quality of generating more such thought seeds in the minds of those who engage with them. The major features are presented in the form of a Table below.

Table 1
Features of Thought Seed

Task	Thought Seed
applicable only in classroom contexts and focuses only on that particular text as discourse	applicable to life and life experiences and often can be used outside the classroom context outside institutionalised spaces
relates only to the problem that the task seeks to address	usually considered as an eye-opening exercise and has a lingering quality attached to it
aim at problem (problems are minor) solving (solutions are limited and often predetermined)	aim at building a thinking platform that is divergent or lateral, pluricultural, multimodal, multidirectional, multidisciplinary and multi 'verse' in orientation and tap the knowledge capital of the person concerned
solution oriented whether focusing on content or language	inspire thinking and can have a range of possibilities
needs completion immediately or with a deadline, may not be reflective have a right or wrong perspective answers are usually very important for completion focus on end product, although some attention paid to process	no need to complete after much deliberation-on going – EQ component – reflective, ideational, have an honest/dishonest perspective often rhetorical in orientation, the 'responses' where required are 'think aloud sessions that are scribed' for tracking changes in thinking focus only on process; focus is on seed sowing and not harvest reaping

the scaffolding provided in the prompt is usually positivist in its orientation	scaffolding questions are to enable thinking from a constructivist paradigm
responses are specific and expected to be uniform across task takers	responses are optional, and the actual prompt is only a catalyst
responses may not take intrapersonal factors into account	Responses are subjective, personal and idiosyncratic
criteria present for evaluation	no criteria for evaluation
limited in their scope	have possibility of producing more thought seeds
very frequently the focus is on the apparent and the explicit; sometimes critical thinking	will always prod learners to apply critical thinking and help them go meta over the apparent and explicit triggers
in the language classroom, skill oriented	aim to develop language potentiality
have a very short shelf life (once done, it may not be remembered)	stays with the learner or teacher and allows for rumination.
Can be at the beginning, middle or end of a module	Will usually be at the beginning or at the end of a module

A few tasks are analysed below using some of the features of thought seeds and their suitability for anthrogogic learning spaces.

Task 1

Take a look at your quarterly or half-yearly examination paper. State for yourself, the objectives for one or two questions. If it tests only memory and reproduction, think of what higher order skill (like analysis or evaluation) you can test for that area. Think of how you could set this as an open book examination question. If you are able to do it, try it out in your own classroom.

(Durairajan, 2015:114)

Critique of Task 1

This task is anthrogogically reflective and majorly rhetorical and does not underestimate their world knowledge and content specific knowledge. But it is not yet a thought seed because it is limited in its scope and though it transcends time, there is no connection of any kind to the outside world, and cannot stand alone bereft of this particular context. There is some amount of metacognition requirement assumed here but again falls back heavily into contextual space.

If this task were to be a thought seed in an anthrogogic paradigm

without tampering too much with the task demands that aim at kindling thoughts on the criteria of evaluation it could be metamorphosed into the following:

Task 1 metamorphosed into Thought Seed 1.

Preamble: All of us are familiar with search engines such as google. We have used it often for searching many things and it usually responds within microseconds. Now, in such a time and place where Google is freely available, what is the place for memory and do you think memory-based questions are required in the examination papers anymore? Can we as teachers do something about it? When was the last time we jogged our memory for a content related answer or did we ask google? What is the place of memory as a device in human lives? What do we do with what is stored in our memory? How do we use the concepts stored in our memory? Think deeply and reflect whether all/most/some examinations need to be open book. Honestly reflect on how memory functions for you and for others. Is it justified on our part to ostracize people for poor memory? What happens if you have a student in your class or a relative who has a physiological memory problem? Could open book/ source examinations bring back justice? Think.

Task 2

(During a telephonic phone interview conducted on August 14, 2020, with a retired Professor, English and Foreign Languages University stated that the following task item created by her, and not taken from any published source, used by her for a final take home examination for a doctoral level course on Language Testing, offered at the English and Foreign Languages University, 2012 could be taken for analysis)

Given below are case studies of two students: read them, and then answer the questions that follow.

1. Saraswati is a first-generation learner who was given a take home examination (not as difficult as this one, but similar) as part of a Master's Programme. She read the paper and then went to her teacher and said that she would not be able to finish the work in the stipulated time because she would have to think of all her answers in her mother tongue and then translate them into English; she also said, very honestly, that she would need the help of a bilingual dictionary for this purpose. The course instructor gave her an extra day for this purpose, but was taken to task by the authorities for having been partial and biased.

2. Partho Sharma is a student of linguistics who has registered for a Master's Programme. He usually reads all prescribed texts or articles and actively participates in class discussions. He has a problem, however, with taking memory based or open book examinations; he forgets all that he has studied and lands up handing in blank sheets of paper. He approached his instructor, who understood the problem and empathised with him. She therefore decided to give him a take home examination, but to be fair to all other students, extended the offer to all 20 of them. Most of them did well as a result and said that it was the first time that they 'took an examination' without tension. Partho got an A grade, along with two others.

Questions

1. Imagine that you had to provide theoretical justifications for the stances taken by the three teachers or course instructors. Write a two–paragraph justification per case explaining your position.

2. In case you disagree with all the stances (or one or more of them) either provide an explanation as to why you disagree, or a theoretical justification for the stances you agree with and an explanation for the stances you disagree with.

Critique of Task 2

The case studies are realistic and plausible, and the tasks are anthrogogic. The two studies discreetly also bring in awareness of inclusivity with a small 'i' into examination space. The tasks are closer to thought seeds because there is no right and wrong answer and stances taken, as long as they are justified, are acceptable.

However, since the tasks stop there, they are limited in their perspective. The tasks will only enable the examiner to know whether theoretical articles or books prescribed have been read, and whether relevant arguments have been appropriately used. There is no migration across time or space or going beyond the here and now to stand back and get a meta view.

Thought Seed for or from Task 2

Do you agree with the decisions made by the teacher? Why or why not? What is the kind of teacher mentality that made such a task modification possible? What kind of teacher would that student have become having experienced this in class? What kind of teacher education would have inspired that teacher to do this, in terms of perspective, curriculum, syllabus etc? Where do you think such perspectives will originate? Policy, planning, or pedagogic or anthrogogic practices? Will the teacher's sense of plausibility have any role to play?

In contrast to the two teacher education tasks critiqued above,

a post-graduate course 'Language and Media' was interspersed with many thought seeds. One point of discussion was representation of menstruation related products in advertisements in the media. The following thought seed was used as a catalyst. The responses, if any, were voluntary and the students were free to record them in an online diary if needed and the choice to share them with the instructor was also left with the students.

Thought Seed

A picture of a menstruating woman with bloodied jeans was used and the following questions were stacked as thought seed/s.

How does a biological phenomenon get treated in the media? Why does the advertisement of a sanitary napkin show blue or green stuff? Similar biological phenomena like hunger gets a glorious advertisement, say for example McDonald's, why is that? Think critically, why certain physiological phenomena are "good" while certain need to be hidden. Record responses as they come in the diary if needed. Also watch the First Indian movie on this theme, Padman. Add from that too if it inspires you.

Critique: A variety of thinking paradigms are activated in the thought seed above, and encourages the students to draw from a variety of experiences and takes them to unexplored connections and leaves them there to germinate. It also uses multimodal trigger questions and leaves the whole exercise open to adult interpretation by being anthrogogic.

The students responded in a variety of ways. Some considered this thought seed as an eye opener and novel way of defining 'biological phenomena' while others were silent. Some others confessed that they had even tried out a few of such thought seeds with their family and friends that were not a part of this course and came back to the instructor with positive feedback. A few of them went to the extent of creating similar thought seeds as a part of their responses or answers in the end of semester examination. A few students confessed that they were feeling at a loss either because they were never taught or thought this divergently nor were they able to make these connections quickly, proving the stand that their mind ground is not yet ready to germinate, while many others, going by their sharing and creating responses, were already in the process of reforestation of their mind grounds. Thus thought seeds are essential in anthrogogic learning spaces and need to be explored to make learning (modules) anthrogogic and align them as learning practices with the NEP 2020 and NCFTE 2009 policy level abstractions.

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An Empirical Analysis of the Determinants of Learner Centeredness using Ordinal Logistic Regression

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Abstract

As part of quality improvement initiatives of the National Education Policy, the government made radical changes in the instructional style in the classrooms and provided training to the teachers in implementing activity oriented and learner centred curriculum. However, teacher's apprehension about the effectiveness of Learner Centred Strategies (LCS), the increase in workload due to the vast syllabus, high teacher-student ratio, overall reluctance to change one's own teaching style; particularly as one acquires more experience and ineffectiveness of the training provided for implementing LCS are all probable issues which influences adoption of learner centred strategies. This study examines the extent to which various learner centred strategies (LCS) have been implemented in schools and identifies the determinants of learner centeredness in classrooms. Ordinal logistic regression is used to predict the dependent variable with ordered multiple categories and other independent variables including type of school, teaching experience, teacher-student ratio, basic entry quality of the students, vast syllabus, training effectiveness and the subject taught by a teacher. Data on the intensity of use of various LCS was collected from 300 teachers using a pre-tested structured interview schedule. The hypotheses were tested using one sample t test. The study found that the use of LCS was slightly above average and that out of the various factors, the subject taught by a teacher and the teacher-student ratio were found to be highly significant in influencing the extent of use of various LCS.

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INTRODUCTION

Improvements and upgradation of teaching-learning atmosphere is inevitable for quality education. As part of the quality improvement programmes initiated by the government, drastic changes were made in the methodology of teaching as well as in the evaluation of the students (Government of Kerala, 2003–04). The learner centred pedagogy was introduced in the higher secondary classes in Kerala in the year 2005 (Government of Kerala 2003–04) and before this period, the teachers followed only the lecture method and there were only class tests done at least 2 times in a year together with an annual examination at the end of the academic year. The evaluation system was converted to include a continuous and comprehensive internal evaluation system (CCE) (SCERT, 2005). This new system of teaching and learning is student centred. In order to achieve the benefits of this quality upgradation strategy fully, it should be implemented as envisaged. It is also important to identify the problems faced by teachers in the adoption of an activity oriented curriculum. This study examines the extent to which various learner centred strategies (LCS) have been implemented and how various factors like ownership of schools, teaching experience, teacher-student ratio, basic entry quality of the students, vast syllabus, training effectiveness and the subject taught by the teacher determines the adoption of LCS.

SIGNIFICANCE OF THE STUDY

The education policies have long-term implications in the development of intelligent human resources for the country. India has contributed to one of the finest manpower resources in the world. The education system has to be streamlined in ways which enable classrooms to produce learners who are able to make informed decisions in their personal lives, in their workplaces and in society (King and Kitchener, 2004).

Training teachers in the new pedagogy was indispensable as this generation of teachers have been exposed to only a teacher centred learning process. Training intended to equip the teachers in creating an atmosphere for discovery learning in classrooms, learning through debate and problem solving, cooperative learning and scaffolding; by using tools like group discussions, debates, seminars, projects, case study, collections etc (SCERT, 2005). These learner centred strategies intend to improve the students' verbal intelligence, logical and mathematical intelligence, visual and spatial intelligence, interpersonal intelligence and intra personal intelligence (Gardner and Hatch, 1989; Brown, 2008). It is important to discuss controversial issues happening in the society through these learner activities and encourage students to indulge in different lines

of reasoning for appreciating multiple perspectives. Strategies like debates and group discussions enable students to analyse other's point of view and critically evaluate the adequacy of their arguments through evidence given, and to develop and defend their own point of view.

The evaluation of the students is conducted continuously based on the TQM principle of continual improvement. For evaluation purposes, question papers emphasise on assessing the skills in "analysis and interpretation" instead of "knowledge (memory recall) and understanding levels" (Bloom, 1969). Teachers' source books were also provided for each subject which contain numerous student-centred teaching models.

Planning towards achieving an excellent education system gets evaluated through the effectiveness of its implementation in the classrooms by the teachers. There were apprehensions among the teachers with regard to the heaviness of the syllabus, high student-teacher ratio and the potential increase in the workload. This study examines two important dimensions. Primarily it measures the extent of learner centeredness in the classrooms. Further, it identifies the factors influencing the adoption of learner centered strategies in the classroom by the teachers.

LITERATURE REVIEW

Wright in her article "Student centred learning in higher education" reviewed the differences in methods and practices of teacher centred and student centred teaching at the college level. The balance of power in the classroom, the function of the course content, the role of the teacher versus the role of the student, responsibility of learning and the evaluation process are the variables used to study learner centeredness. The study gives suggestions on how to implement the learner centred approach and also reports many instances of innovations used by teachers towards better student centeredness (Gloria Brown Wright, 2011). Similar study of Knight and Wood experimented whether student learning improves when an interactive classroom format was used instead of lecture method. Brown in her study indicated how learning could be enhanced by involving students in their own learning as in peer teaching. The experiment on interactive classrooms was conducted by Knight and wood in two successive semesters using a lecture method in one semester and in the next semester they increased student participation and introduced cooperative problem solving; frequent class assessments were also done while continuing the lecture method. The study compared marks obtained by students during pre and post periods of the experiment and found that learning gains and student understanding

about the concepts were higher in the course which was more interactive (Brown, 2008; Knight and Wood, 2005). Just-in-Time Teaching (JiTT) is an innovative method that enables faculty to increase interactivity in the classroom and engage students in learning. The paper establishes the effectiveness of JiTT (Novak, 2011; Novak et al., 1999). Another experimental study on learner centred strategy was conducted in an upper-level mathematics course where the students presented the material to the class instead of the instructor. The study found that the students were able to learn Mathematics better and learned other trans-disciplinary skills such as how to give presentations, feedback to their peers, learn from feedback and how to trust their peers. It was satisfying for the instructors also as they had more personal contact with the students (Alsardary and Blumberg, 2009). A study on the factors influencing the adoption of learner centred approaches by teachers found that 14 per cent of the respondents used learner centred teaching approaches and 8 per cent rejected it. Between these extremes, many others used learner centred teaching components that fit with their personal teaching style and that naturally suit their discipline. (Blumberg, 2015). Another model developed by Blumberg described the complementary relationship among constructivist learner centred teaching, critical reflection, and social media which would develop

teacher performance. It supported the use of learner centeredness which invariably took the focus from simple knowledge dissemination by a teacher to more meaningful ways of learning by the students (Blumberg, 2015). Studies also found that the same faculty member might use more learner centred practices in one course and more instructor-centred practices in another, depending on the course level, instructional format, and enrollment (Blumberg, 2016) and in another study she gave valuable suggestions in using LCT as a means to optimise student learning. She also suggested that lack of training and conceptual understanding about running a learner centred classroom are some of the problems in the implementation of LCS (Blumberg, 2015). An experimental study on the primary trait analysis in a learner centred mathematics course involved a student-to-student instruction process which developed a scoring rubric for the primary traits such as conceptual knowledge, procedural knowledge, application of understanding, and mathematical communication skills, and it was found that students had improvement in all the four traits, with the least improvement in mathematical communication skills (Alsardary et al., 2011). 'Learner centred Teaching Practices: Implementing Project Based Learning in Early Childhood' is a study later published as a book describing how teachers could implement project based learning

as an effective teaching practice for a learner centred classroom. The book explains how varied learning experiences could be delivered in the classrooms and discusses how it is beneficial to the students as they learn to be involved in every phase of a project by questioning, investigating, problem-solving, revising work and sharing their learning in the group (Lev et al., 2020). Studies on the effectiveness of various methods of instruction that enhance students' understanding of basic concepts in science reported that most of the learning methods like game based learning, project based learning and storytelling were all very effective (Blonder and Sakhnini, 2012). (Carmen M. Cain, 2020) investigated how secondary educators were using LCTS in their instruction and what support they needed to use such strategies. The thesis is based on the Dreyfus and Dreyfus model of skill acquisition. This study examined the classroom practices of secondary teachers and the support they needed to use LCTS by collecting data through individual interviews of 12 randomly selected secondary education teachers from a midwestern high school in the United States. The study revealed an important theme; student ownership; which means students take ownership of their learning. The study found that the use of LCTS increased student engagement, improved academic achievement and that as a result positive social change

occurs (Carmen M. Cain, 2020; Garreck, 2013).

Literature review on different aspects of learner centred classrooms were found, but those which study the factors that impact its implementation were few. Teacher's apprehension about the effectiveness of LCS, the increase in workload due to vast syllabus, high teacher-student ratio prevalent in countries like India, overall reluctance to change one's own teaching style as one acquires more experience, ineffectiveness of the training provided for implementing LCS are all important issues which influences application of learner centred strategies. So, the following research questions need to be addressed.

1. Are the teachers still continuing the traditional lecture method? If not, to what extent the suggested learner centred strategies have been used by them and which of these strategies are the most used?

2. If the teachers are more or less continuing with the traditional teacher centred methods, what factors might have influenced them in abstaining from the adoption of learner centred strategies in classrooms?

Based on these research questions, the following hypotheses were framed for the study.

HYPOTHESES

Hypothesis 1: Extent of use of learner centred strategies in schools in Kerala is moderate.

Hypothesis 2: Type of school does not influence the use of learner centred strategies.

Hypothesis 3: Subject taught by the teacher does not influence the use of learner centred strategies.

Hypothesis 4: Teacher-student ratio does not influence the use of learner centred strategies.

Hypothesis 5: Vast syllabus does not influence the use of learner centred strategies.

Hypothesis 6: Basic entry quality of the students does not influence the use of learner centred strategies.

Hypothesis 7: Effectiveness of training does not influence the use of learner centred strategies.

Specific Objectives

1. Examine the extent of use of learner centred strategies in the higher secondary schools in Kerala.

2. Examine how factors like type of schools, teaching experience, teacher-student ratio, basic entry quality of students, vast syllabus, training effectiveness and the subject taught by the teacher determine the extent of adoption of LCS.

Methods

Population and Sample

The population of the study comprises the teachers belonging to the government, aided (an aided school is privately owned receiving grants from the government) and unaided higher secondary schools under the Directorate of Higher Secondary Education, Ministry of Education, Government of Kerala. There are 819 (39.4 per cent) government higher secondary schools, 846 (40.7 per cent) aided and 414 (19.9 per cent) unaided and technical higher secondary schools in the state totaling to 2079 (Directorate of Higher Secondary Education, 2010). 1.5 per cent (30) schools were selected as sample through a multi-stage sampling process including 13 government, 11 aided and 6 unaided schools proportionately, from the northern, southern and central parts of the State of Kerala. From each school 10 teachers were selected and thus data was collected from 300 teachers.

Data Collection and Tools of Analysis

The primary data was collected using a pre-tested structured interview schedule where the extent of use of the learners centred strategies (LCS) were plotted on a five-point Likert-type scale ranging from 5 (always used) to 1 (never used). The various LCS suggested through training were debates, group discussion, assignments, seminar, role plays, collections, case studies, project, class tests, brainstorming, field trips and lectures. The intensity of using the lecture method brings down learner centeredness, so it was given values from 1 (always used) to 5 (never).

Descriptive statistics is computed for identifying the nature of the

data. The method of ordinal logistic regression is applied to examine the relationship between various factors and the extent of use of LCS. The summated mean score measuring the extent of use of LCS is the dependent variable (DV) and is coded as 1 = 'Low Use', 2 = 'Medium Use' and 3='High Use'. Statistical software like SPSS and STATA is used. The independent variables are coded as follows.

1. Types of schools are government, aided and unaided. Two dummy variables were created representing aided and unaided schools with government as the base category.

2. The subjects taught by the teacher are grouped as Humanities, Social Sciences and Science. Two dummy variables were created representing Science and Social-Science with Humanities as the base category.

3. Four Dummy variables for 'Years of experience' representing 5 to 10 years, 10 to 15 years, 15 to 20 years and 20 years and above and 'below 5 years' is taken as the base category.

4. The problem of vast syllabus (vs) was coded as 0 = not a problem and 1 = Is a problem.

5. The problem of high teacher student ratio (tsr) was coded as 0 = not a problem and 1 = Is a problem.

6. The problem of poor basic entry quality (beq) of the students coded as 0 = low basic entry quality; so lcs is not possible and 1= lcs is possible due to satisfactory basic entry quality of the student.

7. The summated mean of the training effectiveness (*te)* based on the opinion of teachers was measured using a construct containing the variables regularity, adequacy of trainers, timing (whether training is given well in advance of the beginning of an academic year), relevance of contents, teacher participation in the training program, supervision by the authorities to ensure quality of training).

RESULTS
Extent of Use of Learning and Evaluation Strategies

The SPSS output on reliability statistics examined over 12 variables under the construct Use of Learner centred strategies was found satisfactory with a Cronbach's Alpha of 0.817. Table 1 shows the results of one sample t test performed to know the extent of use of LCS. It revealed that mean in all the cases except *collections* and *debate*, were significant than the central value of the scale of measurement (3). The mean of strategies like field trip, case study, role play and brain storming were found to be significantly less than the central value (3). The overall learner centeredness in the classroom is measured by the summated mean score of the construct containing the 12 strategies and is found to be highly significant (mean=3.34 p=0.000) depicting an above moderate use of learner centred activities.

Table 1
Extent of use of Learning Strategies: One Sample t-Test

| Learning Strategy | Mean | Test Value = 3 | | | | | |
| | | T | Df | Sig. (2–tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
						Lower	Upper
Seminar	3.88	13.313	299	0.000*	0.883	0.75	1.01
Assignment	4.06	15.967	299	0.000*	1.063	0.93	1.19
Class test	4.32	23.828	299	0.000*	1.320	1.21	1.43
Project	3.72	9.929	299	0.000*	0.723	0.58	0.87
Collections	3.16	1.914	299	0.057	0.163	0.00	0.33
Field trip	2.06	–12.016	299	0.000*	–0.940	–1.09	–0.79
Lecture	3.99	13.190	299	0.000*	0.987	0.84	1.13
Case study	2.44	–6.788	299	0.000*	–0.563	–0.73	–0.40
Group Discussions	3.29	3.349	299	0.001*	0.287	0.12	0.46
Role Play	2.44	–6.461	299	0.000*	–0.560	–0.73	–0.39
Brainstorming	2.32	–8.109	299	0.000*	–0.683	–0.85	–0.52
Debate	3.01	0.147	299	0.884	0.013	–0.17	0.19
Overall learner centredness	3.3385	6.993	299	0.000*	0.33848	0.2432	0.4337

*Source: Primary Data; * Level of Significance 5 %.*

DETERMINANTS OF ADOPTION OF LEARNER CENTRED STRATEGIES

The introduction of LCS in the schools of Kerala in 2005 was on a large scale throughout the state. The higher secondary directorate under which the higher secondary schools were functioning along with the SCERT provided training to all the HSSTs in implementing the activity oriented curriculum. Cluster meetings in line with the quality circles as propounded by the total quality management principles were used as viable platforms where intensive workshops and lectures were given to the teachers. However, this fundamental change in the role of a teacher in the classroom raised apprehensions regarding the effectiveness of the new educational plan. This study tries to probe into the probable reasons which would have prevented the teachers in fully implementing LCS.

The use of learner centred strategies (LCS) is taken as the dependent variable and the type of school,

experience of the teacher, vast and heavy syllabus, basic entry quality of students, teacher-student ratio, effectiveness of training in LCS provided to teachers and the subject handled by the teacher as factors probable to influence teachers in abstaining from adopting LCS in classrooms are taken into the model as independent variables.

Ordinal logistic regression is used to predict the dependent variable (DV) with ordered multiple categories with the independent variables (IV) including type of school, teaching experience, teacher-student ratio, basic entry quality of the students, vast syllabus, training effectiveness and the subject taught by a teacher. The data was analysed using the statistical software STATA. The results of the analysis are given in the subsequent paragraphs.

Based on the LR test, it is inferred that the model containing a full set of predictors represents a significant improvement in fit relative to a null model (LR chi square (24) = 38.89, p< 0.0001) and that at least one population slope is non zero. McFadden's pseudo R2 is 0.1210 as an index of the proportionate improvement in model fit relative to the null model, showing a 12.10 per cent improvement in fit relative to the null model.

Table 2
Stata Output: Ordinal Logistic Regression Model of the
Use of Learner Centred Strategies

Dimensions of the study	Lcs Mean (DV)	Coef.	RRR	Std. Err.	Z	P>|z|	[95% Conf. Interval]
Years of Experience	Five to ten	−0.8095247	0.4450695	0.4864669	−1.66	0.096	−1.762982.1439328
	Ten to fifteen	−0.88741	0.4117207	0.5280129	−1.68	0.093	−1.922296.1474763
	Fifteen to twenty	−1.636732	0.194615	0.8123675	−2.01	**0.044***	−3.228943 – 0.0445208
	Twenty and above	−1.029854	0.357059	1.205176	−0.85	0.393	−3.391956 1.332247
Subject Taught	Social-Science	−1.948027	0.142555	0.4984141	−3.91	**0.000***	−2.924901 – 0.9711535
	Science	−1.816734	0.1625558	0.4530573	−4.01	**0.000***	−2.70471 – 0.9287581
Type of School	Aided	−0.355121	0.7010886	0.3784876	−0.94	0.348	−1.096943.386701
	Unaided	−0.7582596	0.4684811	0.4144987	−1.83	0.067	−1.570662
Vast Syllabus	Vs	0.5768966	1.780504	0.411731	1.40	0.161	−0.2300814 1.383875

Teacher-Student ratio	Tsr	–1.621777	0.1975473	0.7022452	–2.31	**0.021***	–2.998153 –0.2454022
Basic Entry Quality	Beq	0.2077538	1.23091	0.3060636	0.68	0.497	–0.3921199.8076275
Effectiveness of training	Te	–0.0477631	0.9533596	0.1318526	–0.36	0.717	–0.3061895.2106632

/cut1 | – 4.872966 1.026518 – 6.884903 – 2.861028
/cut2 | 3.051857 1.286812.5297525 5.573962

*Source: Stata Output; * Level of Significance 5%*

Table 2 shows the odds ratios and the coefficients explaining the influence of the independent variables on the use of LCS. Work experience, subject taught and teacher-student ratio are the significant determinants

Experience of teachers between 15 to 20 years is showing significant effect on the use of LCS. One unit increase in experience in years, ie., when experience in years changes from 0 (below 5 years) to 1 (between 15 to 20 years), there is 1.64 points decrease in the log odds of being in a higher level of use of lcs, given that all of the other variables in the model are held constant. The predicted odds of use of LCS for teachers having experience between 15 to 20 years are 0.19 times lesser than teachers having experience less than 5 years which is the base category (Table 2). The independent variable tsr is statistically significant. The predictor tsr is coded as 0 for not a problem and 1 for is a problem. This means, for one unit increase in tsr ie., tsr changing from 0 (not a problem) to 1

(is a problem), there is a 1.62 decrease in the log odds of being in the higher level of use of lcs by a teacher, given all of the other variables in the model are held constant. If teacher student ratio increases then the odds of using LCS decreases by 0.197 times (Table 2). The marginal effect of increase in tsr indicates an increase in the probability of low use of LCS by 14.6 per cent (Table 3).

For one unit increase in subjects taught, i.e., subject changing from humanities (0) to social science (1), there is 1.95 points decrease in the log odds of being in the higher level of use of LCS. Similarly, when there is a change from humanities (0) to science (1), there is 1.82 points decrease in the log odds of being in the higher level of use of LCS. The odds ratio indicates that the odds of using LCS by a Social-Science teacher is 0.143 times lesser and that by a science teacher is 0.163 times lesser than by a humanities teacher (Table 2). The marginal effect of change from Humanities to Social Science

indicates an increase in the probability of low use (lcsmean=1) by 35.7 per cent. Similarly, when the subject taught changes from Humanities to Science, the probablity of low use (lcsmean =1) increases by 28 per cent (Table 3).

However, contrary to the expectation, factors like training effectiveness, basic entry quality of students and vast syllabus were not found to be significant in determining the use of LCS.

Table 3
Ordinal Logistic Regression—Marginal Effects of the Factors on Learner Centred Strategies

Dimensions of the study	Variable	dy/dx	Std.Err.	Z	P> |z|	95% C.I.
Years of Experience	Five to ten*	0.1127829	0.06836	1.65	0.099	–0.021199.246764
	Ten to fifteen*	0.1385833	0.09158	1.51	0.130	–0.04091.318077
	Fifteen to twenty*	0.3292536	0.19626	1.68	0.093	–0.055403.71391
	Twenty above*	0.1881762	0.26996	0.70	0.486	–0.340943.717296
Subject Taught	Social-science*	0.3576312	0.0986	3.63	**0.000***	0.164377.550886
	Science*	0.279247	0.06863	4.07	**0.000***	0.144727.413767
Type of School	Aided*	0.0503264	0.05527	0.91	0.363	–0.058004.158657
	Unaided*	0.120442	0.07415	1.62	0.104	–0.024896.26578
Vast Syllabus	vs*	–0.0872742	0.06744	–1.29	0.196	–0.21946.044911
Teacher-Student ratio	tsr*	0.1464133	0.0385	3.80	**0.000***	0.07096.221867
Basic Entry Quality	beq*	–0.0286354	0.0424	–0.68	0.499	–0.111729.054459
Effectiveness of training	te*	0.0065538	0.01808	0.36	0.717	–0.02889.041998

Marginal effects after ologit, * Level of Significance 5%
y= Pr (lcsmean=1) (predict)0.16416584; * dy/dx is for discrete change of dummy variable from 0 to 1

DISCUSSION ON FINDINGS

The overall learner centeredness as measured by the summated mean score of the construct containing the 12 strategies (3.34) show a more than moderate use of learner centred activities. Moderate is defined operationally in this study as a condition where the *Mean* is equal to the central value of the scale of measurement; here as Five-point likert scale is used for data collection and so the central value of the scale is 3. Intensive use of these activities results in more learner centeredness in the classrooms (Sharkey and Weimer, 2003). All strategies except collections and debate were used but it is interesting to note that the average mean score of class test, assignment and lecture is the highest. This means that more rigorous strategies like debates, case studies, brainstorming etc. were sparingly used. When the new learner centred curriculum was introduced, it created a lot of apprehension among teachers, as they perceived these strategies to be time consuming and ineffective. So, it was believed widely that teachers were still continuing the lecture method which is teacher centred and engaging in some learner centred activities for namesake, especially because doing at least four was mandatory. As the mean score is 3.34 and the maximum score of the scale is 5, it can be inferred that there is a huge gap to cover, to be completely learner centred.

ADOPTION OF LCS BASED ON TYPE OF SCHOOL

The government, aided and unaided higher secondary schools in Kerala follow the same state curriculum. However, government and aided school teachers enjoy higher benefits like salary, pension and job security and have more professional freedom than unaided teachers. However, there is no significant change in the level of use of LCS depending on the type of school the teacher belongs to. Therefore, the hypothesis that "type of school does not influence the use of learner centred strategies", is accepted.

SUBJECTS TAUGHT BY A TEACHER

Considering the nature of the subject, appropriate strategies are used like 'role play' for languages. Some of the tools like seminar, projects and assignments are evaluated by further dividing them into sub skills such as literature review, relevance, depth and structure of content, clarity of analysis and interpretation etc. and such strategies are used more in Social Sciences. Class tests, collections, debate, group discussions, were common to all types of subjects (SCERT, 2005). It is reasonable to believe that the extent of use of LCS could vary depending on the subject handled by the teacher. The probability of use of LCS by a Science and Social Science teacher is less than a teacher teaching Humanities. The hypothesis

that "subject taught by the teacher does not influence the use of learner centred strategies" is not accepted.

Teacher-student Ratio in the Schools, Vast Syllabus and Basic Entry Quality of the Students

The teacher-student ratio in the higher secondary schools is 1:60. It was instructed by the higher secondary directorate that at least 4 of the learning strategies suggested, should be conducted by a teacher. A teacher has to handle at least 3 subjects and 4 strategies/subjects creating a workload of 720 evaluations. It was also observed in an earlier study that vast syllabus, high teacher student ratio and low basic entry quality of the students were problems faced in the implementation of learner centred curriculum (Sreeja Sukumar and Santhosh Kumar, 2015). This study found that the teacher student ratio is a significant factor influencing the use of LCS, when *tsr* increases the likelihood for the use of LCS decreases. Therefore, the hypothesis that 'Teacher-student ratio does not influence the use of learner centred strategies by the teachers' not accepted.

However, the vast syllabus and basic entry quality of the students does not significantly influence the use of LCS. So, the hypotheses 'vast syllabus does not influence the use of learner centred strategies' and that 'Basic entry quality of the students does not influence the use of learner centred strategies', are accepted. There is no significant relationship between 'effectiveness of training and use of LCS. So, the hypothesis that effectiveness of training does not influence the use of learner centred strategies is accepted.'

Teachers having experience between 15 to 20 years are less likely to use LCS than teachers having experience less than 5 years. However, experience above 20 years is not significant. As teachers gain experience, they may be reluctant to change their comfortable methods of teaching. Further, research on attitudes of teachers towards changes in curriculum would provide more insight into the problem.

Conclusion

It can be reasonably concluded that, if the extent of usage of the different learning and evaluation strategies are high, then, there is a high level of activity oriented learning going on in the school education in Kerala evidencing existence of learner centeredness. However, overall learner centeredness in the classrooms is statistically found to be at slightly above moderate level. The mean score of assignments, class tests and lecturing which are predominantly present in the traditional teacher centred system are the highest and hence, substantial use of these traditional methods

should be suspected. The whole concept of quality improvements made in the higher secondary schools is based on the principles of total quality management, which of course advocates continual improvement (Kaizen Approach). Therefore, the teachers should be sensitised to the importance of activity oriented curriculum and motivated to increase the adoption of learner centered strategies.

The study interestingly found that an increase in the experience of teachers have impacted the adoption of LCS. The teachers who have experience between 15 to 20 years were found to be less likely to use LCS compared with teachers who have only experience below 5 years. This definitely shows the reluctance of the teachers to change to new methods of teaching and come out of their comfort zone.

The teacher student ratio which acts as a determining factor in the use of LCS is also statistically significant. The effective and efficient implementation of LCS is possible only when the current teacher student ratio of 1:60 is reduced and only then the students can receive correct feedback on their performance. Statistically significant relation is also found between the subject handled by a teacher and the use of various learner centred strategies. The characteristic differences in the volume and content of the subjects taught and the high teacher student ratio are two major factors influencing the use of LCS.

As the effectiveness of learner centred strategies cannot be overlooked, these problems should invariably be solved and efforts to be taken to initiate a scientific redesigning of the syllabus to ward off excess portions by excluding concepts that should be covered in a tertiary level and the portions that have already been covered in the secondary education. Appropriate policy decisions to increase teacher workforce and continued training and motivation are indispensable to create learner-focused activity oriented classrooms, leading to substantial improvement in the quality of education.

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Effectiveness of Flipped Learning Instructional Pedagogy on Learning Engagement and Academic Achievement in Chemistry

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Abstract

Innovative pedagogies of the digital age attempts to abandon the passive teacher centred one way teaching process involving students actively to facilitate learning, thus improving the teaching-learning process. Flipped instruction is a digital pedagogy which has brought drastic changes in the teaching-learning process which reverses the traditional learning environment and students invest their time and effort in both synchronous and asynchronous sessions. Hence, in this experimental study the researcher attempted to investigate the effectiveness of flipped instruction on students' learning engagement and academic achievement by collecting data from Grade IX students and the analysis showed that there is significant difference in Learning Engagement and Academic Achievement in Chemistry of students who were taught using flipped learning instruction and traditional learning, further, the students taught with flipped learning instruction had better learning engagement and higher achievement scores compared to the students taught with traditional learning mode.

INTRODUCTION

Education is dynamic in nature, the teaching-learning process is influenced by the changes happening in society and the needs of the learner. Modern society is working on the digital system.

In this digital era, many innovative pedagogies have aroused to improve the teaching-learning process

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according to the needs of modern digital society. Innovative pedagogies attempt to abandon the passive teacher centre one way teaching process instead involving students actively and facilitate learning. This shifts the role of teachers to a facilitator, a guide and students to knowledge creators by interacting with themselves and teachers actively and exploring the content in depth. Flipped instruction is a digital pedagogy which has brought drastic changes in the teaching-learning process. Flipped learning is an approach which transform the traditional teaching-learning environment and shifts the one way classroom teaching-learning to asynchronous pre learning sessions in which learners put their time and effort in understanding the basic learning and remember those learning elements which are required to work collaboratively among peers to explore their knowledge in depth.

Rationale of the Study

Earlier the teaching-learning process was mostly confined inside the classroom and learning of students was not monitored by the teacher out of the classroom. Flipped instruction attempts to change this scenario and monitors learners throughout the learning journey. It allows teachers to blend various methodologies in their classroom and monitor the learning of the students both in synchronous and asynchronous sessions. Synchronous sessions happen when both students and teacher meet regularly inside the classroom for instructional process. It is the face to face learning situation in which a teacher meets their students physically and involves all students in learning through various strategies in which students collaborate with each other actively.

Asynchronous sessions happen at the pace, place and time of students in which students view the digital pre-learning materials provided and complete the learning tasks created by the teacher. Both teachers and learners are connected via a digital network to access the digital learning resources. The asynchronous session happens in two phases—before the class session and after the class session. Teachers connect to their learners before the class session via a suitable digital network to provide necessary inputs for their learning. These learning resources are designed to prepare the learners for their face to face in-class sessions, few learning tasks to check the prior knowledge of the learners and to provide new knowledge at lower order thinking skills. This pre-learning asynchronous session creates rapport between teacher and learner with the content to be explored in their in-class sessions. It stimulates the learners to explore the content in depth.

Flipped learning instruction is an educational technique that consists of two parts—Interactive group learning activities inside the classroom and direct computer based

individual instruction outside the classroom. Students are assigned the video watching for home work, freeing up class time that is used to be spent listening to lectures for hands on activities and application of knowledge which used to serve as home work. Flipped learning instruction employs group based interactive learning activities inside the classroom.

Teachers and students connect with each other after every in-class session through the same digital network to continue their learning discussions. This gives opportunities for teachers to engage their students outside the classroom by involving them in learning activities which sustains students' interest and motivation. Teacher provides post-learning activities to students to assess their progress in learning. This happens at the pace of students and increases their retention. This post-learning asynchronous session engages students in learning activities to stimulate students' intellect and students seek to go beyond the requirements through the post-learning activities.

According to Flipped Learning Network 2014, effective flipped learning instruction involves four pillars — flexible environment, learning culture, intentional content and professional educator. Michele Estes et al (2013) propose a simple model for flipping the classroom with three stages — pre-class, in-class, and post-class.

Stages of Flipped Learning Instruction

Pre-class

The flipped instructor will move this type of activity to an asynchronous learning environment. If the information is available online, students may read and refer to it as often as needed in order to recognise and recall it later. Procedural instruction that changes very little with time is also appropriate for the asynchronous learning environment. Instructors design their original, pre-recorded digital learning materials in a variety of media formats to provide as pre-learning resources (Mazur, 2009). In this step, instructors have the opportunity to asses student knowledge in advance of class-time to identify areas that require clarification or emphasis during class time. By understanding student needs prior to class instructor will make adjustments required during in-class.

In-class

During synchronous learning of the flipped classroom, the instructor uses activity-based learning strategies to maximise student-teacher interaction on learning content through in-class discussion, group learning and individual learning activities, observation of students while performing any experiments, and potentially the use of technologies to conduct formative assessment such as learner response systems.

Student-student engagement is very important in flipped classroom. Adopting peer feedback and peer instruction during in-class time is very essential to explore the content in depth and practice. Maximising the instructor-student and student-student interaction during in-class is regarded as essential ingredient in teaching-learning process. The features of technology can be used as a lever to make it happen effectively.

Post-class

Before and after the asynchronous and synchronous components of flipping have occurred, instructors in the flipped classroom have an opportunity to increase student attention and sustain student motivation for engagement in learning outside of class time, and to assess learner progress through post-class learning activities. Instructors who flip their classroom incorporates extrinsic motivators that encourage advance preparation. Adoption of technologies that shift the role of instructor to that of learning coach will support the development of students' self-regulation skills necessary for success in flipped environment. A variety of methods and tools of assessment available are used to assess student learning after instruction.

Flipping the teaching-learning process became more popular and influenced by the inverted classroom approach as evidenced from the study conducted by Lage et al (2000)

and this approach maximises active learning by using a variety of media and delivery modes of content to develop self-regulated learning among students during the pre-class sessions (Talbert, 2014) and instruction employed by Mazur (2009) to engage students actively during the synchronous in-class sessions. Novak and Patterson (1998) states synchronous in-class sessions as a way of combining collaborative course work with online materials and activities to help instructors understand student needs to offer timely feedback and plan the lessons responsive to the needs of the learner.

The reviews collected were analysed and the reveals that flipping the teaching-learning process enhances critical thinking of students thereby increasing learning engagement and achievement of students (Kaur, 2018). Flipped learning integrates active learning to increase achievement of students (Eichler, Peeples, 2016) and activates higher order thinking skills to engage students in learning. It also ensures that students remain at Higher order thinking levels for longer duration (Bormann, 2014) and creates friendly classroom environment (Borkar, Turkar, and Borkar, 2017). Flipped learning allows all students to attain the set objectives overcoming their learning problems (Fornasari, 2015). Flipped learning attempts to increase students learning engagement (McLaughlin et al, 2014) and performance as a result of active

learning strategies conducted during synchronous sessions (Carlson and Winquist, 2011)

As evident from above, student involvement in the learning process and achievement in learning increases by incorporating letter learning as an instructional process. This reverses the traditional learning environment and students invest their time and effort in both synchronous and asynchronous sessions of flipped learning therefore the researcher attempted to investigate the 'Effectiveness of Flipped instruction on Students' Learning Engagement and Academic Achievement'.

OBJECTIVES

1. To compare the effect of flipped learning instruction with traditional learning on students' learning engagement.

2. To find out the difference in learning engagement of students who were taught using flipped learning instruction and traditional learning.

3. To find out the difference in academic achievement in chemistry of students who were taught using flipped learning instruction and traditional learning.

4. To find out the difference in progressive tests in chemistry of students who were taught using flipped learning instructional pedagogy and traditional learning pedagogy.

5. To investigate the main and interaction effect of teaching methods and gender on students' learning engagement from control and experimental groups.

6. To investigate the main and interaction effect of teaching methods and gender on academic achievement in chemistry of students from control and experimental groups.

HYPOTHESES OF THE STUDY

1. There is no significant difference between the control group and experimental group's pre-test scores of learning engagement.

2. There is no significant difference between the control group and experimental group's post-test scores of learning engagement.

3. There is no significant difference between the pre-test and post-test mean scores of learning engagement of experimental group of students.

4. There is no significant difference between the pre-test and post-test mean scores of the learning engagement of control group of students.

5. There is no significant difference between the control group and experimental group's pre-test scores of academic achievement in chemistry.

6. There is no significant difference between the control group and experimental group's post-test scores of academic achievement in chemistry.

7. There is no significant difference between the pre-test and post-test mean scores of academic achievement in chemistry of experimental group of students.

8. There is no significant difference between the pre-test and post-test mean scores of academic achievement in the chemistry of control group of students.

9. There is no significant difference between the experimental group and control group's mean scores of progressive test 1 in chemistry.

10. There is no significant difference between the experimental group and control group's mean scores of progressive test 2 in chemistry.

11. There is no significant main and interaction effect of teaching methods and gender with each other on students' learning engagement.

12. There is no significant main and interaction effect of teaching methods and gender with each other on academic achievement in chemistry.

METHODOLOGY

The researcher selected experimental method for conducting the research with flipped learning instructional pedagogy as an independent variable which affect the dependent variables like learning engagement and academic achievement in chemistry of students.

OPERATIONAL DEFINITIONS

Flipped learning instructional pedagogy can be operationally defined as an instructional approach in which secondary school students gain basic knowledge of the chosen content in-home or in any other place through asynchronous video lectures, pictures, animations, simulations, and text. An interactive learning environment is created during in-class time by engaging students with activities, real demonstrations, discussions, and group activities prepared by the researcher to assist them in applying the concepts learned in their home during pre-class activities to those activities conducted during class-time.

Students' learning engagement can be operationally defined as an interactive engagement in which students are engaged actively individually as well as in small group to analyse, synthesise and evaluate the subject matter with the guidance given by the researcher both in the face-to-face class and online instruction.

Achievement scores in Chemistry of the students exhibit a link with the method used for instruction, which fosters a change in student achievement in Chemistry. In this present study, it refers to the students' score on the achievement test in chemistry developed by the researcher.

Sample

The study utilised a sample of 60 students of Grade IX in an English medium government school located in Bangalore urban. The present experimental study utilised pre-test post-test two group design. Thirty students were having the facility of accessing digital devices after school hours to view the digital learning resources for participating in pre-class activity and to complete digital assignments for post-class activity, they were selected and grouped as the experimental group and the students who did not have the facility of accessing digital devices after school hours were grouped as the control group. Thus, the study utilised purposive sampling in which both experimental and control groups consisted of 30 students each.

Tools Used in the Study

Learning engagement scale (5 point attitude scale with 42 items) and academic achievement test in Chemistry (34 MCQs in the content taught) constructed and standardised by Vandana M. and Haseen Taj (2019) were used for collecting pre-test and post-test scores for research data. The reliability of the above tools were found to be 0.871 and 0.97 respectively. Also research developed two unit tests in Chemistry (for the content taught) which were used as progressive tests.

Research Design

The present experimental study employed pre-test and post-test group design. Both control and experimental groups of students were administered with a pre-test using learning engagement scale and academic achievement test in Chemistry. One unit from the Chemistry part of Science text book for Grade IX was taught to both experimental and control groups of students. The experimental group of students were trained to access moodle platform to complete their out of class activities. Out of class activities for flipped instruction consisted of a variety of digital resources like videos, text, infographics, animations on the lesson taught as pre-learning resources and digital assignments as post-class activities. After pre-class session synchronous face to face sessions inside the classroom was conducted by utilising group and individual active learning strategies in which students participated in both digital and non-digital activities. The lecture and demonstration method was used to teach the same unit for students of the control group. During classroom teaching relevant teaching-learning aids like charts and models were shown to students and questions were asked to interact with students to clarify their doubts. The duration of teaching for both the experimental and the control groups of students was 50 days. Progressive tests on the unit were administered to both control and experimental

group of students on the 25th and 50th day. After the completion of teaching and progressive tests, both experimental and control groups students were administered with post-test in learning engagement and the academic achievement test in chemistry using the tools constructed by researcher.

FINDINGS

The data on pre-test and post-test scores on learning engagement and academic achievement in Chemistry, progressive tests 1 and 2 in Chemistry were analysed using t-test and the findings of the analysis were tabulated as below.

Table 1
Table Showing Pre-test, Post-test Mean Scores of Learning Engagement between Experimental and Control Groups

Groups	N	Mean	SD	t-value	Level of Significance
Pre-test on Learning Engagement					
Experimental	30	164.07	15.970	0.405	NS
Control	30	165.63	13.912		
Post-test on Learning Engagement					
Experimental	30	185.67	10.877	2.396	*
Control	30	178.63	11.836		
Learning Engagement of Control group of Students					
Pre-test	30	165.63	13.912	8.900	**
Post-test	30	178.63	11.836		
Learning Engagement of Experimental group of Students					
Pre-test	30	164.07	15.970	11.764	**
Post-test	30	185.67	10.877		

*NS = Not Significant, * = Significant at 0.05 level, ** = Significant at 0.01 level*

Table 2
Table Showing Pre-test, Post-test Mean Scores of Academic Achievement Test in Chemistry between Experimental and Control Groups

Groups	N	Mean	SD	t-value	Level of Significance
Pre-test on Academic Achievement test in Chemistry					
Experimental	30	4.83	1.085	2.068	*
Control	30	4.33	0.758		

Post-test on Academic Achievement Test in Chemistry					
Experimental	30	27.4	2.99	12.517	**
Control	30	18.23	2.674		
Academic Achievement Test in Chemistry of Control Group of Students					
Pre-test	30	4.33	0.758	26.877	**
Post-test	30	18.23	2.674		
Academic Achievement test in Chemistry of Experimental group of Students					
Pre-test	30	4.83	1.085	35.921	**
Post-test	30	27.4	2.99		

*NS = Not Significant, ** = Significant at 0.01 level*

Table 3
Table Showing Mean Scores of Progressive Tests 1 and 2 in Chemistry of Experimental and Control Groups

Groups	N	Mean	SD	t value	Level of Significance
Progressive Test 1 in Chemistry					
Experimental	30	19.53	3.501	7.184	**
Control	30	13.0	3.545		
Progressive Test 2 in Chemistry					
Experimental	30	19.23	3.901	7.180	**
Control	30	12.6	3.223		

*** = Significant at 0.01 level*

The data on post-test scores on learning engagement of students from both the experimental and the control groups were analysed using 2 way ANOVA and the findings were as shown in the Table below.

Table 4
Showing Observed Data for 2 Way ANOVA of Teaching Method of Boys and Girls of both Groups

Teaching Method		Traditional Learning	Flipped Learning
Gender			
Boys	N	16	12
	Mean	180.19	187.67
	Standard Deviation	10.815	10.815
Girls	N	14	18
	Mean	176.86	184.33
	Standard Deviation	13.085	11.019

Table 5
Results of 2 Way ANOVA for Learning Engagement with Independent Variables Namely, Gender and Teaching Method

Sources of Variation	Sum of Squares	Df	Mean Squares	F – Value	Level of Significance
Gender	162.764	1	162.764	1.243	NS
Teaching Method	819.825	1	819.825	6.263	**
Interaction of Gender and Teaching Methods	3.247	1	3.247	0.00	NS
Error	7330.818	60			
Total	8235.650	59			

Table 6
Showing Observed Data for 2 Way ANOVA of Teaching Method of Boys and Girls of both Groups

Teaching Method		Traditional Learning	Flipped Learning
Gender			
Boys	N	16	12
	Mean	18.13	27.42
	Standard Deviation	2.217	2.678
Girls	N	14	18
	Mean	18.36	27.40
	Standard Deviation	3.201	3.256

Table 7
Results of 2 way ANOVA for Academic Achievement in Chemistry with Independent variables namely, Gender and Teaching Method

Sources of Variation	Sum of Squares	Df	Mean Squares	F – Value	Level of Significance
Gender	0.153	1	0.153	0.018	NS
Teaching Method	1230.667	1	1230.667	147.841	**
Interaction of Gender and Teaching Methods	0.248	1	0.248	0.030	NS
Error	466.159	60	8.324		
Total	1726.983	59			

Discussion of Results

From Table 1, it is observed that the obtained t-value of 0.405 is less than 2.000 at 0.05 level; this infers that both experimental and the control group of students have the same learning engagement before the treatment, hence the Hypothesis 1, there is no significant difference between the control group and the experimental group students in their mean scores of pre-test in learning engagement is accepted. There is a significant difference between the experimental and the control group students in their mean scores of post-test in learning engagement, it is observed that the obtained t-value of 2.396 Is greater than the table value of 2.000 at 0.05 Level. Thus, both experimental and the control groups significantly differ in their mean scores of post-test in learning engagement, further it is observed that students from the experimental group have higher levels of learning engagement than the students from the control group, hence Hypothesis 2 is rejected. This result is similar to the findings of the research conducted by Maheshwari and Seth (2019) that students' learning engagement improves with the implementation of flipped learning and students feel highly satisfied (Awidi and Paynter, 2019). It is also observed that the obtained t-values of 8.900 and 11.764 are greater than the table value of 2.660 at 0.01 level, hence Hypotheses 3 and 4 are rejected and it can be restated as there is significant difference between the pre-test and post-test mean scores of the learning engagement of the control group of students and there is significant difference between the pre-test and post-test mean scores of the learning engagement of the experimental group of students. It also reveals that the learning engagement of the students increased after the treatment for both experimental and the control groups of students, further the value of 11.764 is greater than the value of 8.900, thus students of the experimental group have better learning engagement than the students of the control group. This result is in agreement with the results obtained by Hernández, (2012) that flipped learning increases students' learning engagement and students involved in interactive learning activities by investing their time before and during the classroom learning as shown by Webb et al (2014).

From Table 2, it is observed that the obtained t-value of 2.068 is slightly greater than the table value of 2.000 at 0.05 level and the hypotheses 5 is rejected and stated as there is significant difference between the control group and experimental groups pre-test mean scores of academic achievement in chemistry, the obtained t-value of 12.517 is very much greater than the table value of 2.704 at 0.01 level and hence Hypothesis 6 is rejected and restated as there is significant difference between the control group and experimental groups

post-test mean scores of academic achievement in Chemistry. Future, it is observed that the t-value of 12.517 of post-test mean scores is higher than that value of 2.068 of pre-test mean scores hence it reveals that the flipped learning instruction has great influence on academic achievement of students. Flipped learning increases academic achievement of students (Alamri, 2019) and significantly higher scores in achievement for experimental students was observed (Özüdoğru and Aksu, 2020). It is also observed that the obtained t-value of 26.877 and 35.921 are greater than the table value of 2.704 at 0.01 level hence, Hypothesis 7 and 8 are rejected and restates as there is significant difference between the pre-test and post-test mean scores of academic achievement in Chemistry of control group of students and there is significant difference between the pre-test and post-test mean scores of academic achievement in Chemistry of experimental group of students. It is also observed that the post-test mean scores of academic achievement in Chemistry are higher than that of the pre-test mean scores, further the obtained t value of 35.921 of experimental group is more than the value of 26.877 of control group students. This result suggests that the students taught with flipped learning instruction have obtained higher scores in academic achievement than the students who were taught using traditional learning pedagogy. Flipped instruction incorporates active learning strategies and ensures students to remain at higher order thinking levels for a longer time (Bormann, 2014). The academic performance of students improves by incorporating flipped instruction (Bueno–Alastuey and Galar, 2017) and increases academic achievement of students (Vimala and Muniandy, 2018).

From Table 3, the obtained t-values of 7.184 and 7.180 are greater than the value of 2.704 at 0.01 level hence Hypotheses 9 and 10 are rejected and restated as there is significant difference between the control group and experimental groups mean scores of progressive test 1 in Chemistry and there is significant difference between the control group and experimental groups mean scores of progressive test 2 in Chemistry. Flipped learning enhances academic achievement of students (Kaur and Gurpreet 2018) and integrates active learning into chemistry courses (Eichler and Peeples, 2016).

From Table 5, it is observed that gender has no significant main effect (f = 1.243, P >0.05) on learning engagement of students, teaching method (traditional teaching and flipped learning) has significant main effect (f = 6.263, P < 0.01) on learning engagement of students and there is no significant interaction effect of gender and teaching method (f = 0.00, P > 0.05) on learning engagement of students. The result infers that gender has no significant effect on learning engagement and

teaching method has a significant effect on learning engagement. Further, flipped learning increases students' concentration (Kurushkin, M., and m., Mikhaylenko, 2016), student understanding and self-determination (Calderara and Wiebe, 2019) on watching pre-learning videos.

From Table 7, it is observed that gender has no significant main effect (F = 0.018, p >0.05) on academic achievement in chemistry of students, teaching method (Traditional Teaching and Flipped Learning) has significant Main effect (F = 147.841, p < 0.01) on academic achievement in chemistry of students and there is no significant interaction effect of gender and teaching method (F = 0.030, p > 0.05) on academic achievement in chemistry of students. The result infers that gender has no significant effect on academic achievement in Chemistry and teaching method has a significant effect on academic achievement in Chemistry. Further, flipped learning increases academic achievement of students as students derive learning satisfaction (Lopes and Soares, 2017) and in-class group activities attempt to clarify their doubts (Borkar, Turkar, and Borkar, 2017) and students attain the set objectives (Fornasari, 2015).

Educational Implications

Flipped learning instruction shifts direct instructional process from synchronous to asynchronous sessions and incorporates active learning strategies during synchronous sessions to involve every learner. The results reveal that there is significant difference in post-test in the learning engagement of experimental and control group of students further, the mean value of 185.67 of the experimental group is greater than that of 178.63 of the control group of students, hence teachers should design learning activities to involve all students in the learning process. The result shows that there is significant difference in pre-test and post-test mean scores of learning engagement of the experimental group of students. Further, the mean value of 185.67 of post-test in learning engagement is greater than the mean value of 164.07 of pre-test in learning engagement of the experimental group of students. It is higher than the post-test mean scores of 178.63 of the control group of students. Thus teachers should implement flipped learning instruction in their pedagogical practices and incorporate both synchronous and asynchronous learning sessions in their teaching process.

The post-test mean scores of academic achievement in chemistry of experimental and control groups differ significantly, further, the mean value of 22.7 of the experimental group is more than the mean value of 18.23 of the control group. This implies that flipped learning has enhanced mean scores in academic achievement in chemistry of an experimental group

of students hence teachers should create e-content on the topics to be taught and provide to their students to engage in pre learning activities.

The results reveal that there is significant difference in progressive test 1 of experimental and control group of students, further, the mean value of 19.53 of experimental group is a more than the mean value of 13.0 control group of students. Also there is significant difference in progressive test 2 of experimental and control group of students. Further the mean value of 19.23 of experimental group is greater than the minimum value of 12.6 of control group of students. Hence, teachers should design learning activities to involve all students in the learning process to engage them in collaborative work with peers. Teachers should plan the in class activities so that there is more time available for interaction with students and facilitate them to explore the highest knowledge possible.

Conclusion

Technology has influenced the teaching-learning process and resulted in development of modern pedagogical practices. Flipped learning instructional pedagogy is one such innovative pedagogy which attempts to involve students and teachers in synchronous and asynchronous teaching-learning sessions. Flipped learning instructional pedagogy provides lot of opportunities for teachers to create learning resources and activities to involve their students in learning process as well as to spend more in-class time for fruitful interaction with their students and develops self-learning and deep learning skills among students to increase their interest and achievement in learning. Thus it can be concluded that flipped learning instructional pedagogy maximises classroom interaction to increase students' learning engagement and thereby increase in academic achievement and performance of students.

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Implementation of Grade Level Assessment Tool in Social Sciences (GLAT-SS) for Grade VI of Karnataka State Education Board

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Abstract

This study attempted to implement Grade Level Assessment Tool Social Sciences (GLAT-SS) for Grade VI of the Karnataka State Education board. A total of 615 students participated in the study, 310 students were from the Kannada medium, and 305 students were from English medium schools. A convenient sampling technique was used to select the students across six districts in Karnataka state (including pilot study). Investigators employed a survey research design. The study was conducted in two major stages: Compilation of GLAT-SS test items and field testing of GLAT-SS. Kruskal-Wallis one way ANOVA test and Mann-Whitney-U test were used for the analysis of data. The results revealed a significant influence of different districts on students' performance on GLAT-SS. However, there was no significant influence of the medium of instruction on students' performance on GLAT-SS. A significant difference was also found in English medium and Kannada medium students' performance across different districts of Karnataka state. As part of the study, the range of scores for GLAT-SS was determined in three levels: below average, average, and above average. The study highlights that GLAT-SS can identify students' present performance levels for Grade VI in Social Sciences subject and accordingly help in planning the remedial teaching sessions.

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INTRODUCTION

Assessment is an essential part of the school education programme. The teaching-learning process is not completed without assessment. For any training programme, assessment is necessary to determine the progress achieved and what is yet to be achieved. Many countries have identified the importance of formative assessment in reaching the target in education. For example, in England, a formative assessment program was started in the year 2000 at preschool and primary school level. In Scotland, formative assessment practices were used by teachers in the teaching process. In 1999, New Zealand also implemented its national assessment strategy on formative assessment; in Canada, also formative assessment is viewed as a fundamental strategy (Ozan and Kincal, 2018). In other countries also such as Spain, Germany, Sweden, and Finland, highlighted the importance of formative assessment and the necessity of using different assessment methods (Klinger, Volante and DeLuca, 2012). Furthermore, it also helps the teachers plan and modify the teaching-learning process as a whole and even for few students specifically. The formative assessment results act as an indicator for teachers to plan their lessons as they inform teachers how much the students have learned their lessons (Wuest and Fisette, 2012). It aids in diagnosing the learning problems of students in the classroom. It helps teachers to involve the parents by reporting them about the child's learning.

Social Sciences are a unique subject that aims to promote equality, democracy, and liberty among students to become responsible citizens. It encompasses various concerns of society and includes a wide range of content drawn from history, geography, political science, economics, and sociology (Clark, 1973). A study was conducted to determine the impact of teaching a lesson in social sciences Grade IX using jigsaw technique Bartin province in Turkey. It included 46 students. A pre-test and post-test control group experimental design was used. It was found that instruction through the jigsaw technique had a positive impact on academic success. And a statistically significant difference was found in pre and post-test results (Harur, 2017). Another study was conducted to investigate the impact of teaching social sciences with ICT's help on people's achievement. The quasi-experimental research design was used. The study subjects were divided into two groups of Grade VI pupils of a public primary school in Izmir, Turkey. Each group consisted of 35 pupils. Three research tools were used to collect data, i.e., academic achievement test, attitude measurement scale on social sciences education, and an attitude measurement scale on ICT. The results revealed that teaching

social sciences using ICT does not significantly affect pupils' attitudes towards social sciences lessons (Cener, Acun and Demirhan, 2015). It is vital to assess their knowledge in social sciences to gauge the knowledge acquired. Moreover, unlike other subjects, social sciences are different in each state as students of one state study more of their local geographical features, local history, economics, and political science.

Educational Assessment at every grade level and in every subject helps identify the concepts at which the child finds it difficult to understand and perform. It further helps to work on the educational training needed for students. Grade level assessment will enable parents and educators to know the students' achievements levels and inform the next steps in the students' learning. Moholik (2017) conducted a study on quality dimension in evaluating social science. He mentioned in social sciences different types of questions must be used. Such as multiple choice items, matching items, very short items, easy type, etc. He also highlighted multiple-choice must be prepared, which suits all kinds of learners. Joshi (2017) conducted a comparative study of questions given in Grade VIII social science textbook of different publications from the point of view of a continuous and comprehensive evaluation in (CCE). The results revealed the history book 'Our Past – Part I' of Grade VIII published by private publication is better than NCERT publication from the point of view of CCE. A study by Kathleen (2016) examined the effects of Google classroom on teaching social science for Grade VII learners graders with learning disabilities. A single subject design was used to evaluate the learning outcomes. During the intervention period for nine weeks, students had to complete assigned work using Google classroom. The results revealed that students increase their vocabulary, but little improvement was seen in content knowledge. Hendrix (1999) conducted a study whether using jigsaw technique students' academic achievement can be improved in social sciences subjects and skill necessary for being a good citizen.

Hilda et. al. (2020) conducted a study to determine the effect of implementation of performance assessment of the results of social sciences with covariates social attitudes in Grade IV in district Jombang. Research design used was archetypal. The post-test only control group with covariates social sciences attitudes was used. The results showed that there is a difference between learning outcomes of students in social sciences subject with respect to conventional performance appraisal and assessment.

Ozan and Kincal (2018) examined the effects of formative assessment practices on students' academic achievements, attitudes towards lessons and self-regulation skills in Grade V social sciences class.

The data collection instruments included: Social sciences performance tests, attitude inventories for social sciences classes, self-regulatory learning skills scales, a semi-structured interview form, and an observation form. The experimental procedure was carried out for 28 weeks. Forty-five students participated in the study. The results revealed that the experimental group in which formative assessment practices were performed had significantly higher academic achievement levels and a better attitude towards the class than the control group students. Different studies highlight the experiments carried out in social sciences subjects using a variety of techniques. However, the tasks related to assessing the present performance grade-wise, according to the state curriculum in social sciences subjects are hardly available leading to the current study's need.

Need for the Study

Considering the less availability of assessment tools in social sciences subject in Karnataka for Grade VI, the assessment tool must be developed to evaluate the knowledge gained in social sciences according to the curriculum prescribed. The following are the rational reasons why the Grade Level Assessment Tool in Social Sciences subject is to be developed.

1. It was observed that there are hardly any tests in India targeting students' assessment at the Grade VI level in social science subject as per latest Karnataka State Education Board.

2. The tests developed in other countries are not suitable for Indian conditions in general and Karnataka specifically as they are culturally inappropriate, especially in terms of social sciences.

3. It is mentioned that the government's policy 'No Detention' is promoting students from one grade to next grade without checking whether the child acquires the necessary knowledge, i.e., in simple words, there is no checkpoint at every stage.

4. It helps in establishing uniformity in assessment in social sciences subjects in Karnataka.

5. To assess the child in a more comprehensive and multi-dimensional manner, and get the best out of the child, evaluation of the child's learning should include different assessment types.

Consequently, such a test would help examine the grade-level performance in students in social sciences. Thereby, it would be possible to ascertain the child's present level of performance in social sciences subject based on the range of scores in Karnataka. If required, it would be possible to train the child appropriately. Thus, the current study is aimed to develop a test to assess grade-level performance

in students in the social sciences subject for Grade VI.

AIM OF THE STUDY

To implement a Grade Level Assess/ment Tool in Social Science (GLAT-SS) for Grade VI of Karnataka State Education Board in English and Kannada languages.

OBJECTIVES OF THE STUDY

1. To assess the influence of districts on GLAT-SS total scores.
2. To assess the influence of medium of instruction on GLAT-SS total scores.
3. To determine the range of scores for GLAT-SS in three levels, such as below average, average, and above average.
4. To examine the performance of English medium students across five districts of Karnataka.
5. To examine the performance of Kannada medium students across five districts of Karnataka.

HYPOTHESES OF THE STUDY

1. There is no significant influence of districts on GLAT-SS total scores.
2. There is no significant influence of the medium of instruction on GLAT-SS total scores.
3. There is no significant difference in the performance of English medium students across five districts of Karnataka.
4. There is no significant difference among Kannada medium students across five districts of Karnataka.

OPERATIONAL DEFINITIONS

1. **Grade:** Grade VI students of English and Kannada medium in Karnataka state.
2. **Assessment tool:** It is a test developed based on the textbook of social sciences subject in Karnataka, both in English and Kannada.

METHOD

Research Design

Survey Research Design was used.

Participants

A total of 615 typically developing students participated in the study. For the pilot study, 204 typically developing students participated. Among them, 84 students (38 English and 46 Kannada) were from Grade VII, and 40 students were from each Grade VIII, IX, and X respectively, i.e., a total of 120 students (60 English and 60 Kannada) participated as can be seen in Fig.1.

And 411 typically developing students studying in Grade VII from five districts of Karnataka participated in the final data collection. Among them, 95 students (42 English and 53 Kannada) were from the Chamarajanagar district. Ninety eight students (47 English and 51 Kannada) were from Bellary district. Ninety eight students (50 English and 48 Kannada) were from the Chithradurga district. Seventy two students (43 English and 29 Kannada) were from Davanagere
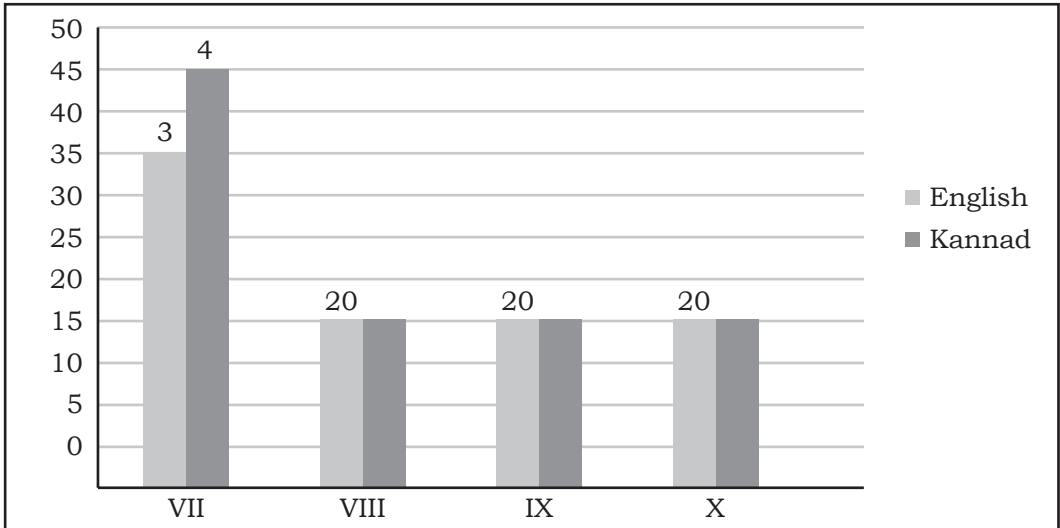
Fig. 1: Participants for pilot study from Mysore district

district, and 48 students (25 English and 23 Kannada) were from Dharwad district participated, as can be seen in Fig. 2.
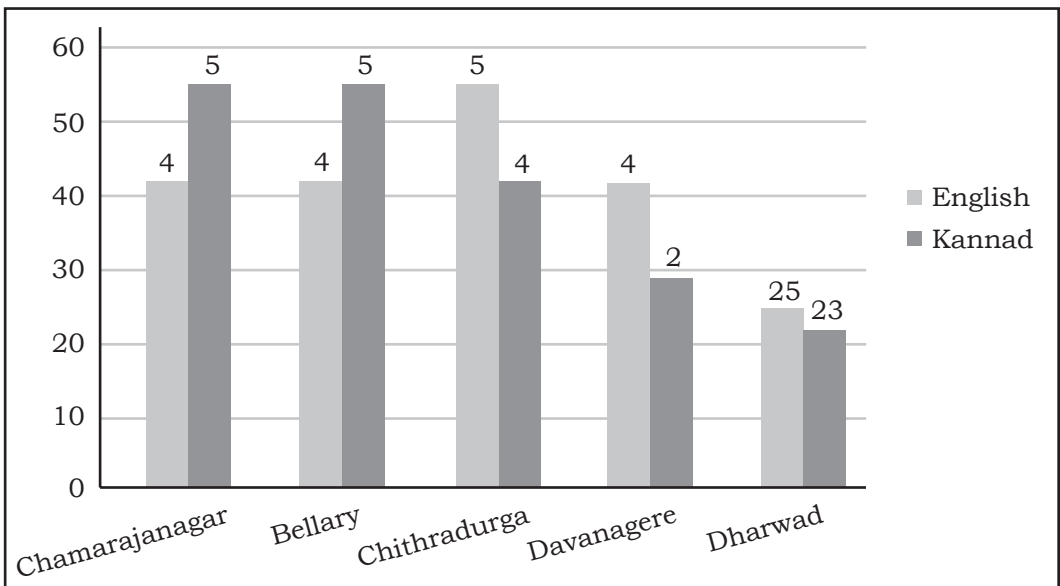

Fig. 2: Participants for final data collection across five districts of Karnataka

All the participants met the following inclusion criteria—

1. Students were studying in Karnataka State Education Board.
2. They were typically developing students studying in regular schools.
3. Studying in English and Kannada medium.
4. Studying in Grades VIII, IX, and X.
5. Studying in Grade VII.
6. Students in Grade VII must have scored 50 per cent in Grade VI Annual Exam in Social Science subject (Previous academic year) as per the Academic records.

Furthermore, they also met the exclusion criteria, i.e., no reported impairments and disabilities. It is as per the information collected from school authorities.

SAMPLING TECHNIQUE

In this study, a convenient sampling technique was used.

TESTING ENVIRONMENT

For data collection purposes, GLAT-SS was administered on students in Grade VII in a quiet classroom in their respective schools, away from distractions across five districts of Karnataka State.

Students from different grades were selected to ascertain whether they remember the concepts that they have learnt in previous grades in social sciences subject. The concepts learnt will be the foundation for future learning in higher grades and promotes vertical learning.

PROCEDURE OF THE STUDY

The study was conducted in two stages. The first stage included the compilation of grade level assessment tool in social science (GLAT-SS) for Grade VI. The second stage included field testing of GLAT-SS on typically developing students in English and Kannada medium schools across five Karnataka districts and a final compilation of GLAT-SS, as can be seen in Fig. 3. As a part of ethical procedure, permission was sought from Principals of schools to carry out the study. After getting consent from the respective Principals, the data was collected for the study. Furthermore, the study also included developing a range of scores for GLAT-SS.
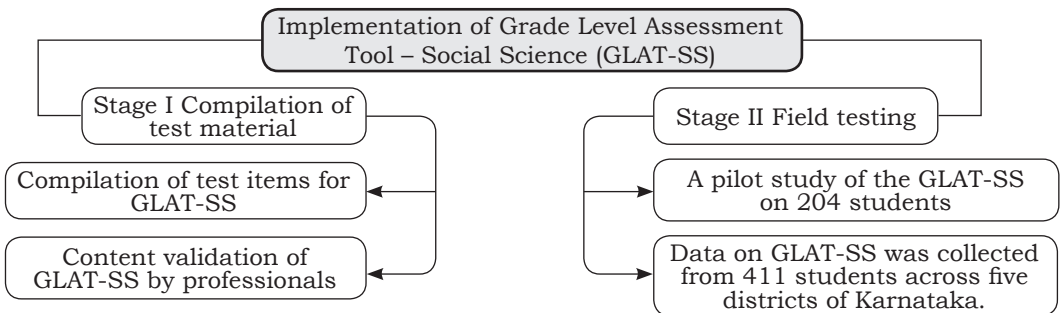

Fig. 3: Framework of steps in implementation on grade level assessment tool-social sciences

RESULTS AND DISCUSSION

Data collected was statistically analysed for assessing the influence of district and medium of instruction on total scores. The results are discussed to draw general conclusions about the sample under study. To check whether the data is normally distributed for districts and medium of instruction, the data was subjected to the Shapiro Wilks test. And the results revealed that the data does not follow the normal distribution (i.e., p<0.05) for GLAT-SS total scores concerning district and medium of instruction. And for testing the hypotheses, non-parametric tests: Kruskal-Wallis one way ANOVA test and Mann-Whitney-U test were used to determine whether district and medium of instruction had any significant influence on GLAT-SS total scores. All statistical significance values were compared with 0.05 and 0.01 level of significance. The analysis is done by using SPSS software.

Influence of Districts on GLAT-SS Total Scores

The first objective of the study is to assess the influence of different districts on GLAT – SS total scores and the first hypothesis of the study states that there is no significant influence of districts on GLAT-SS total scores is tested and results are presented in following Table.

Table 1
Kruskal Wallis One Way ANOVA Tests Between 5 Districts in Respect of GLAT-SS Total Scores.

District	Mean	SD	Median	n	Mean Rank	x² (4)	p-value
Bellary	63.14	6.73	63.50	98	183.79	16.861	0.002**
Chamarajanagar	65.38	6.58	65.00	95	220.13		
Chithradurga	66.27	5.32	67.50	98	240.46		
Davanagere	63.52	6.33	62.75	72	185.56		
Dharwad	63.56	5.73	64.00	48	183.70		
Total	64.52	6.30	65.00	411			

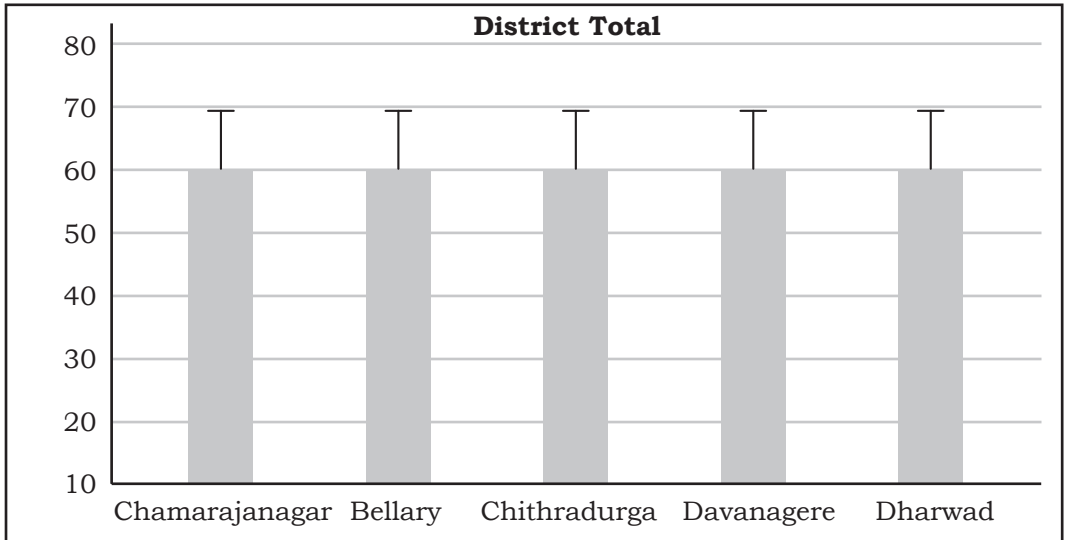** Indicates significant at P< 0.05 ** Indicates significant at P<0.01*

Fig. 4: Influence of Kruskal Wallis one way ANOVA tests between 5 districts
in respect of GLAT-SS total scores

As can be seen in the Table 1 and Fig. 4, descriptive and inferential statistics revealed that students from Chithradurga district performed better (Mean=66.27) as compared to students in other districts. Results revealed that there is significant influence of districts on GLAT-SS total scores among students studying in grade VII (i.e., x^2 (4) = 16.861, p = 0.002) and the null hypothesis is rejected.

Influence of Medium of Instruction on GLAT-SS Total Scores

The second objective of the study is to assess the influence of medium of instruction on GLAT-SS total scores and the second hypothesis states that there is no significant influence of medium of instruction on GLAT-SS total scores is tested and results are presented in the following table.

Table 2
Mann-Whitney U Test Between English Medium and Kannada Medium Students on GLAT-SS Total Scores

Medium	Mean	SD	Median	n	Mean Rank	|Z|	p-value
English	64.31	6.01	65.00	207	202.56	0.592	0.554
Kannada	64.73	6.59	65.00	204	209.50		
Total	64.52	6.30	65.00	411			

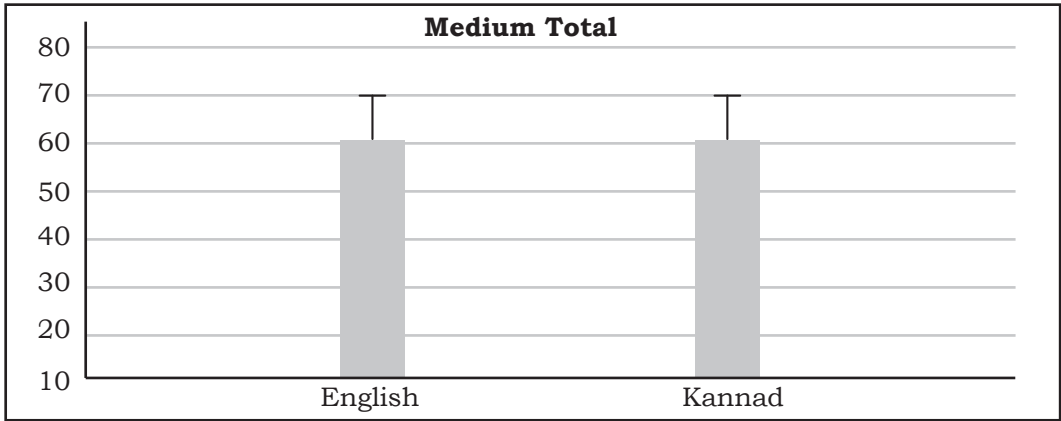* Indicates significant at P< 0.05 ** Indicates significant at P<0.01

Fig. 5

Kannada medium students on GLAT-SS total scores.

Descriptive and inferential statistics calculated in the above Table 2 and Fig. 5 showed that there is no significant influence of medium of instruction on GLAT-SS total scores (i.e., $|Z|$=0.592, p=0.554) and hence the null hypothesis is accepted.

Calculation of Range of Scores for GLAT-SS

The third objective of the study is to find out the range of scores for GLAT-SS in three levels such as below average, average, and above average.

As seen in Table 3, based on Mean and Standard deviation of GLAT-SS total scores, the range of scores were divided into three categories namely below average, average, and above average.

The Performance of English Medium Students across Five Districts of Karnataka

The fourth objective of the study is to assess the performance of English medium students across five districts of Karnataka and the fifth hypothesis states that there is no significant difference in performance of English medium students across five districts of Karnataka.

Table 3
Descriptive Statistics Mean, Standard Deviation and Median for GLAT-SS Total Scores

Range		
Below average (58.22)	Average (64.52±6.30)	Above average (70)
0–57	58–69	70–80

* Indicates significant at P< 0.05 ** Indicates significant at P<0.01

Table 4
Kruskal Wallis one Way ANOVA Tests (Non-Parametric Test) Across Five Districts of Karnataka Among English Medium Students in Respect of GLAT-SS Total Scores

District	Mean	SD	Median	N	Mean Rank	x^2 (4)	p-value
Bellary	59.28	5.68	60.00	47	56.20	62.080	0.000**
Chamarajanagar	65.79	4.34	65.50	42	117.12		
Chithradurga	67.55	5.59	69.00	50	141.03		
Davanagere	66.13	5.40	65.00	43	119.94		
Dharwad	61.70	3.62	62.00	25	70.34		
Total	**64.31**	**6.01**	**65.00**	**207**	**202.56**		

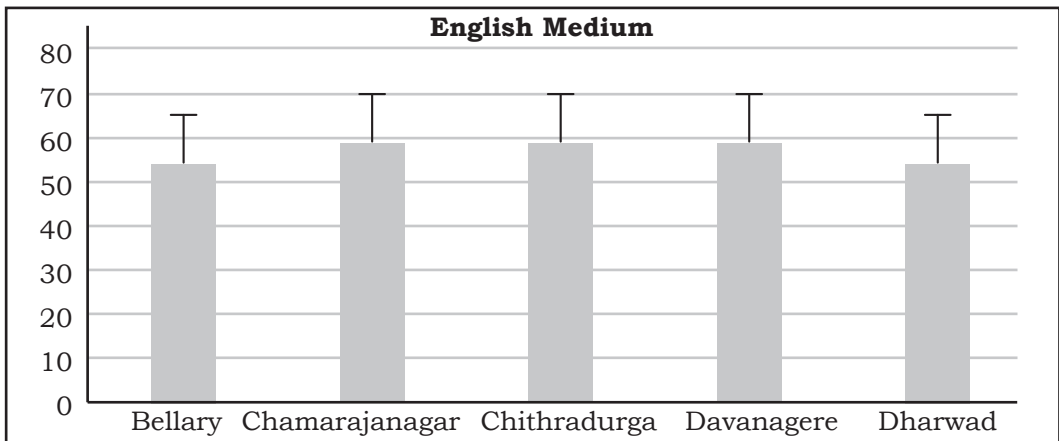*Indicates significant at P< 0.05 ** Indicates significant at P<0.01*

Fig. 6: Performance on GLAT-SS across five districts of Karnataka state among english medium students

As can be seen in the Table 4 and Fig. 6, descriptive and inferential statistics revealed that students from Chithradurga district English medium students performed better (Mean=67.55) as compared to students in other districts. Results gave there is significant influence of districts on GLAT-SS total scores among English medium students studying in VII grade (i.e., x^2 (4) = 62.080, p<0.01). Hence, null hypothesis is rejected.

The Performance of Kannada Medium Students across Five Districts of Karnataka

The fifth objective of the study is to assess the performance of Kannada medium students across five districts of Karnataka and the sixth hypothesis states that there is no significant difference among Kannada medium students across five districts of Karnataka.

Table 5
Kruskal Wallis one Way ANOVA Tests (Non-Parametric Test) Across Five Districts of Karnataka Among Kannada Medium Students in Respect of GLAT-SS Total Scores

District	Mean	SD	Median	N	Mean Rank	x^2 (4)	p-value
Bellary	66.70	5.60	68.00	51	121.31		
Chamarajanagar	65.06	7.96	64.50	53	105.26		
Chithradurga	64.93	4.72	65.25	48	102.29	22.570	0.000**
Davanagere	59.66	5.64	59.00	29	57.66		
Dharwad	65.59	6.89	66.50	23	111.39		
Total	**64.73**	**6.59**	**65.00**	**204**	**209.50**		

* Indicates significant at P< 0.05 ** Indicates significant at P<0.01
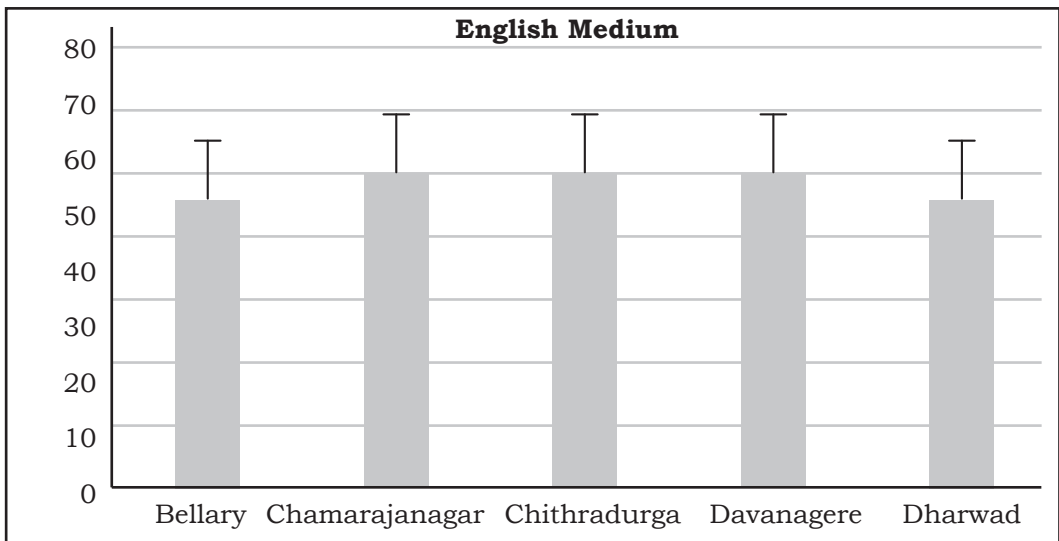

Fig. 7: Performances on GLAT-SS across five districts of Karnataka among Kannada medium students.

As can be seen in the Table 5 and Fig. 7, descriptive and inferential statistics revealed that students from Bellary district Kannada medium students performed better (Mean=66.70) as compared to students in other districts. Results gave there is significant influence of districts on GLAT-SS total scores among Kannada medium students

studying in grade VII (i.e., x^2 (4) = 22.570, p < 0.01). Hence, null hypothesis rejected.

As shown from the above results, the data analysis reveals that students from Grade VII from the Chithradurga district performed better than students in other districts on GLAT-SS. The scores were divided into three categories: below average, average, and above average. And most of the student's performance was in the range of 58–69, i.e., *average* in all the districts. Also, it is seen that the performance of students in the Chithradurga district was more in the range of 70–80, i.e., above average as compared to other districts. Kannada medium students from Bellary district performed better as compared to students in other districts. There is difference found in performance between English and Kannada medium students on GLAT-SS total scores in Bellary district, Chithradurga district, and Dharwad district. From the results, it is evident that GLAT-SS reveal students' performance in social science subject systematically where most of the students' performance was in the average range. It supports the study (Wuest and Fisette, 2012), where formative assessment results acted as an indicator for teachers to plan their lessons. GLAT-SS also considers the results of (Mcmillan 2014) which highlighted that many questions to be asked for obtaining the information regarding whether the students had learned or not. Among 15 different sections of GLAT-SS, Section 15 that is 'Read the passage and answer the questions' is the easiest section for students to answer, and the most challenging section for students to answer (Mean=2.03) was Section IX that is 'Answer the following questions in one sentence.'

Conclusion

The Grade Level Assessment tool (GLAT-SS) was implemented to assess students' educational level in social sciences subjects as per the Karnataka State Education Board in Grade VI so that remedial measures can be taken up appropriately. It is especially useful for those students who are scholastically backward in social sciences subject. This tool considers the content of Grade VI in Karnataka, and items were selected from the existing textbook with utmost care to enable a representative sample of content for testing. Also, it is easy for teachers to use the tool. GLAT-SS saves the teachers' time in constructing teacher-made tests in social sciences subject in Karnataka. It can be used by the teachers in identifying challenges faced by students in social science subjects for Grade VI in Karnataka for both English and Kannada medium students.

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Critical Reflections on Assessment Approaches in School Education

Minimum Levels of Learning, Continuous and Comprehensive Evaluation and Learning Outcomes

Vandana* and Aejaz Masih**

Abstract

Assessment being an inextricable part of any learning process has gone through many ups and downs since independence in India. Transformations have seen from the introduction of Minimum Levels of Learning: to measure a list of competencies as an end product, to the introduction of theoretically sound 'Continuous and Comprehensive Evaluation (CCE): to guide the overall learning process of student. With time, many pitfalls and implementation failures have been observed in these approaches of assessment. Thus, the inception of learning outcomes approach after CCE's unexpected implementation failure opens a scope for critical discourse in the field of school education in India. The term 'learning outcomes' reflects a conceptual tension and far less scope of flexibility as propounded by many educationists globally. Thus, the paper attempts to show the post-independence journey of school level assessment procedures in India and critically reflects upon the current learning outcomes approach from national and international perspective to predict its future feasibility and upshots.

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INTRODUCTION

Traditionally, knowledge is commonly viewed as static and absolute in nature and learning as a passive exercise. Accordingly, the curriculum tends to be designed and implemented as a collection of facts and truths and assessment as a means to quantify how much and how well these facts have been memorised and reproduced by the students. But with the changing perspective of knowledge in terms of social, cultural and political dimensions as a constructive process of meaning making, contest these absolute and rigid notions of 'knowledge', 'learning' and 'assessment'. The assessment process stays within the socio-cultural context, emphasising upon the diversified needs and ways of knowing and learning and a 'fair' opportunity being provided to all to express their learning throughout this process (Rampal, 2020).

WHAT ROLE DOES ASSESSMENT PLAYS IN EDUCATION?

Assessment is inextricably embedded in the teaching-learning process. A careful and effective design of assessment could facilitate learning by providing valuable feedback to the learners as well as teachers on their learning process and help external stakeholders to pass a judgement on learner's course of study (Azim Premji Foundation, 2015).

At the time of designing assessments, it becomes difficult what purpose does it serve, i.e., formative or summative. Summative assessments are designed to judge a learner's performance at the end of an academic year or a particular course against pre-defined standards. While formative assessments are designed as a part of the on-going learning process and provides a detailed, individualistic and continuous feedback on the learning process of learners. This kind of 'assessment for learning' also helps the learners, teachers and their parents in understanding the process of learning and reframing the teaching strategies and assessment practices as per the individual learner's profile. The kind of assessment also depends upon for whom it is being designed, i.e. for students, governance purposes, institutions, a program and so on (Azim Premji Foundation, 2015).

TRANSFORMATIONS IN ASSESSMENT APPROACHES AT SCHOOL LEVEL IN INDIA

Important Policies, Commissions and Frameworks: Perspective on Examination Reforms

The education system of any nation has its foundation based upon the recommendations made by educational policies, national frameworks, various commissions and committees as well as the decisions and conclusions made by the higher bodies and institutions set up for the planning, research and governance of the education system

at the school level. The Education Commission (Ministry of Education. Government of India, 1964) and Secondary Education Commission (1952) stated the educational system as examination-ridden and reflected upon the crippling effect of external examination on quality of learning and suggested that teaching for successful learning cannot occur without high quality assessment (Ministry of Education, Government of India., 1964 and Mudaliar, 1953). Therefore, assessment needs to be integrated in the process of teaching and learning and designed in such a manner that it becomes a powerful means of influencing the quality of what teachers teach and what students learn. Similarly, the National Policy on Education (1968) had mentioned that the major goal of examination reform should be to improve the quality of evaluation system and make it a continuous process for the students to improve their level of performance rather than focusing upon certification. In the queue, the second National Policy on Education (1986) revised in 1992 and Programme of Action (1992) addressed that the reforms in examination have been a subject of serious discussion for quite a time and suggested decentralisation of the operations in examination system; increasing the credibility of the examination system; shift from pass or fail criteria to grade system; open book examination, diagnostic evaluation to be experimented with

(Programme of Action, 1992). The Minimum levels of Learning (MLLs) in language, Mathematics and Environmental Studies for Classes I to V have been developed by Ministry of Education at the national level and the POA (1992) suggested developing the same in the remaining subject areas. It also suggested a flexible scheme of Continuous Comprehensive Evaluation, 2019 guidelines recommended at the elementary stage so as to make the evaluation process an integral part of teaching and learning process (Programme of Action, 1992).

Another remarkable documents, National Curriculum Framework (2005) and Position paper on Examination Reforms (2006) associated the term evaluation with stress, anxiety and examination and accepts that the efforts at redefining curriculum would be of no use if the evaluation and assessment system would not change for good. It deeply identified that CCE would require a great deal of planning at various levels if it is to be meaningfully executed and if it is to have any reliability as an assessment. It explicitly addressed the issues in the examination system as categorisation of students as 'fast' or 'slow' learners; stress-ridden examination system; one size does not fit all and suggested to not expect of everything of every subject from every student; flexibility in when exams should be taken and elimination of pass or fail concept; make use of variety of assessment methods;

qualitative feedback; self-evaluation; criterion based assessment, term-wise exams; progress card indicating general observations on health and nutrition, specific observations on the overall progress of the learner, and information and advice for the parents etc.

CCE was then introduced into the school examination system as one of the measures of Right to Education Act (RTE, 2009) and many alterations have been done since then, following which, the latest document on CCE published by NCERT in 2019 was designed to keep it abreast with the learning outcomes designed in various curricular areas in 2017. It provides information to help different practitioners to understand and overcome the misconceptions related to CCE supported with detailed insights on 'What', 'Why', 'How' aspect of CCE as well as provides exemplary 'Rubrics' for evaluation in consonance with the learning outcomes with a focus on bringing inclusivity and quality into the system. Parallel to this, the National Education Policy (2020) envisages transforming the culture of coaching, rote memorisation and checking content knowledge of students to the flexible and competency based assessment system where learning outcome and indicators would guide the course of learning and suggested to establish a National Assessment Center (PARAKH) and report cards of students with 360–degree coverage.

A brief timeline of important policies, frameworks and commissions on the examination reforms at the school level provides a backdrop to how different assessment approaches came into existence which is reflected upon in a detailed manner ahead.

From Minimum Levels of Learning (MLLs) to the Inception of Learning Outcomes Approach

Special focus on educational achievement and quality of education began in India when National Council of Educational Research and Training (NCERT) in collaboration with the UNICEF, worked upon the projects on 'Primary Education Curriculum Renewal' and 'Developmental Activities in Community Education and Participation' in 1978 and laid down Minimum Learning Continuum (NCERT, 1991). This continuum included learning outcomes to be achieved by the students studying in Classes 2, 3, 4 and 5. Considering the evidences collected from these projects and the recommendations of the National Policy on Education (1986), NCERT developed another document named 'Minimum Levels of Learning at Primary Stage' (NCERT, 1991). The vision behind formation of MLLs was to reduce the disparities in terms of caste, class, creed, and promote equity by providing a standard access to education to all children of primary

stage. The government laid down the MLLs which specified the standards to be achieved by all learners in various grades of the primary stage in three curricular areas of language, mathematics and environmental sciences (NCERT, 1991). But critics have argued that the philosophical and conceptual basis of the MLL concept was flawed in many ways as stated in a report titled 'Status of Learning Achievement in India' published by Azim Premji Foundation in 2004.

A radical shift has been observed in the process of learning and teaching as a construction of knowledge rather than focusing upon the competencies and product oriented evaluation. Soon, the MLL concept was found to have a limited scope for the overall development and assessment of the learners as well as equally focusing upon the affective and psychomotor domains of learning. In order to address these changes and bring them into the system, NCERT undertook an exercise to frame 'Learning Outcomes' for Classes 1–8 in all the subjects (NCERT, 2017) based upon the long term grade and subject-wise curricular expectations and suggested pedagogical processes.

It is pertinent to reflect upon the major assessments related initiatives taken in between the era of MLLs and the concept of learning outcomes before jumping upon the conclusion.

Continuous and Comprehensive Evaluation (CCE), Non-Detention Policy (NDP) and Admission in Age Appropriate Class (AAAC): Major Initiatives under RTE Act, 2009

More than a decade ago, the National Curriculum Framework (NCF) 2005, highlighted a shift in the paradigm of learning (NCF, 2005). Children as active learners than passive consumers of knowledge; construction of knowledge as a natural process within the environment; learning— a meaning making process by exploring, inventing, enquiring, reflecting and deciding wisely, were the few highlights of this shift (Sharma, 2015).

Keeping that in mind, the Ministry of Education (MoE) earlier known as Ministry of Human Resource Development (MHRD) advised the academic authority in one of its advisory notice that apart from following ABL (Activity Based Learning) methodology, Continuous and Comprehensive Evaluation (CCE) system involves creating profile for each child by focusing upon five major tools, namely, the engagement of child with others and oneself; overall observation; observation pertaining to group activities as well as individual activities; understanding of child's written responses on teacher assigned activities and recording anecdotes (MHRD, 2012). CCE in itself was proved to be a well thought shift in the assessment system.

Highlighted in an e-article on 'Assessment in School Education: The Current Debate' by Azim Premji Foundation (2015), the poor implementation of a well thought concept of CCE made it a huge hurdle to realise its real intent into the process. It was misunderstood as a process of weekly testing of learners in the name of formative assessment and passively filling the formats. If teachers would have given intensive trainings, first, for understanding the conceptual dimensions of CCE and, then, its pedagogic implications into the classroom, the implementation of CCE would have been processed in a desired manner (Azim Premji Foundation, 2015).

The policy in itself was fault free and theoretically sound but the authoritarian structure of education system could not make it possible in practice (Mishra, 2015). Thus, there seems to be a need to challenge and reconstruct the overall evaluation system of the country from being authoritarian to child centred for the policy ideas, like CCE, Age Appropriate Admission to the Class (AAAC) and NDP, could realise their true potential in practice (Mishra, 2015).

The actual worth of CCE could be understood well if other important measures of Right to Education Act (RTE, 2009), such as AAAC and NDP, would be read and understood in concomitance (MHRD, 2012). All these measures are based upon the rock solid constructivist philosophy of child-centred education. This paradigm believes in child's own construction of knowledge in an active and enriched environment as per their own individual potential with the positive support and guidance of the teachers. The goals of learning, the process and assessment activities, are all discussed and decided among teachers and learners together as a part of overall learning process.

This approach disapproves the authoritarian role of teachers and requires learners to ask questions and think critically and rationally to arrive at a solution for the well-being of the humankind. The underlying assumption that similar age group would help learners to collaborate well brought in the concept of AAAC. Likewise, individual differences among learners make them learn in their own way and pace. A 'one-size fits all' type examination system cannot justify with each child's potential and leaves many important areas of child development untouched. Consequently, CCE was recommended through RTE, 2009. From here, the need for NDP was recognised because each child progresses as per their own potential level and mere tagging them with 'pass-fail' would not account for conceptual clarity rather make them feel demotivated (Mishra, 2015).

Before the new National Education Policy (NEP, 2020) became public; there had been a lot of murmuring in the reports and news about the future of assessment and evaluation system

of the nation. This whole buzz was about whether the traditional pass-fail exam based system will be reinstituted or 'No Detention Policy' (NDP) will be followed which was assumed to promote learners automatically to the next class by the majority.

How are They All Connected?

After the decline of MLLs approach and poor implementation failure of CCE and related measure like NDP, the next transformation in assessment procedures came into the form of 'Learning Outcomes' till elementary level. NCF (2005) emphasised upon the fact that though MLLs were designed to measure the level of competencies of children in different curricular areas but the fragmented manner of sub-skills to be achieved in a timely manner was never a condition for flexible learning process. With regard to the concept of learning outcomes, NCF (2005) takes a stand that, "designing learning and test items for these detailed lists (competencies), and teaching to these learning outcomes, is impractical and pedagogically unsound". Apart from having its own merits and demerits, there is still a lack of clarity between what NCF (2005) emphasised about learning outcomes approach and the vision behind designing 'Learning Outcomes' till elementary stage. Therefore, the recently developed 'Learning Outcomes' (LO) for assessment purposes make it even more crucial to look at it from multiple perspectives with a critical stance.

Critical Reflection on the Learning Outcomes Approach in School Education of India

In India, the journey of assessment system at school level has gone through various stages and forms since independence. A number of studies have shown the concern behind India's declining rate of educational achievement with no signs of improvement. The Annual Status of Education Report (ASER), 2018 released by Pratham, indicated that though the levels of basic arithmetic and reading has improved a bit in rural India since 2014, but significant efforts to improve foundational skills are the need of the hour as noted in the report. Similarly, the National Achievement Survey (NAS) of the academic year of 2017–18 conducted by NCERT shows levels of learning in different subject areas, wherein lowest performance of students was seen in the area of mathematics as compared to other subjects.

Since independence, many commissions and committees laid emphasis upon revamping the assessment system based on standardised examinations and tests to bring about qualitative reforms in the education system because assessment takes a significant part of any teaching-learning process (Assessment Reforms; NEP, 2020). Student assessment in India has passed through oral testing, written tests, centralised examinations at secondary and senior secondary levels, continuous and comprehensive

evaluation and, now, towards competency based assessment through predefined learning outcomes. The recently launched 'National Education Policy' (NEP) 2020 amidst COVID-19 pandemic, in its fundamental principles, stated, "focus on regular formative assessment for learning rather than the summative assessment that encourages today's 'coaching culture' (NEP, 2020), which has been a word of mouth in several previously published policies and commissions.

The new NEP insinuates upon replacing the rote memorisation and summative form of assessment to a more flexible, formative, competency based assessment system which includes assessment 'as', 'of' and 'for' tools designed to measure the predefined learning outcomes and capabilities in a specific subject area (NEP, 2020). At once, these changes sound vibrant and give a lot of hope, though a few have been repeated throughout education policies, but to announce board like school examinations at the end of Classes 3, 5 and 8 to be conducted by an external authority reflects worrisome story as highlighted by many activists and educationists. Anita Rampal, an eminent educationist from Delhi University, stated explicitly in this context that,

"It's centralised focus on state examinations even in Grades 3, 5 and 8 in addition to the board examinations in Grades 10 and 12 runs contrary to the RTE which had banned children from being subjected to any board examination till Grade 8, and even its modified Section 16 allows a regular school examination" (Rampal, A. 2020).

This centralised focus on examination system even at the foundational stages of education clearly indicates the focus on measuring the previously made learning outcomes for each subject of a given class for the purpose of governance and accountability matters. However, an e-news article on 'NEP 2020: Why altering school education in India has divided experts' puts it in favour of the policy guidelines on assessment that it could benefit students to take enough time to grasp concepts even in board exams and the school examination at class 3, 5 and 8 by an authority would fill the gaps in learning then and there, instead of failing students at higher classes (Kaveri, M. 2020).

Another perspective in this discourse supports the formulation of learning outcomes in lieu of broad curriculum expectations suggested by NCF-2005 as it would benefit the teachers to measure students' learning progress and also throw a light on the health of the education system (Sharma, 2015).

The document on learning outcomes at the elementary stage claims not to be prescriptive in nature and may be modified as per the local requirement on one hand and constructivist in nature on the other hand (NCERT, 2017), but failed

to recognise that in constructivist paradigm, learning outcomes are not prescribed in advance for all the students as repeatedly mentioned by majority of educationists earlier in this paper.

The document also reads, "Keeping in view the decline in outcomes of reading ability as well as numerical and mathematical ability which is a major concern at present, quality, as measured by learning outcomes to be achieved by all, especially for literacy, numeracy and essential life skills is crucial. The focus of the Twelfth Five Year Plan for basic learning as an explicit objective of primary education and the need for regular learning assessments to make sure that quality goal are met" (NCERT, 2017).

The focus of above statement is reflecting the ultimate objective of developing learning outcomes is to shift the focus from 'teaching to test' culture in order to judge and maintain the quality of learning in a standardised manner. A special focus was given to suggest some curricular strategies for the categories of students who fall under inclusive education but it was made sure that they, too, reach the same levels of learning or obtain same outcomes at the end of the year. The individual learning needs and styles of learning are given due importance in terms of developing class-specific or student-specific suggested learning outcomes. The document emphasised upon process-oriented learning to be

measured in both qualitative as well as quantitative forms (NCERT, 2017) for students to develop holistically which provides a ray of hope that at least it did not completely loosened a touch with constructivist approach.

Also, the document points, "Most often, teachers are not clear about what kind of learning is desired and the criteria against which it could be assessed" (NCERT, 2017). The fact could be valid but the bigger concern remains, "Would the suggested learning outcomes make teachers competent enough to teach and assess what they are expected to do in the constructivist paradigm?" or "will it rather make them mechanistic in their approach by withdrawing their academic freedom and autonomy"?

The reasons presented for the development of learning outcomes in order to maintain quality in school education driven towards constructivist paradigm but more clear guidelines are required to make the learning outcomes inclusive for all (special needs as well as social inclusion categories) students in the near future.

Critical Reflections on Learning Outcomes (LO) Approach: International Perspective

The term 'Learning Outcome' has been used extensively in educational literature and the concept has found widespread application in educational institutions. Along with the developments made in this prospect, it has become an area of

constant dialogue. While the idea has been embraced by some, some have criticised it on many accounts or argued that it has been misused. At present, the diverse meanings attached to this term and multiple ways of implementation has made it pertinent to reflect upon the concept of learning outcomes supporting with different perspectives upheld by various educationists globally.

The term 'learning outcomes' was first defined and used in the Educational Policy Document of European countries as part of Bologna Declaration 1999 to provide some common standards of performance in higher education (European Ministers in charge of Higher Education, 1999). The concept of learning outcomes presumes that predefined and precise standards of learning would ensure the level of student's performance at the end of the academic term or course of study (Murtonen et al., 2017). The overriding discussion in this area has been about whether predefined, unchanging, precise and measurable statements should judge the level of learning or less precise, open-ended and less focus on measuring learning in standard outcomes would analyse the process of learning (Prøitz, 2010; Zhang, 2016). Another view posited by Hussey and Smith highlighted that learning outcomes have been used in behaviouristic terms since a long time but the introduction of a "more fashionable term" as 'Learning Outcomes' would not change the level of magnitude they deem to

check in a standardised manner (Hussey and Smith, 2008). The purpose of any teaching-learning is to scaffold, elaborate, extend, apply and critically form an understanding of a particular concept with the help of previous occasions of learning or a skill to be refined further. During these sessions, it is neither preferable nor possible to design specific or stable learning outcomes because the emphasis of any teaching-learning session would vary with the level of individual student's ability (Hussey and Smith, 2008).

Eisner quoted the movement of learning outcomes as, "uniformed army of young adolescents all marching to the same drummer" (Eisner, 2000, p. 344). The paradigm shift discussed earlier in this paper involves teaching and learning as an interaction between a teacher, learners, learning environment and learning aids where individual needs and potential of the learners could take unexpected moves leading the process of learning towards a completely new path and used as "learning moments" (Hussey and Smith, 2008) by the progressive teachers and thus, the role of the teacher is of prime importance in framing learning outcomes according to the relevance and worth. Bennett and Brady seems to be in agreement with what Hussey and Smith said about 'Outcomes' being a tool for judging and auditing the teacher's ability of teaching in place of measuring the teaching and learning process (Bennett and

Brady, 2014). The movement of LO based assessment contributes to the existing structural inequalities, further homogenize the classrooms, curtailing the academic freedom of teachers and placing them under the unfair surveillance (Bennett and Brady, 2014). It was also noted by some that learning outcomes are not showing results as they were deemed to (Holmes, 2019) but could benefit if the teachers and curriculum designers would allow learners to become a part of designing learning outcomes and observe learning from learner's perspective (Allan, 1996).

Conversely, Manuel Souto-Otero noted the critical and defensive viewpoints regarding LO movement and presented a neutral stance that learning outcomes may work for different purposes in different geographies. They could be precise as well as open-ended; some could be used for assessment purposes (Souto-Otero, 2012) and others might not; some might follow the process of learning by using different modalities and others might use them as an end; if implemented in a desired manner (Lassnigg, 2012).

From the above considerations, it is seen that globally the learning outcomes approach is being widely used in the higher education system and the pros and cons presented by various educationists indicates that LO may be useful in the successful completion of a specific teaching session with teachers and students equally participating into the process

of learning but cannot be used as performance indicators.

CONCLUSION

The purpose of education is to imbibe the three essential processes of learning (how to learn, relearn and unlearn) into the learners. The assessment of such learning is a part of the broader learning process which does not focuses solely upon pass or fail criteria or achieving an end outcome but to improve learning throughout by systematically maintaining the holistic learning reports of students. Traditionally, teaching to test the knowledge of pre-decided competencies and specific performances in rigid contexts does not hold much scope of growth in the 21st century. There should be a constant discourse among educational departments, teachers and policy makers regarding the current wisdom that assessing the pre-assumed learning outcomes should take priority over teaching our students how to think critically and become a critical part of their own learning and assessment processes. One can ask, "What really is the purpose of this focus on learning outcomes?" Although a number of critical remarks on the learning outcomes approach have been observed by the international researchers in the previous section of the paper but a constructive approach towards achieving these learning outcomes and timely reflections with a critical lens would

prove their worth in the Indian school education system. Only if the learning indicators mentioned in the document 'Learning Outcomes at Elementary Stage' (NCERT, 2017) in order to achieve the learning outcomes, would be effectively conceptualised and practiced by the teachers at the ground level with continuous and appropriate training programmes, the vision behind the inception of learning outcomes approach could be internalised and realised by the system accurately.

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Problems of Teaching English Language in Nagaland

Lovely Sarkar* and Surendra Yadav**

Abstract

In today's world, the growing importance of English language is evident in various fields of life. Owing to its usefulness, our education system requires skilled English language teachers who can cater to the needs of the learners for learning to be maximised. This paper focuses on the status of English language in the state of Nagaland. Through this paper, the researcher attempts to identify the problems faced by the teachers of English language in Nagaland and also to suggest strategies for the elimination of the problems. Researcher's own experiences as a teacher of English in the state of Nagaland have been mentioned in this paper. Review of literature consists of the various language policies, commissions and committee reports on English language, articles on English language teaching in Nagaland, newspaper articles and books related to English language teaching. The findings of the study reveal that teaching of English language in Nagaland has several issues and challenges. This calls for special efforts and changes so that language learning can be improved.

Introduction

In today's world, the importance of English language is evident in various fields of life. It is a language used in communication, international business, education, publications, entertainment, for seeking job and career opportunities, for travelling to other parts of the country and the world at large.

A vast reservoir of information, documents, e-books, etc., are found in the internet in the English language. It is a language that is used for the

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expression of our thoughts and feelings. Its importance can never be denied in the present world.

It is a way and means to keep pace with the other nations of the world. Today, English is an instrument of communication, a medium of expression and exploration. English is regarded as the major international language and billions of people speak English in current times. According to F.G. French, "Because of rapid spread of industrial development, science and technology, international trade and commerce and the close interdependence of nations, English has become a world language" (Pahuja, 2009, p.1). Jawaharlal Nehru says, "English is our major window on modern world" (Pahuja, 2009, p. 2).

This paper reflects the status of English in the state of Nagaland. Despite the growing demands and need of the language, proper measures are not taken for imparting English language education in the state. Plethora of gaps exists in the teaching and learning of English. The purpose of the study is to identify the problems faced by the teachers of English language in Nagaland and through the identification of the problems; it strives to suggest strategies for the elimination of the problems. The researcher's own experience as a teacher of English for over a decade in the state gives an impetus and forms the background of the study.

Literature Review

For the present study various articles, dissertations and theses related to English language teaching have been reviewed. The reports of various committees and commissions appointed by the government of India from time to time which looked into the matters of education have also been reviewed for a detailed analysis of the importance of English in India and also how the language policies have evolved and led to the present system of education.

The University Education Commission (1948–49) suggested that in addition to the mother tongue and Hindi, english should be taught at the secondary and university levels. English should be the medium of instruction for higher education. According to the commission, the richness of the English language is evident in the field of literature, humanism, scientific expansion and technical growth and development. If we give up English considering it a language of the foreign land, we would surely lag behind and be far off a place from the rapid expansion of knowledge. The lack of exposure to the language would result in deterioration of our standards of scholarship. It further says that our students should have sufficient mastery of English and that without having required competency in the language the students should not be deemed to have completed the course.

The Secondary Education Commission (1952–53) has also emphasised the need for teaching

and learning English at Secondary School and University levels. It stated that English as a subject should be mandatorily studied at the secondary level across the country accounting to the fact that it is widely known among the educated, it is a means of national unity, and it is useful in international sphere. To exclude it will lead to harmful effect.

The Kothari Commission (1964–66) emphasised the need to master the English language. For this, adequate emphasis has to be laid on the study of English from a very young age. It reiterated its importance as a library language and also the role it plays for the dissemination of knowledge across the world.

The National Policy on Education (1986) lays special emphasis on the study of English. Teaching and learning of English must be strengthened as it is the language of science and technology. In order to keep pace with the rapid growing world, India has to contribute to the field of knowledge by playing its active role.

The NEP 2020 throws light on the importance of the study on the Indian languages, classical languages and literature of India. It mentions about the three-language formula which 'includes the study of a modern Indian language, preferably one of the languages, apart from Hindi and English in the Hindi speaking States, and of Hindi along with the regional language and English in the non Hindi speaking States' (Report of the Education Commission, 1964–66)

and 'also to encourage the study of Indian languages across the country' (NEP 2020). It envisions to give 'high quality offerings in Indian languages and English' and some foreign languages (NEP 2020). This policy lays stress on the need to promote multilingualism for national integration.

Sothu (2020) studied the problems of teaching and learning of English as a second language at secondary level in Nagaland. The study revealed that deficiency of proper aim, method, good textbook and lack of facilities are some of the problems faced by the teachers of English language.

Khamari (2014) explored the problems of teaching English at primary level. Descriptive survey method was used. The major findings reveal that there is lack of congenial atmosphere for teaching English in the classroom and the number of English teachers in school is not sufficient.

Meghanathan (2011) conducted a study on 'Language Policy in Education and the Role of English in India: From Library Language to Language of Empowerment'. The study dealt with an extensive study of the language policy in school education of different states of India as first language, second language and also third language, the languages taught in the school curriculum and the medium of instruction at all levels of school education and the place of English in the schools. The findings reveal that material development (especially textbooks) has not been

professionalised. This does not help the students as their needs are not met. Schools lack in infrastructural facilities and competent teachers which add to the problem.

METHODOLOGY

This study is descriptive in nature. For this study, extensive literature review has been done. Data for this study has been collected from the secondary sources like books, journals, articles, dissertations and newspapers. The review of literature consists of the recommendations of various education commissions namely—University Education Commission of 1948–49 and Kothari Commission of 1964–66 with regard to the place and importance of English in the country and national policies like— NPE 1986 and NEP 2020 on education have been studied. Articles written by Meghanathan (2011), Khamari (2014) and Sarkar and Yadav (2019) have provided new dimensions to the study. Ph.D dissertations of Whiso (2006) on 'English for the undergraduate students of Nagaland' and M.Ed dissertation of Sothu (2020) on 'A study on the problems of teaching and learning of English as a second language at secondary level in Jakhama block in Kohima district' of Nagaland have been reviewed which provided an impetus for this study. Books written by T.C. Baruah (2010) and N.P. Pahuja (2009) *The English Teacher's handbook'* and *Teaching of English'* respectively were of immense help for the researcher to delve deep into the position of language

teaching in India. Some articles in the local newspapers of Nagaland state like Nagaland Post and Eastern Mirror were taken into consideration for this study. Apart from these, the researcher's own experience as a teacher of English in the state of Nagaland is also presented in this paper.

NEED AND SIGNIFICANCE OF THE STUDY

Language system in Nagaland involves the use of English, Nagamese, and the Naga dialects. "Keeping in view the rich plurilingual Naga society, it becomes imperative that the students learn English language well" (Whiso, 2006). This makes it essential to choose English as a common language system in Nagaland for official as well as educational set up. However, the teaching and learning of English is confronted with multiple problems in the state. So, this study attempts to identify the problems of Teaching English in Nagaland and thereby come up with some suggestions so that the problems with regard to English language teaching can be solved.

FINDINGS OF THE STUDY

India had been under the British rule for a very long time. This has resulted in the growth and expansion of English language in India. English is not an Indian language as it is not the mother tongue of any Indian state. When the Indian constitution was adopted on 26 January 1950, it was decided that Hindi will be

declared as the official language of the Union. But due to the objections raised by some of the states, English was to be continued for 15 more years (Languages with official status in India). However, there was continued dissatisfaction and protests by several states in India over the use of English for only a specified period and as a result Parliament enacted the official language Act, 1963. This provided for the continuation of use of English for official purposes along with Hindi, even after 1965. In India, it enjoys the status of an associate language. "In addition to Hindi language English language may also be used for official purposes" (Ministry of Electronics and Information Technology, GOI). Next to Hindi, it is used as a link language for inter-state and intra-state communication. It has greatly impacted both the educational system and national life. Growing importance of English in India is based on the following aspects— "as a national link language, as an international link language and as a library language" (Baruah, 2010). Owing to the practical utility of English in multifarious activities, it is a revered language.

Despite having the status of first language, the teaching of English is not found to be satisfactory in Nagaland. Teaching of English is influenced by a number of issues which need special attention. The findings of the study reveal that some major challenges lay ahead of the English language teachers.

The problems and challenges are as follows—

1. Problems Related to Teaching — learning Resources

It is a known fact that teaching-learning resources reinforce better teaching — learning process. In the absence of those resources, teaching of English is never fruitful. The problems related to teaching-learning resources are as follows—

(a) **Lack of library facilities—** Insufficient library facilities fail to develop proper reading culture among the students of English language. It causes hindrance for better learning opportunity for the students as well as the teachers as it limits the students' knowledge and understanding of the language. Library facilitates the students to gain access to a wide variety of books which helps them in extensive reading, increased fluency, improved vocabulary, better comprehension and thus, they develop higher order thinking skills. Libraries should be well equipped with sufficient journals, periodicals, books, reference materials, etc. But in many schools of Nagaland there is dearth of library facilities. Most of the school libraries do not have sufficient and updated reading materials.

(b) **Lack of audio-visual aids—** Lack of audio-visual aids in language classroom does

not stimulate learning. "The availability of right type of teaching materials and audio-visual aids can certainly make the teaching of English in India quite effective" (Pahuja, 2009). In the absence of right type of materials students miss the fun for learning new and abstract concepts. Audio-visual aids make learning of English easy by making the concepts interesting for the learners of English language. Aids like the blackboard, the roll-up board, charts and tables, flashcards, cut-outs, the flannel board, wall pictures, the clip-charts, advertisements etc. are the minimum requirements of an English classroom. Absence of these aids may not give the expected outcomes of learning. Most of the schools do not have these aids.

(c) Lack of teacher's instructional material— Material for developing communicative activities, development of skills, practice materials for phonology, grammar games and activities, teacher's manual, puzzles, computers, podcasts, multimedia components, etc. play very important role in English classrooms. Teachers need to be equipped with good instructional materials for learning to be maximised. Lack of instructional materials

can create gaps in teaching English.

2. Problems Related to Classroom Teaching

There are numerous problems that a language teacher comes across in the classroom. Some of them are discussed below—

(a) Lack of interest— Interest is an internal factor that draws the learner towards learning. Lack of interest in the learner is a major cause of failure in the attainment of the objectives of teaching and learning English language in India. Teachers need to create a need in the children to learn the language otherwise they will not develop interest in learning the language.

(b) Less interactive classroom— This is yet another problem which needs to be addressed. Creating an interactive classroom environment is very important for a teacher. "The teacher and the taught are the active participants in the process of education" (Safaya et al., 2010). Unresponsiveness of the students can make the class dull. Hence, failure to create learning environment will lead to less interaction in the classroom which will hamper active participation of both the teacher and the taught.

(c) **Mispronunciation—** The sound system as well as the spelling system of different languages vary. The style of pronunciation of one's mother-tongue if applied to English may lead to faulty pronunciation. In a complex sociolinguistics state like Nagaland, where various languages and dialects are used for communication, pull of the mother tongue while speaking English is evident. For example, the letter 't' is pronounced as 'd' in some tribes, while 'b' is pronounced as 'p'. This creates a problem for both the teacher as well as the students to understand each other.

(d) **Overcrowded classrooms—** Each student learn at different pace. Some students learn fast while some are slow learners. This demands individual attention. Overcrowded classrooms can restrict the teacher from giving individual attention to the learners. An overcrowded classroom will never allow the teacher to cater to the needs of the students with diversified needs. Many of the private schools in Nagaland are overcrowded which is a problem in teaching-learning process.

(e) **Lack of proper strategies—** Improper strategies on the part of the teachers can lead to the failure of teaching — learning process and make it monotonous. Teachers need to equip themselves with some proactive strategies like classroom management skills, teaching skills, time management skills, managerial or leadership skills. Proper strategies help the teachers to be ready for any kind of situation.

3. Lack of parental support for English language education

Lack of support from parents is one of the most recurring factors in the rural areas. Students belonging to those areas, generally lack motivation and support from their family to learn language. Sometimes there is lack of awareness on the part of the parents to identify the benefits of language learning. Parental attitude towards learning a language also affect the child's learning.

4. Lack of proper objectives of teaching English language

Many a time it is found that teachers do not understand the real objectives and importance of teaching English. Teaching of English is not objective-based. "The most unfortunate aspect was the lack of any clear-cut and attainable aim of teaching. This aimlessness was primarily responsible for the deplorable standard of achievement in English" (Baruah, 1991). In addition to this, the teachers are many a time overloaded with the syllabus. Timely completion of the syllabus puts pressure on the

teachers so much so that the teacher is helpless and real aim of teaching the language gets lost.

5. Use of old methods

In the rural schools, the old methods of teaching English are being used which is not student centered. Teachers still use, total-physical response approach, translation method and other old methods in their classroom. This limits the exposure of the students to the new and innovative methods of teaching English and restricts the students learning in a fruitful manner.

6. Teacher's own limited language proficiency

Teacher's limited language proficiency can never be an input for language learners. English teachers should be well equipped with the recent trends and practices of teaching. Teachers need to be updated with the recent trends of teaching English. It will help the teacher to acquire the required skills in the language. One who dares to teach must be a good learner first. A teacher must constantly seek knowledge.

7. Allotment of English classes to unspecialised teachers

It is a matter of great regret to find that teachers who are even without any specialisation are allotted English classes. It is found in some private as well as government schools. Government had appointed several teachers who do not have any specialisation in English and are specialised in subjects of Social Sciences. In many schools, teaching of English is taken up as a subject which can be taught by anyone and does not need any effort or specialisation from the part of the teacher. A teacher who does not have sound knowledge about English language fails to do justice to language teaching.

8. Proxy teachers

The menace of proxy teachers is well-known in the teaching fraternity of Nagaland. The case of proxy teachers in the village government schools is an open secret (Avina, 2022; Khrozhoh, 2021). The government appoints qualified teachers for various subjects but many of these teachers do not go to their posting places mostly if they are posted in some remote areas or villages and they themselves hire some teachers who readily takes up the job. The proxy teacher is generally a local inhabitant of the village who is unemployed. They take the place of the appointed teacher in lieu of a meagre amount of money. Proxy teacher is a big threat to the education of the children as he may not be adequately trained for the job and may not have adequate qualification to teach the subject.

9. Teaching and learning of English as a subject and not a language

The treatment meted out to English is that of a subject and not a language. This is a grim fact which probably hinders the language learning. Many a time students learn it for getting

good marks only and teachers teach it only as any other subject like Science, Maths, Social Science etc. and aims for the completion of the syllabus. The communicative aspect of English is also neglected. If the teaching of English is considered only as a subject and not as a language, the beauty of the language will be lost.

10. Disparities in the quality of English language education

Educational disparity exists in the rural and urban schools of Nagaland. Disparity can be found in terms of not so improved quality of education in the schools of rural areas which may be due to poor infrastructural facilities, lack of resources and facilities. The system of education in the urban schools is more advanced as compared to the rural schools. The teaching method also differs. Technology embedded teaching methods used in the urban schools is reflected in the students' performance. Infrastructural facilities in the rural areas are poor as compared to the urban schools. This limits students' exposure and affects learning. Digital divide is yet another concern. Due to poor connectivity or poor network the students fail to make use of the internet to access for information whereas, in the urban areas the students can make use of the digital devices for their assignment, projects etc.

DISCUSSION

The various problems related to teaching of English in the state are related to lack of teaching-learning resources like library facilities, audio-visual aids and teacher's instructional materials; not so interactive classes, overcrowded classrooms, mispronunciation and improper strategies; lack of parental support, lack of proper objectives of teaching English, use of old methods, teacher's own limited language proficiency, allotment of English classes to unspecialised teachers, proxy teachers, teaching and learning of English as a subject and not as a language and disparities in the quality of English language education.

The findings of the study indicate that although the growing need and importance of the English language is being felt at all levels yet no tangible step is taken for the elimination of the problems. No proper method is applied for uprooting the causes of its failure to meet the needs of the society at large. The importance of English language is the main reason for people to pursue English education with great enthusiasm than ever before and thus it has occupied a place of prime importance in the educational scenario of Nagaland. However, unfortunately owing to various reasons English language teaching remains under developed in many areas of the state. Out of the numerous problems of education at the primary as well as elementary levels, language is the major issue in the state of Nagaland. English

is the first language at all levels of education in Nagaland. But the learner's chance of hearing English language is limited to the classroom. The first language which is offered at the Secondary level of education is English. The second language offered is Modern Indian Languages – Hindi, Bengali, Ao, Lotha, Sumi, Tenydie and Alternative English. Nagaland is "the state with the largest number of medium of instruction at the primary level" (Meghanathan, 2011). This makes students encounter various difficulties in the English language classrooms. The findings of this study reveal that the growing number of private educational institutions is a witness to the disparities in the quality of education provided in the state.

RECOMMENDATIONS

Considering the role and importance of English language in the development of education system of a country, the syllabus, curriculum, teaching methods etc. have to be framed in such a manner that it serves the students' learning in the best possible manner. A myriad of strategies is required to optimise learning of English language which can be implemented according to the need and demand of the situation. This will definitely help the students as well as the teachers to overcome the difficulties faced during the teaching and learning of English. Some of the major recommendations are—

1. Educational institutions should strive to make provisions for improvement of the teaching-learning resources. Library facilities need improvement so that more and more relevant and quality books are stored.

2. Every school should look into the matter of overcrowded classrooms. The pupil teacher ratio should be checked.

3. Language has an important role to play across the curriculum. Strong emphasis on language naturally leads to the improvement of other areas of learning as well. It strengthens the foundation for several other subjects. Teachers need to adopt proper strategies for making the English language classrooms more interactive so that students find it interesting to learn the language.

4. A wide variety of new and innovative methods will create interest in the teaching-learning process. "The first and foremost quality of a language is its communicative aspect" (Sarkar and Yadav, 2019). Effective communication is a fundamental component of good teaching. New teaching methods like communicative teaching method need to be adopted so that our students gain communicative skills.

5. Technological facilities need to be improved in the schools so that language learning can be more interesting. Integration of ICT in English classrooms would maximise learning outcomes.

6. Schools need to appoint teachers with specialisation in English for teaching the language.

7. The system of proxy teachers in Nagaland is really a matter of concern. Stringent action has to be taken against the regular teachers who hire them on payment basis for their own benefit leading to the poor quality of education in the government schools of the remote places of the state. Government has begun the work to stop the menace. However, it has to go a long way to eliminate the problem. Strict biometric attendance has to be taken for this purpose.

EDUCATIONAL IMPLICATIONS

Evaluation in the form of in-depth study of the existing problems of teaching English will surely give new direction to the policy makers, educators and school administrators for the betterment of the situation. Education, being a subject of the concurrent list demands the active role and participation of the Centre as well as the state in matters related to education.

Keeping in mind the role of teacher's preparedness in the teaching-learning process, institutions need to arrange special training programs like refresher courses, in-service training programs, workshops and seminars for the teachers irrespective of whether they are professionally trained or not. This will keep the teachers updated about the latest developments in their fields. The educational institutions should be equipped with the basic infrastructural facilities so that the needs of the students can be fulfilled. English is a global language. The rapid development of English across the world can be attributed to globalisation. Globalisation has impacted the English language so much so that once called as the "Queen's language" has become a "Common – man's language" now.

Globalisation has both positive and negative effects on language. In this situation, proper care and attention need to be paid for its development so that our students are competent enough to meet the challenges that may be posed in due course of time. Only setting up English medium schools or converting schools into English medium will do no good for the future generation of the students.

CONCLUSION

Proper initiatives need to be taken for the teaching of English. The question arises "Is language teaching helpful?" Answer to this lies in the fact that comprehensible input is the basis for learning any language. Although English is the first language of Nagaland, yet the students' hearing of the language diminishes once they are out of the classrooms, Nagamese, the local language, other tribal dialects of the state and several languages take over English. In this case, it is imperative that language inputs are thoughtfully given to the children. Teaching, when consciously and deliberately planned is a kind

of input for the language learners. A teacher needs to plan the right kind of teaching-learning materials which will serve as inputs and will cater to the needs of the language learners. This will facilitate and optimise language learning.

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A Study of SWAYAM Prabha DTH TV Channel (*Kishore Manch*) in Secondary and Senior Secondary Schools of India

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Abstract

Technology undergoes constant evolution. As newer technologies emerge, they absorb and integrate the capabilities of the outgoing ones. However, this doesn't render the earlier technologies obsolete. They persist and can be utilised to achieve valuable educational outcomes. The objectives of both technology and education align in a way that fosters synergies, enhancing children's learning experiences. Television, a technology that continues to endure, possesses unique features. Combining both audio and visual elements, it stands out as a powerful tool for delivering diverse information effectively. Educational television, in particular, serves as a crucial device for disseminating education widely among the masses. In this paper, the awareness, accessibility and perception of Swayam Prabha DTH TV Channel 'Kishore Manch' was studied across various States/UTs of the country using both qualitative and quantitative data. The results indicated that there was limited awareness about the channel. Accessibility of the channel in the sampled States/UTs is still a challenge. The perception of teachers towards the channel was positive but there is a scope of improving the production quality of educational programmes. Additionally, challenges such as discontinuity in series telecast need addressing, along with the endeavour to captivate students' interest in DTH TV. As the efforts are underway to expand the initiative of educational TV in India, the paper seeks to discuss the results of the surveys about this expansion.

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INTRODUCTION

Information and Communications Technology (ICT) has permeated almost every part of human civilisation. Learning too has been impacted in big ways. From organising classrooms to integrating technology into pedagogy, from educational administration to distance and blended learning, technology is being used extensively to achieve the desired outcomes. Disseminating the information through television, radio, internet, handheld devices, etc., has been used for the past many years. Among all these technologies, the importance of television cannot be under-estimated even today, especially in countries like India where the digital divide still exists. In 1959, television was introduced in the country as an educational project supported by UNESCO and the Ford Foundation.

It started as a social communication experiment, with small tele-clubs organised in Delhi and community television sets. Educational television was introduced in 1961 to enhance middle and high school education. Its experiments in teaching of Science, Mathematics, and language proved successful and received appreciation from many UNESCO experts (Kumar, 2000). Later, when India launched its first Indian National Satellite System (INSAT-1 [A]) on 10 April 1982, a countrywide national telecast service became available. Initially, programmes for students and teachers were telecasted in two States,

viz., Odisha and Andhra Pradesh. Subsequently, more advanced series of INSAT satellites were launched, including INSAT 4 (A) in 2005, which significantly boosted the country's DTH television services. In the year 2000, Indira Gandhi National Open University (IGNOU) in collaboration with the Ministry of Human Resource Development (MHRD now Ministry of Education (MoE)) of the Government of India launched a satellite channel *Gyandarshan* exclusively devoted to education, was launched to boost the educational telecast. In 2004, EDUSAT a special satellite as the world's first satellite meant for educational purposes. It covered the entire part of the country and provided radio/television broadcasts, night downloading facilities and video—conferencing facilities.

Through all these initiatives, the educational telecasts have entered the Indian classrooms. National institutions such as UGC, IGNOU, NCERT have undertaken several initiatives to telecast educational programmes through various educational channels for both school and higher education. One such initiative has been the SWAYAM Prabha, which was launched in 2017 by the Department of Higher Education (DHE), MoE, Government of India (GoI) to telecast high quality educational programmes on a 24×7 basis. SWAYAM Prabha is a bouquet of 34 educational DTH TV channels using GSAT-15 satellite. Different institutions got the responsibility to

develop quality educational videos based on their expertise. NCERT was nominated to telecast the video content for school education from Classes 9–12. NCERT named this channel as the *Kishore Manch* (KM).

Such large initiatives require research-based studies to understand various dimensions of the project and their impact on teaching and learning. Research indicates that good television shows, like good books, can enhance children's comprehension of the world around them. Students will continue to watch educational programmes for additional learning opportunities. Though there is the internet to provide educational content; there are a large number of students who don't have access to devices or bandwidths. For them, educational TV is a valued tool for delivering curriculum–based content. A UNESCO document (1974) emphasizes the importance of television for education, "Television has the advantage of providing a synthesis of all the available aids to learning. It meets virtually all other techniques including flexible language of the film. There is also the value of the medium for the tele guidance of teachers and instructors in new methods". A number of experimental studies have reported that children who watched episodes of educational television demonstrated improvements in educational domains immediately afterwards (Bogatz and Ball, 1971; Singer and Singer, 1981; Davis, 1989; Hall et al., 1990; Rice et al., 1990; Huston, 1992; MacBeth, 1996; Singer and Singer, 1998; Crawley, 1999; Anderson et al., 2001; Naigles and Mayeux, 2001; Wright et al., 2001; Zill, 2001; Buckingham and Sefton-Green, 2004; Fisch, 2000). As an organised, sequential, and methodical supplement to formal school instruction, School Television (STV) launched a project in October 1961 for Delhi's Secondary school students with the goal of raising the quality of instruction given the city's lack of laboratories, space, equipment, and qualified teachers. Teachers appreciated STV as a tool for teaching and presentation of content (Kumar, 2000).

Educational television can have both beneficial and detrimental consequences. Numerous studies have examined the harm that television causes to society, especially to children and teenagers. Canadian Paediatric Society (2002) points out that frequent viewing of television limits children's time for vital activities such as playing, reading, learning to talk, spending time with peers and family, storytelling, participating in regular exercise and developing other necessary physical, mental and social skills. By the mid–1980s, there was considerable increase in the volume of commercials on television. With extremely few upkeep costs for the user, a one-time investment in a radio or television results in a longer–term advantage. In order to reach and connect with isolated and dispersed communities, it is necessary to take

a new look at the time-tested media of radio and television. Even less studied is the status and awareness of the educational television channel.

RESEARCH QUESTIONS

RQ1: What is the outreach of Swayam Prabha channel *Kishore Manch* across various States/UTs of the country?

RQ2: Do the States/UTs of the country are aware about the *SWAYAM Prabha/Kishore Manch* project?

RQ3: Do the States/UTs have the accessibility for *SWAYAM Prabha/Kishore Manch* channels or any other educational television channels?

RQ4: What is the perception of teachers towards the use of educational television/ Kishore Manch Channel in the school?

MAJOR OBJECTIVES OF THE STUDY

The main objectives of the study are to—(i) Study the awareness and accessibility for *Kishore Manch* Channel (SWAYAM Prabha) in secondary and senior secondary schools of India; (ii) Study the accessibility of any other state educational television channel in secondary and senior secondary schools of India; (iii) Study the perception of principals, teachers and students for *Kishore Manch* channel.

RESEARCH DESIGN

In this study, the status and utilisation of SWAYAM Prabha 'Kishore Manch (KM) channel' was studied across the nation. For this, both types of data, i.e., qualitative and quantitative were collected and so a mixed research method was followed. Attempts were made to collect data from the State-level functionaries of all States and UTs (36 in number) who have had the administrative authority to run Secondary and Senior Secondary Government and Government aided schools in 29 States and 7 Union Territories (UTs) of India. Besides this, purposive sampling of the teachers were also done to study the perception towards the KM Channel. During the literature review, it was found that very little research has been done on educational television in India. Also it was found that no study was done on *SWAYAM Prabha.* All the tools were developed by the researchers: questionnaire for States' functionaries and questionnaire for school teachers. Researchers have collected the data in a phased manner for this study.

Table 1

S. No.	Name of the Tool	Sample	Type of the tool	Description of Tool
1.	Questionnaire for State's Functionaries	Director, school Education; Director, SCERTs and State Project Director (SPDs), RMSA	Questionnaire	The tool consists of total 7 items (both objective and subjective) related to the awareness and accessibility of channel no. 31 *Kishore Manch.* The tool also focussed on gathering information about any other state educational television and reasons for utilisation and non utilisation of contents of *Kishore Manch* in their States
2.	Questionnaire for Principal	School Principals	Questionnaire	The questionnaire consists of four areas— (i) Infrastructure (ii) Accessibility and Awareness (iii) Perception on *Kishore Manch* (iv) Difficulties and suggestions about the programs of Kishore Manch
3.	Questionnaire for School Teachers	School Teachers	Questionnaire	The questionnaire consists of five areas— (i) Infrastructure (ii) Accessibility and Awareness (iii) Perception on *Kishore Manch* (iv) Quality of programmes (v) Difficulties and suggestions about the programs of *Kishore Manch*

The validity of the tools was established through content validity. The items of the tools were reviewed as per the objectives of the study and also in context of language like issues of grammar rules, coherency, and expression properties. The drafted tools were finalised in a two-day workshop. Experts from the area of research and mass communication were invited to provide suggestions and finalise the research tools developed for the study.

The tool for functionaries of the States/Union Territories (UTs) was sent to all the 36 Directors, School Education; Directors, SCERTs and State Project Directors (SPDs), RMSA through e-mail (along with the online link) and posts. After this the researchers approached some purposely selected teachers of Secondary and Senior Secondary Government and Government aided schools in the State of Haryana and Rajasthan to determine their perceptions of the use of the educational TV channels. Data were collected in 2018.

The delimitations of the study were two-fold. Data were dependent upon the responses received from States/ UTs by email. Size of the samples posed a limitation on the study. There was a time lag in collecting data in Phase 1 and 2.

Results and Discussions

Objective 1: To Study the Outreach of Educational TV Channel Kishore Manch Across the Country

Data were received from States, viz., Bihar, Goa, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. Data were also received from Union Territories (UTs), viz., Andaman and Nicobar Islands, Chandigarh, Daman and Diu and The Government of NCT of Delhi. 11 responses were received by 11 SCERTs, 1 from RMSA, 2 from Directorate of school education, 6 from DIETs of West Bengal, 78 from schools of Haryana and 4 from schools of Rajasthan.

Objective 1.1(A): Awareness about the SWAYAM Prabha Project by MHRD

• Responses towards the awareness of *SWAYAM Prabha* indicated that the majority of states and UTs have had awareness about the *SWAYAM Prabha* project mainly through official channels, official meetings, *SWAYAM Prabha* Website, NCERT website and CIET website. Majority of states had awareness about the Kishore Manch channel from the NCERT Website, Newspapers and *SWAYAM Prabha* website. The stated reasons for being unaware about the project were: lack of communications about the

project in exhibitions/lecture/ talks/official communications; lack of adequate advertisements on TV/Radio/Newspapers and lack of adequate information on the social media sites. Other possible reasons were: lack of adequate promotion of the *SWAYAM Prabha* project by the MHRD on its website; unavailability of these channels across privately owned DTH TV network and educational TV being no longer popular among the educationists.

Objective 1.1(B): Awareness about the Kishore Manch Channel

- Almost 70 per cent of the States/ UTs responded that they are aware about *Kishore Manch* Channel under *SWAYAM Prabha* project and there were various reasons for their awareness. Most prominent reason is through NCERT Website, Newspapers and *SWAYAM Prabha* website. Some also responded that the awareness is due to the MHRD website, CIET website, colleagues, official meetings, radio, lecture/ talk, social networking sites (Facebook, Twitter, Google+, Instagram, Youtube) and official communications.

- Like above, the stated reasons for lack of awareness could be the same.

Objective 1.2(A): Access to Kishore Manch Channel in the Schools of State:

Schools in Bihar had access to SWAYAM Prabha due to the teacher training through the channels allocated to National Institute of Open Schooling (NIOS) out of the *SWAYAM Prabha* initiative. For this almost 1000 secondary and senior secondary schools had the facility for NIOS channel. Rest of the states had no access to *Kishore Manch* channel in their respective schools. Though the state of Punjab had no access to *Kishore Manch* TV channel, they have had the facility of EDUSAT content through satellite network (ROT) in 3289 Government High and Senior Secondary Schools.

SPECIFIC REASONS FOR NON-ACCESSIBILITY OF THE KISHORE MANCH CHANNEL IN THE STATE

The sampled states/UTs have provided many reasons for the non accessibility of *Kishore Manch* in the state. The reasons were discussed here:

- Difficult geographical conditions and no availability of D2H at home.

- Lack of infrastructure in the schools to telecast the channel. In the UT of Daman and Diu, there was no such problem of infrastructure as it was present in all the schools. There were other reasons for non-accessibility.

- Few states responded that there was lack of awareness about its

existence and there has not been much publicity and awareness about this channel.

- State Government has not provided any down linking and up linking services or direct to home services to the schools.

- Two of the States responded that DoE has not provided any facility in schools to subscribe to the *SWAYAM Prabha* channels. However SCERT Chandigarh was utilising the NCERT KM channels for the students of D.El.Ed. and in service training programmes.

- In case of Andaman and Nicobar Islands, they responded that the islands of the territory were remotely located where connectivity was a concern. It was difficult for anyone to access the educational sites.

Arulchelvan and Viswanathan (2006) reported that a small percentage of 14.61 per cent respondents in Tamil Nadu watch UGC CWCR programmes while a huge population of students 85.39 per cent do not watch the programmes. The researchers suggested that, "top priority should be given to strengthen the educational usage of the powerful electronic media and creation of awareness among students about educational media should be taken up on a massive scale with a sense of urgency".

SOME SUGGESTIONS FOR IMPROVING THE CHANNEL AWARENESS, VISIBILITY AND QUALITY OF THE CHANNEL IN STATE WAS ALSO PROVIDED DURING DATA COLLECTION

- Special budget provision should be provided for each school of state to avail D2H set with LED TV.

- There is a need to work as a mission in this direction. The information and instructions should be given to the State Government regarding the channel.

- Promotion and orientation is necessary for popularising the channel in schools by sending regular information/letters with brief details; advertising in newspapers and through popular TV channels/*Doordarshan* channel as well as in *Akashwani* telecast before some popular programme; awareness should be imparted to the teachers in the in-service training programmes at SCERT; circular can be sent to educational institutions and adequate information should be spread through social media such as Facebook, Whatsapp, Google ads. They suggested that the components of visibility is important to the schools for the complete utilisation of the channels.

- The NCERT or CIET should take initiative to make them accessible in schools of the region.

- Some other suggestions were received from Rajasthan SCERT:

every Saturday telecast may be planned on a fixed time in presence of a teacher. The programmes should be separate for different age groups and common issues can be taken covering national and regional issues. Different methods should be used for the contents such as talks, drama, folk dance/tales, quiz, etc. Feedback sessions for analysing programmes may be organised and research-based interventions may be planned.

- In Punjab, the programmes were telecast on EDUSAT Network (ROT-Receive only Terminals consisting of set top box, antenna, display screen, etc.), which were established in 3289 Government High and Senior Secondary schools across the state. They sought the advice to extend Punjab EDUSAT Network on Government DTH/DD network.

Objective 2: To Study the Accessibility of Any Other State Educational Television Channel in Secondary and Senior Secondary Schools of India

- State of Rajasthan responded that the state was having an ICT satellite Education channel, which was started from 15 January, 2015. *Rashtriya Madhymik Shiksha Abhiyan* (RMSA) of the State had been given the responsibility to provide the content in Hindi from 10:05 AM to 1:30 PM. The technical operations of the channel were done by Compucom software limited, IMFS and infrastructure was provided under ICT Phase IV and V. The channel was made compulsory for schools to show in the classroom. This was not available on local cable networks or DTH networks.

- State of Punjab had also its channel on which programmes were telecast on EDUSAT Network (ROT-Receive only Terminals) that was established in Government High Schools and Senior Secondary Schools across the state. The timings of the telecast was 7 hrs (9.00 AM— 3.20 PM) and the languages of the programmes were Punjabi and English. The channel was managed by Punjab Edusat Society (O/o Director General School Education, Punjab). The facilities were received through Receive Only Terminals (ROT) and Satellite Interactive Terminal(SIT) in the schools.

- Besides this all the other States responded that they didn't have any educational television channel for school and teacher education in the respective State.

Peddharkar (1988), Kumar (1990), Mishra (1990), Kumari and Ali (January 1991), Govindaraju (1996), and Rao (1998), among others, have extensively documented the factors contributing to the underutilisation of UGC programmes and the pervasive apathy toward the use of television

in higher education. The consensus among the majority of researchers is that several challenges impede the effective utilisation of educational television programmes. These include insufficient awareness about the programmes, the indifferent attitude of teachers, the unavailability of television sets, inadequate space for viewing, power shortages in colleges, the complexity of language used, and shortcomings in the delivery methods of the programmes. Addressing these multifaceted challenges is crucial for enhancing the overall effectiveness and utility of educational television programmes.

Further, some States/UTs discussed their plans for starting an educational TV channel of their own.

- Almost all the States responded that they were planning in this direction to start the channel in their states. In Uttarakhand, CIET-NCERT is providing budget to start a State level channel.

- In Bihar, facilities of educational films were shown through a projector in the schools in secondary and senior secondary Schools. Earlier, State Institute of Educational Technology (SIET) helped in this endeavour. SIET was no longer operational.

- Daman and Diu had no such plan as the UT was affiliated with the Gujarat State Education Board and the UT followed BISAG channel, broadcasted by the Gujarat State for Primary and Upper Primary school.

- Delhi had received a proposal from MHRD regarding Educational TV Channel for UT and the proposal will be placed before competent authorities.

- There was no educational TV channel in Tamil Nadu. However, they had a plan in place to start an educational TV channel in collaboration with (TACTV) Tamil Nadu

- In Meghalaya, most of the schools didn't have the facilities for TV sets.

- Andaman & Nicobar responded that they cannot start the channel as the UT is remotely located from mainland as well its own islands, where the development has not been taken enough to start an educational TV channel.

- In Punjab they wished to extend Punjab EDUSAT Network on Government DTH/DD network or if any other option and asked advice for this.

- Rest two states have responded that they have planned for the channel and two states have not yet initiated.

Objective 3: To Study the Perception of Principal and Teachers for Educational TV/ Kishore Manch Channel

Positive perceptions of the *Kishore Manch* channel came to light in relation to the improvement of students' learning levels, the provision of a pleasurable viewing experience,

and the assistance in fostering a personal interest in learning and the enrichment of classroom instruction. But 50 per cent of schools agreed that it affected viewers' spatial abilities, viewers' imagination, viewers' task perseverance, brings in visual reinforcement for conceptual clarity, hinders the learning because the telecast is in discontinuity in case of series of programmes, affects the learning because the queries of students and teachers are not attended to by the subject experts and affects learning because the attention span of the students is decreased due to long duration of the programmes. Also 50 per cent of schools were undecided if educational television generated any interest towards the learning because the format of programmes often was incompatible with the needs and learning styles of the students. Moreover, the programmes were largely based on demonstration. Similar results were observed by Crawley et al. (1999). They revealed that while television as a medium does not always have a detrimental impact on attentional skills, it can teach particular concentration techniques when presented and planned well. Television programmes may additionally demonstrate the immediate and possibly long-term benefits of problem-solving abilities, particularly for young viewers who watch them on a regular basis. Television can influence cognitive skills in numerous ways, both via its

content and its formal components, or cinematic codes. Also, watching television affects viewers' ability to imagine, stay on task, and have spatial awareness. For instance, Salomon (1979) has demonstrated that watching slow zooms into details of a large picture teaches children visual analytic skills. Similarly, watching changes in camera perspectives can enhance children's spatial perspective (CEC, 2010). Regarding both enrichment and syllabus-based programmes, students indicated that up to 30 minutes was their most preferred length for educational programmes. Most popular languages for ETV programming were Hindi and English. Yashobanta (2000) carried out a study on Effectiveness of the School Broadcast Programmes of All India Radio (AIR) and Educational Television (ETV) Programmes of Doordarshan with reference to school achievement of the learners. This study showed that (i) Both the ETV and School Broadcast programmes have been found to have positive effect on school achievement of pupils and it is really a matter of concern that none of the schools was found utilizing the ETV and school broadcast programmes in an institutionalised manner.

CONCLUSION

The project's original goal was to extend educational resources to remote areas, yet unfortunately, it struggled to gain significant momentum at its inception. It is

important for educational TV channel to telecast programmes based on students' needs. In a country like India, where television is a predominant source of entertainment, there is an opportunity to enlighten parents about its educational potential. Page and Crawley (2001) assert that advertisers often show limited interest in documentaries and educational programming, which may contribute to the lack of accessibility to instructional programs for the general public. This study underscores the insufficient publicity surrounding the initiative, emphasising the need for awareness campaigns. States express eagerness to launch educational channels, provided there are adequate funds and a commitment to catering to the educational needs of teachers and students at the regional level. Simultaneously, there's a need for advancements in television production and distribution technology to enhance the overall quality of educational content. Fisch (2000) suggests that children's learning can be maximised by altering the presentation surroundings and consistently reinforcing educational themes throughout television shows. In a world where the internet is presumed to surpass television,

justifying the value of instructional television becomes challenging. However, Pal's (2003) research on the effects of ETV programmes on mathematical concept understanding highlights the enthusiasm of rural and urban primary schools in Jaipur to utilise ETV for various teaching purposes, including enrichment and remediation. To further understand the impact of educational television, additional research is essential, focusing on learning outcomes and other criteria to gauge effectiveness. Exploring the perspectives of the younger generation towards educational TV programmes will provide valuable insights into shaping the future of educational broadcasting. India's diverse landscape sometimes reveals itself through a digital divide. Bridging this gap requires the strategic deployment of a diverse array of technologies. Educational television stands as a significant effort to address this disparity in learning, aiming to deliver education directly to the doorsteps of children. The recent G20 declaration also emphasizes the use of technology to overcome the digital divide, further highlighting the global recognition of this critical issue.

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Academic Resilience of Adolescent Students During COVID-19 Pandemic Situation

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Abstract

Present paper tries to find out the academic resilience of adolescent students in the COVID-19 pandemic situation with reference to their socio-economic status and location. Descriptive survey research method has been followed in this study. The sample of the study comprises 150 adolescent students belonging to Grade IX from Provincialised high schools of Jorhat district, Assam. Data were collected personally by the investigators with the help of an academic resilience Scale. Simple percentage, t-test, ANOVA and Post-hoc test was used for analysing the data. 42.67 per cent of the adolescent students were found to have Moderate academic resilience level and 32.67 per cent and 4 per cent of the adolescent students were found to have low and extremely low academic resilience level. Remaining 20 per cent of the adolescent students were found to have high academic resilience level. Significant difference was found in the adolescent students' academic resilience level in the COVID-19 pandemic situation when compared with reference to their location and socio-economic status.

Introduction

The COVID-19 pandemic has brought drastic changes all over the world since 2020 onwards. No one was prepared for dealing with such a deadly virus that overtook everything and brought the situation to stand still. Millions of people are dead, many abandoned and every aspect of life has been affected. It may only be a challenge for the developed countries that are very much acquainted and updated with the medical facilities but for a developing country like India it turned out to be a curse where people had to suffer and are

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still suffering from it. According to the brief report by Bahl, Bassiand Arora, (2021), "11,005,850 million confirmed cases of COVID-19 and 156,418 deaths have been recorded in India". People were hardly able to overcome the trauma then suddenly the second wave was as its peak. It was fully successful in hampering the smooth functioning of all the sectors creating imbalance everywhere. And one of the important sectors that this study is going to focus on is the education sector. The whole education system turned upside down in India as it had to move to online mode of teaching and learning within few months.

It is often very easy to talk about online class but when it comes to the application part it requires enough expertise on the part of teachers, student's sincerity, motivation, etc., and most importantly gadgets to make it possible. This pandemic has anyway made the life of individuals complicated. It has changed the whole scenario of work culture making the teaching-learning process more challenging and difficult. This has certainly affected the academic life of the students especially for the adolescence, which is a period of transition and full of ups and downs. Here, academic resilience of the adolescent students plays a major role. Because if a person is resilient enough, they can cope and overcome the obstacles on their way and do well in their academics.

RATIONALE OF THE STUDY

Adolescence is the crucial stage of one's life where the growth and development of an individual takes a different turn. It is more of a complicated phase filled with doubts, curiosity, energy, etc., which need to be guided in a right direction for their proper development as whole. Due to the pandemic, it has become more challenging as the schools were closed and shifted to online mode where the kind of supervision and guidance needed was hardly possible. The financial condition of many families was such that it became more difficult to fulfil the basic requirement for online education. From a survey report conducted in April 2020 by Bahl, Bassi and Arora (2021), "on 1–12th standard students from 23 states of India, it was found that 43.9 per cent of the students have smart phones, another 43.9 per cent of students have basic phones, and 12 per cent of the students do not have either smart phones or basic phones". Again there are network issues, lack of knowledge of digital use on the part of teachers and students, etc. Apart from these when an individual gets stuck at home for months together, not able to go out due to the fear of COVID-19 leads to increase in stress which is not good for mental health. Especially the adolescents are worst affected by this as they go through a different thought process. All these have had certain negative effects in the academic life of the adolescent students. Therefore, it is very important to find out the

academic resilience of the adolescent students so that emphasis can be given on its development through various measures.

Some of the studies in relation to academic resilience of Adolescents during COVID-19 were like by Asiyah, Kumalasari, and Kusumawati (2020) who conducted a study from social support aspect and students resilience at the time of pandemic and found that social support plays an important role in increasing student's resilience at the time of pandemic. Sharma and Sood (2020) found that resilience significantly predicts perceived well-being both directly and indirectly and found that perceived distress and psychological well-being are not on the same continuum. Octavius, Silviani, Lesmandjaja, Angelina and Juliansen (2020) stated that COVID-19 and mental health goes hand in hand so both need to be focused. Eva, Parameitha, Farah and Nurfitriana (2021) stated that resilience is important for online learning among the students for their subjective well-being at the time of COVID-19. Yuan (2021) reported that mindfulness training is important at the time of the COVID-19 pandemic to increase student's resilience and emotional intelligence. Therefore, focus should be given on providing mindfulness training program. Sarmiento, Ponce and Bertolin (2021) reported high levels of resilience among the university students, irrespective of socio-demographic variables at the time of COVID-19. Branje and Morris (2021) stated that during the pandemic many adolescents had to go through depressive symptoms, negative effect, loneliness and lower academic adjustment.

OBJECTIVES

1. To find out the academic resilience of adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation.

2. To find out the academic resilience of adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation with reference to location.

3. To find out the academic resilience of adolescent studentsof Jorhat District, Assam during the COVID-19 pandemic situation with reference to socio-economic status.

HYPNOTHESES

Ho 1— There will be no significant difference in the academic resilience of Adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation with reference to their rural and urban location.

Ho 2— There will be no significant difference in the scademic resilience of adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation with reference to high, middle, and low socio-economic status.

Methodology

The present study is a quantitative type of research and the investigator has followed Descriptive Survey Research method to study the problem.

SAMPLE

The population of the study is adolescent students of provincialised high schools in Jorhat district, Assam, India. Five provincialised high schools were selected randomly from Jorhat District, Assam, India. From the five schools all the IX standard adolescent students present in the classes were selected as the number of students in the classes were very less due to the COVID-19 pandemic situation. Thus the final sample comprised of 150 Grade IX adolescent students.

TOOL USED

A self-developed academic resilience scale for the Secondary level students consisting of 40 items was used for the collection of data. It was developed under the five dimensions of academic resilience that are socio-emotional, motivation, cognitive, meta-cognitive and self-belief. From the spearman-brown formula, the reliability of the scale was found to be 0.75 and 0.76 by using Cronbach's Alpha method. Both face and content validity of the scale was established through critical discussions with eight experts from education background. Content validity index of the scale was found to be 0.81 which shows that the items were highly relevant. The content validity index was found through the method developed by C. H. Lawshe, 1975. And the intrinsic validity was found to be 0.86 which is the square root of the reliability coefficient measured through Spearman Brown Formula. From this, it can be considered that the test measures the true ability of the subject to the extent of 86 per cent; thus the validity of the scale can be considered to be 0.86.

PROCEDURE OF DATA COLLECTION

Data was collected personally by the investigators by maintaining the COVID-19 protocol as declared by the Government of Assam, India. Participants were asked to abide by the rules by sanitising their hands, wearing mask, and maintaining one hand distance from their peers. With the help of self developed academic resilience scale, data were collected from 150 Grade IX adolescent students from selected high schools. Clear cut instructions were given to the participants to fill up the responses to the items in the scale. Students returned the filled-up scales to the investigators which were then systematically pooled for analyses.

STATISTICAL TECHNIQUES USED

Statistical techniques used to analyse and interpret the data are Simple percentage method, Mean, SD, t-test, ANOVA and Post-hoc test.

ANALYSIS AND INTERPRETATION OF DATA

The analysis and interpretation of the data were as per the objectives and hypotheses of the study.

Objective 1

To find out the academic resilience of Adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation.

Table 1
Academic Resilience Level of Adolescent Students During the Covid-19 Pandemic Situation

Total number of students	Extremely Low (120 and below)	Low (121–140)	Moderate (141–160)	High (161 – 180)	Extremely high (181 and Above)
150	6 (4%)	49 (32.67%)	64 (42.67%)	31 (20%)	0

Finding

From Table 1, it is found that 4% of the adolescent students come under extremely low category of academic resilience. 32.67 per cent of the adolescent students come under the low category of academic resilience. 42.67 per cent of the adolescent students come under the moderate category of academic resilience. Only 20 per cent of the adolescent students come under the high category of academic resilience and none were found in the extremely high category of academic resilience.

Discussion

From the above Table, it can be said that majority of the adolescent students were found to have moderate academic resilience level while some adolescent students were found to possess high academic resilience level. Some adolescent students also come under low and extremely low academic resilience level. One of the important factors behind this low academic resilience level among many adolescent students is the pandemic. It has certainly created imbalance in the regular teaching-learning process by sudden transition from the offline to the online mode. As availability of the digital infrastructure is the biggest challenge in each and every school along with the students (Chaturvedi, Vishwakarma and Singh, 2021). Apart from this, the social restrictions imposed due to the pandemic have led to less interaction with the peers which ultimately led to low energy or drive on the part of adolescent students, creating an academic stress effecting the academic performance of the students (Mahapatra and Sharma, 2021).

Objective 2

To find out the academic resilience of adolescent students of Jorhat

District, Assam during the COVID-19 pandemic situation with reference to their rural and urban location.

Ho 1— There will be no significant difference in the academic resilience of Adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation with reference to their rural and urban location.

Table 2
Academic Resilience of Adolescent Students with Reference to Location

Sl. No.	Location	N	Mean	Df	t (Stat)	t (tab)	Level of significance
1.	Rural	77	141.14	145	5.41	1.97	0.05
2.	Urban	73	153.2877				

Finding

From Table 2, it is found that out of 150 adolescent students, 77 are from rural area and 73 are from urban area. The mean for the adolescent students from rural area is 141.14 and for urban area are 153.2877. The degree of freedom is 145 and it is seen that the t (stat) value 5.41 is more than the t (tab) value 1.97 at 0.05 level of significance. Hence, the null Hypothesis 1 can't be accepted. This shows that there is a significant difference in the academic resilience of Adolescent students during the COVID-19 pandemic situation with reference to location.

Discussion

From the above findings, it can be said that location has an influence in the academic resilience level of the adolescent students. The mean score of the adolescents from the rural area is found to be less than that of urban area depicting the low academic resilience level among the adolescents from the rural areas. Due to the pandemic, the adolescents especially from the rural areas had to face a lot of problems. For example— many parents lost their jobs, family members due to severe rise in the cases. And all these certainly caused a negative effect on the adolescent students by creating an atmosphere of stress and fear leading to a negative effect on their academic score for their whole focus got turned upside down. Apart from these problems, there were problems of network issues, and equipment constraints in rural areas as many schools did not possess enough amenities to conduct online classes properly. Also, the lack of technical knowledge on the part of both teachers and students affected the academic scores of students significantly leading to be low academic resilience level among

the adolescent students from the rural area. Therefore, focus should be on building resilience among the adolescent students along with taking steps by the educational institutions to get access to basic requirements for an online class to face the pandemic and make the education system resilient enough which was also reported by Ganguly, Misra and Goli (2020).

Objective 3

To find out the academic resilience of Adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation with reference to socio-economic status.

Ho 2 — There will be no significant difference in the academic resilience of adolescent students during the COVID-19 pandemic situation with reference to socio-economic status.

Table 3
Academic Resilience of Adolescent Students Based on their Socio-economic Status

Source of Variance	Df	Sum of Squares	Mean Sum of Squares	F value	Remark
Socio-economic status	2	17343.141	8671.570	84.150	0.001
Error	147	15148.119	103.048		
Total	149	32491.260			

Table 4
Nature Of Differences Among the Three Groups Through Tukey HSD Post-hoc Test

Socio-economic Status	N	Mean	Sig.
High	54	160.65	0.001
Middle	44	145.77	0.001
Low	52	135.19	0.001

Finding

From Table 3, the one-way ANOVA depicted a statistically significant effect with F-value 84.150 and p-value of 0.001 which is less than 0.05 level of significance. Hence-, the null hypothesis cannot be accepted.

This shows that there is a significant difference in the academic resilience of Adolescent students of Jorhat District, Assam during the COVID-19 pandemic situation on the basis of socio-economic status. As from the ANOVA test, the result was found to be

significant, so, to further evaluate the nature of differences among the three groups that is the high socio-economic status, low socio-economic status and middle socio-economic status, Tukey HSD post-hoc test was followed.

From Table 4, it was found that for all the groups, the p value is less than 0.05 level of significance. The mean for low socio-economic status group was 135.1923 while for middle socio-economic status group, it was found to be 145.7727 and for high socio-economic status group, the mean was 160.6481. All the means are different from each other. Therefore, it can be concluded that the low socio-economic status group is statistically significantly different from the Middle and high socio-economic status group. Middle socio-economic status group is statistically significantly different from the low and high socio-economic status group. And high socio-economic status group is statistically significantly different from the low and high socio-economic status group.

Discussion

From the above finding it can be said that the academic resilience level of the Adolescents from high socio-economic status group is more than that of the adolescents from the middle and low socio-economic status group. And this difference is evident because the adolescents from the low socio-economic status have to go through various difficulties in order to fulfil their basic needs. Same goes with the middle socio-economic status group to a certain extent in comparison to the high socio-economic status group. But these difficulties got doubled after the outbreak of the pandemic where every sector faced a huge loss during the lockdown as a result of which many families lost their job finding it difficult to earn their livelihood. The pandemic caused a direct impact on the adolescent's lives as they lost their family members and had to go through a lot of stress and trauma for being stuck at home, even not able to manage on their basic needs. All these factors adversely affected the academic life of the adolescent students especially from low and middle socio-economic status group as a result of which their academic resilience level may be found less than that of the high socio-economic status group. Even though the fear due to the pandemic is same for all people, but in case of high-socio-economic status group, they could afford things much easily than that of the other two groups. Therefore, focus should be on taking specific measures through intervention program for building resilience among adolescent students from socio-economically vulnerable groups (Ganguly, Misra and Goli, 2020).

Conclusion

It is evident from the findings that the academic resilience level of the adolescent students is not up to

the mark and one of the important reasons behind this is the pandemic. The pandemic have not only affected individuals physically but also mentally. At this time of difficulty, it is very important to develop academic resilience among the adolescents so as to make them capable enough to overcome the hurdles and challenges of the difficult times and to progress in their life. This study is limited to a particular area so more studies in relation to academic resilience from other areas with more sample is encouraged. This will help to find out the average level of academic resilience among adolescent students to start a drive on providing intervention program on academic resilience among the adolescent students.

EDUCATIONAL IMPLICATION OF THE STUDY

This study will encourage the teachers to focus on building academic resilience among the adolescent students keeping in mind the individual differences. It will also make the teachers understand the importance of finding out different strategies to provide proper guidance and support to the adolescent students at this time of crisis.

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Cyber Bullying in Online Teaching During COVID-19
Experiences of Female Educators in India

Debjani Chakraborty* and Chhavi Garg**

Abstract

The onset of the COVID-19 pandemic in March 2020 in India triggered a nationwide lockdown and the education system too took one of the largest hits with most institutions shifting to online mode of teaching, posing a variety of challenges. The challenges were spread across a wide area, ranging from basic facilities like stable, high-speed internet and mobile phones or laptops to the lack of prior experience in teaching online, creating a sense of pressure as India converted to almost a full-time online teaching system. This naturally triggered a series of incidents, often in forms of incident messages, online class disruptions and 'misuse' of the online learning mediums to create chaos by students who found a way to take mischief making to a whole new level, and resorting to bullying in the cyberspace. While a number of studies are focusing on the challenges faced by students and understanding cyber bullying amongst classmates, the only literature available from the teachers' point of view is in media coverage of such incidents, making this research essential for understanding challenges faced by educators. Hence, this study makes an attempt to understand experience of female teachers especially in context of untoward incidents happening while online teaching. An online survey was conducted in the present study and it was found that female teachers are facing incidents, which to some extent can be termed as cyberbullying.

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INTRODUCTION

When Prime Minister of India Narendra Modi announced the first 21 day lockdown in a national television address in March 2020, (Hebbar, 2020) forcing the nation into effective shut down including the closure of educational institutions, little did anyone know that the 21 day period will drag through more than a year bringing in a paradigm shift in how education is imparted in the country.

This change which was to go on and create a lasting impact on the education system of India, affecting its Sustainable Development Goal (SDG) target commitments in the long run, especially SDG 4 (Quality Education). In several reports in the early days of the pandemic when nations across the world retorted to lockdowns and shut downs to combat the spread of the virus, United Nations has not only warned of a direct disruption of the SDG 4 (Quality Education) but also of the repercussions on the targets of other goals interlinked with SDG 4 (Quality education) including those in SDG 5 (Gender Equality) and SDG 3 (Good Health and Well Being) (Srivastava, 2020)

And just like the rest of the world, India, faced its fair share of challenges, especially with access to education, as it staggered and realigned its education strategy to help students access education.

Although the advent and availability of fast, cheap connectivity since the introduction of 4G has introduced online learning in bits and pieces across India's urban pockets, a renewed interest, this time fuelled by necessity was established in the role and utility of online and digital learning at the time of a crisis across the whole world (Bordoloi et al., 2021). And since the shift was so sudden and unprecedented, it was observed that the decision for a shutdown in India just like in many nations left very little time for educational institutions to prepare for remote teaching alternatives (Daniel, 2020)

In India, this challenge was met with a variety of approaches. While many schools and colleges switched to online mode of learning almost immediately, the government had to intervene and facilitate the use of internet in teaching in several parts of the country also. Platforms like Shagun (for school students), SWAYAM Prabha (32 Direct to Home educational television channels), SWAYAM Massive Online Open Course (for students from Grade IX to post graduate) along with *Shodh Ganga* and *Shodh Gangotri* for research scholars were engaged as open source learning platforms for students which could be accessed from anywhere through an internet connection (Tekwani, 2020). But replacing teachers right away was a

far cry from what was practical and several video conferencing platforms like zoom, google classroom, google meet and cisco webex were engaged to virtually engage with students, while other platforms like whatsapp and email were also engaged in dispatching information regarding classes (Mathivanan, et al., 2021; Sathish, et al., 2020). This led to the rise of a series of challenges ranging from online evaluation, creation of digital learning materials and lack of technical knowledge for teachers who had to undergo this sudden shift to the online mode (Kamal and Illiyan, 2021)

In the national capital, female teachers of Delhi University reported exceedingly increasing incidents of sexual content being shared or used to disrupt classes, including strangers logging in to classes using the meeting IDs shared for the same by teachers. Incidentally following similar issues, Singapore banned several video conferencing applications in educational use to avoid the harassment of teachers (Iftikhar, 2020).

While there have been many instances of 'untoward experiences' by female educators; the accounts have been limited to a handful of newspaper headlines and online blogs only.

COVID-19 AND EMERGING NEW NORMAL

Akin to the introduction of the concept of water less alcohol-based sanitizers and wearing of masks in all public spaces to avoid contamination, the new normal post COVID-19 dictated practices like a digital shift for online launches and events, online versions of games like *ludo* and in some cases, even the live telecast of wedding ceremonies. In fact, when popular matrimonial app cum website Shaadi.com launched *Shaadi Meet* — a video calling feature on its platform on June 19, 2020 for potential bride and grooms to meet each other for the first time over a video call, over 105,000 people used the feature within two days (Dash, 2020).

Just like every other sector, education, which was probably one of the most affected sectors due to complete shutdown, had to go through a sea of changes too. Sun and Chen (2016) outline how even small decisions became challenging due to the inability of teachers to have a face-to-face connect with students. Since teachers were unable to facilitate free conversation, they were often unable to help students at the other end of the screen to actively interact and collaborate, preventing effective learning.

Nambiar (2000) says that there were several types of new platforms adopted by teachers which included

online video calling facilities (zoom and google meet), team management dedicated services (google classrooms and microsoft teams) and messaging services (whatsapp and mailing lists). All of these brought in new challenges and struggles in the process of learning to use them for teaching.

CYBERBULLYING FEMALE EDUCATORS: VEILED GENDER-BASED VIOLENCE AND THE NEED FOR SECRECY

Where there is anonymity, there is a space for encouragement of pulling something that one wouldn't do in broad daylight. The onset of COVID-19 has forced education online but only a chunk of the students has been able to benefit as the coverage is not absolute. Belur (2020) writes how at a time when teachers themselves were learning to engage technology to remotely teach from scratch, students who had better understanding of the platform did not refrain from using technology to cause distress and harm to the teachers

From critiques of pronunciations and spelling mistakes to students going to the extent of posting social media videos depicting teachers in poor light that went viral; the experience has been extremely overwhelming and high pressure for educators across the country (Belur, 2020).

Although almost everyone has come across 'funny teaching fail' videos, and one simple search of the hashtag #OnlineClassGoneWrong returns 176 videos from 149 channels in YouTube India, with views as high as 4,85,000, there is a hush-hush around the reporting of such incidents in the public domain. Even in the handful of newspaper and online platform coverages, most teachers sharing experiences tend to go anonymous. In one such article by *The Print*, an online journalism portal, a teacher goes on record to state how online bullying is the biggest challenge for female educators in a stark contrast to other similar stories, where names of teachers are changed (Sharma, 2020).

Hence, for the purposes of this study of cyberbullying, the researchers have chosen the experiences of female educators to evade the term cyberbullying or cyber harassment and retorted to the use of a much looser umbrella concept and perceivably less harsh terminology 'untoward incident' for helping the respondents come out with answers without having to fear the judgement and ridicule.

The definition of cyberbullying given by Patchin and Hinduja (2006) as "wilful and repeated harm inflicted through the use of computers, cell phones, or other electronic devices,"

is used to categorise these incidents as bullying through the research.

The term 'female educators' cover individuals who identify as females and are engaged in teaching students at school, undergraduate, post graduate and PhD level. This study also includes female educators who teach on online platforms like YouTube, Unacademy, Udemy, Byju's and Coursera along with coaching institutions for competitive examinations across online and offline platforms.

Research Questions

The research questions in this study were aimed at developing a preliminary understanding of the following facets to this phenomenon, based on the experiences shared by the female educators:

RQ1: Are untoward incidents happening to female educators in online classes and if yes, how often?

RQ2: Do these incidents meet the definition of cyberbullying as given by Patchin and Hinduja (2006) and to what extent?

RQ3: Do age and cyber literacy levels affect such untoward incidents?

RQ4: What is the effect of these incidents on educators facing them and what is the way forward/aftermath?

Methodology

To fulfil the aim of the study, survey method was used. A cross-sectional survey was conducted to collect the data for the study. Under survey method, fully structured questionnaire was used as a research tool to collect data. In the questionnaire both close-ended as well as open-ended questions were included to get quantitative and qualitative data respectively.

Due to the lack of mobility during COVID-19, data was collected through an online survey. The questionnaire was converted into a google form for online sharing. The google form was shared on two online platforms namely WhatsApp and Facebook. The sampling method used was volunteer sampling, wherein the respondents themselves chose to be a part of this study (Jupp, 2015). Hence, non-probability sampling was followed in the study.

Since the study aimed to understand the untoward incidents happening to female educators, responses received were filtered to get responses from female educators. A total of 45 responses were received which were complete in nature and could be used for data analysis and interpretation.

The categories in the questionnaire included both closed ended and open-ended questions.

RESULTS

Occurrences of Incidents

The age distribution of respondents is a key demographic data collected as a part of the questionnaire. The data captured in the same is as follows:
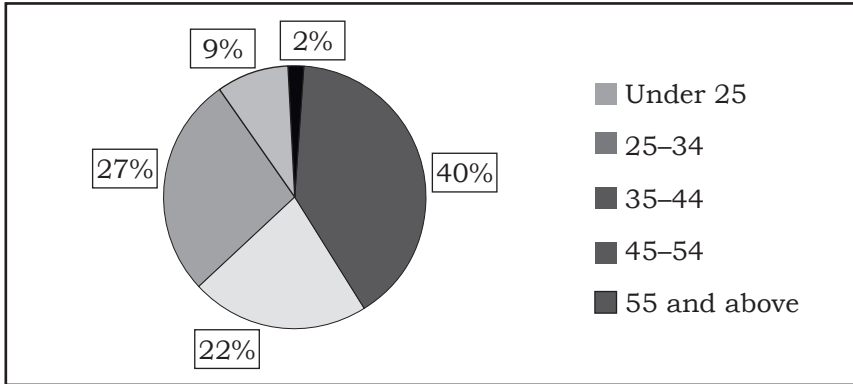

Fig. 1

As Fig. 1 shows, the age distribution of respondents indicates that there are inputs from all the age groups and the highest share of respondents (40 per cent) was from the age group 25–34 years while the share of respondents from age groups 35–44 years and 45–54 years remained roughly same at 22 per cent and 27 per cent respectively.

The data captured shows that 37 per cent (n=17) reported incidents with self while 60 per cent (n=27) reported incidents with some colleague/s as shown in Fig. 2.
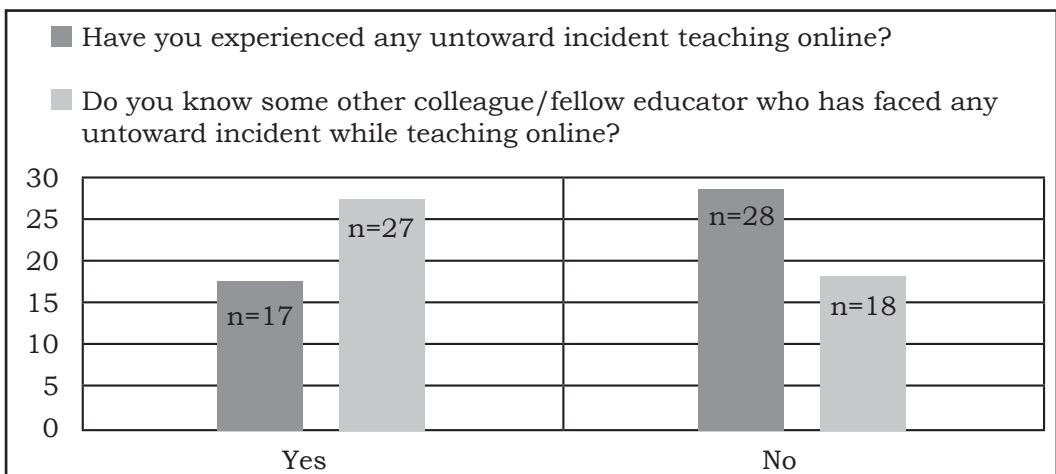

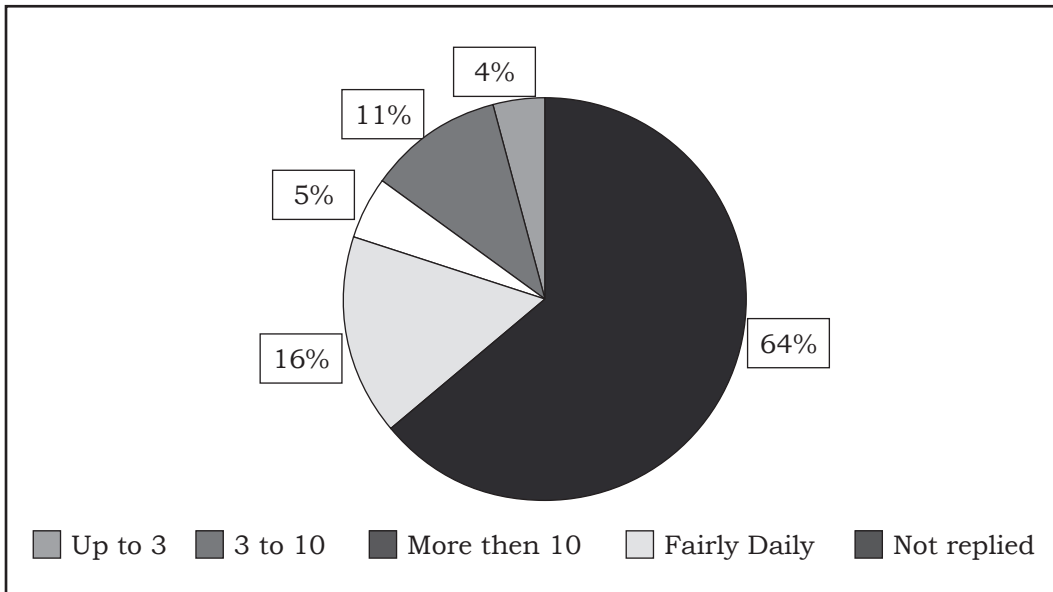*Fig. 2: Incidents experienced by female educators and their colleagues*

Fig. 3: Number of incidents reported by the respondents

As Fig. 3 shows, a total of 64 per cent of the respondents said that the number of incidents experienced by them or their colleagues was up to 3, 16 per cent experienced 3–10 incidents.
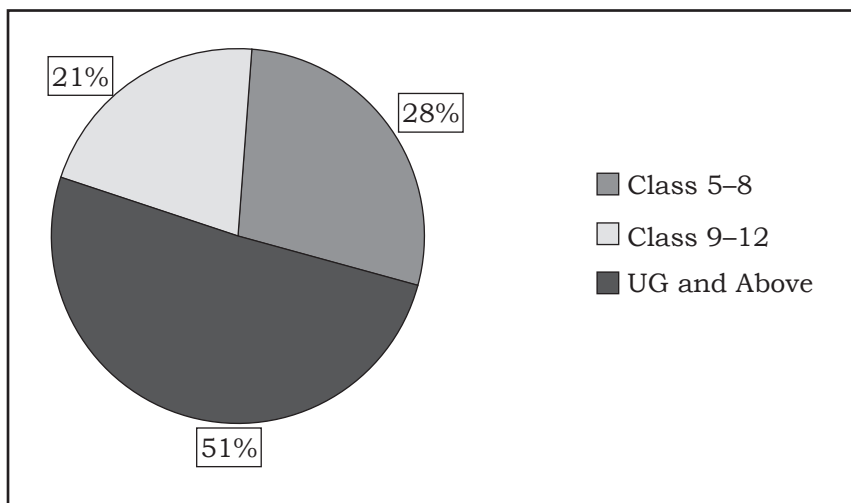

Fig. 4: Teaching level in relation to number of incidents reported by the respondents

As Fig. 4 shows, the maximum number of incidents were experienced by educators teaching students in Classes 9–12, which ideally is between ages 14–18. A total of 51 per cent of such 'untoward incidents' were reported during online classes by the respondents teaching Classes 9–12.

Understanding the Incidents: Are they Necessarily Cyberbullying?

The questionnaire also captured the type of incidents, defined by the following index in an attempt to code the same from the semi open answers from the respondents on the question as follows—

Category 1:   Students using technology to prevent you from joining classes/ disrupting classes

Category 2:   Sharing of untoward and/or sexual content

Category 3:   Unwanted messages in groups, DM

Category 4:   Bullying or threats by anonymous handles on your personal ID

Category 5:   Parental interventions in between classes

Category 6:   Students turning off cameras or passing comments or using chat board during classes to cause disruption

Category 7:   Others

The most prevalent type of incident is category 6 as Fig. 5 shows, that is 'students turning off cameras/passing comments or using chatboard during classes' that accounts for 70.45 per cent of total incidents described.
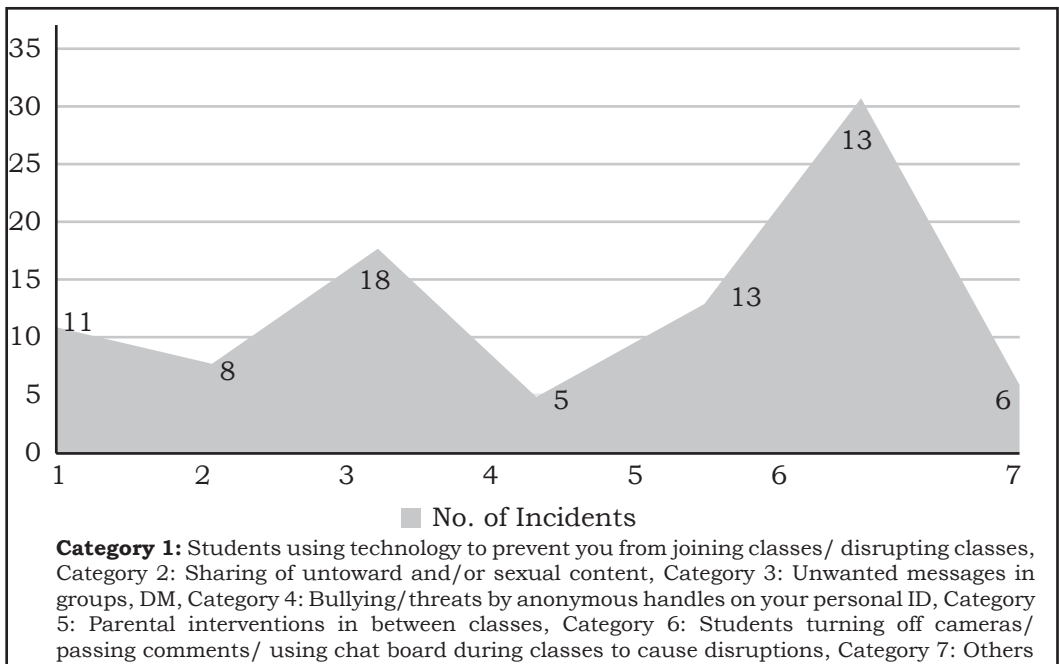

Category 1: Students using technology to prevent you from joining classes/ disrupting classes, Category 2: Sharing of untoward and/or sexual content, Category 3: Unwanted messages in groups, DM, Category 4: Bullying/threats by anonymous handles on your personal ID, Category 5: Parental interventions in between classes, Category 6: Students turning off cameras/ passing comments/ using chat board during classes to cause disruptions, Category 7: Others

Fig. 5: Type of Incident Vs Number of Incidents

As shown in Fig. 5, further observation reveals the share from response categories—1, 'Students using technology to prevent you from joining classes or disrupting classes' is at 25 per cent, 2, 'Sharing of untoward and/or sexual content' is at 18.18 per cent, 3, 'Unwanted messages in groups, DM' is at 40.90 per cent and 4, 'Bullying/threats by anonymous handles on your personal ID' is at 11.36 per cent. They also rarely are in isolation but can be determinedly classified as more 'intended' as a disruption than category 6.

Another category, that a student has no control over was 5 'parental intervention in between classes' which also receives a mention in the 'other' incident category when a respondent noted that her class was disrupted by a 'naked man', most probably a relative or family member on camera. With 13 incidents reported in the category, this is the third highest cause of classroom interruption, indicating a trend of helicopter parenting where teachers are under constant surveillance by parents in their own (digital) classrooms.

This set of questions are instrumental in capturing the essence of 'intent' to determine if the incidents are wilful in nature, to meet the definition of cyberbullying by Patchin and Hinduja (2006).

Fig. 6: Perception of respondents on role of cyber literacy and age on 'untoward incidents

As Fig. 6 shows that incidents are highest in the age group of young female educators, between the age group of 25 to 34, followed closely by the group 35 to 44. When looking at the total share, the division is as follows—
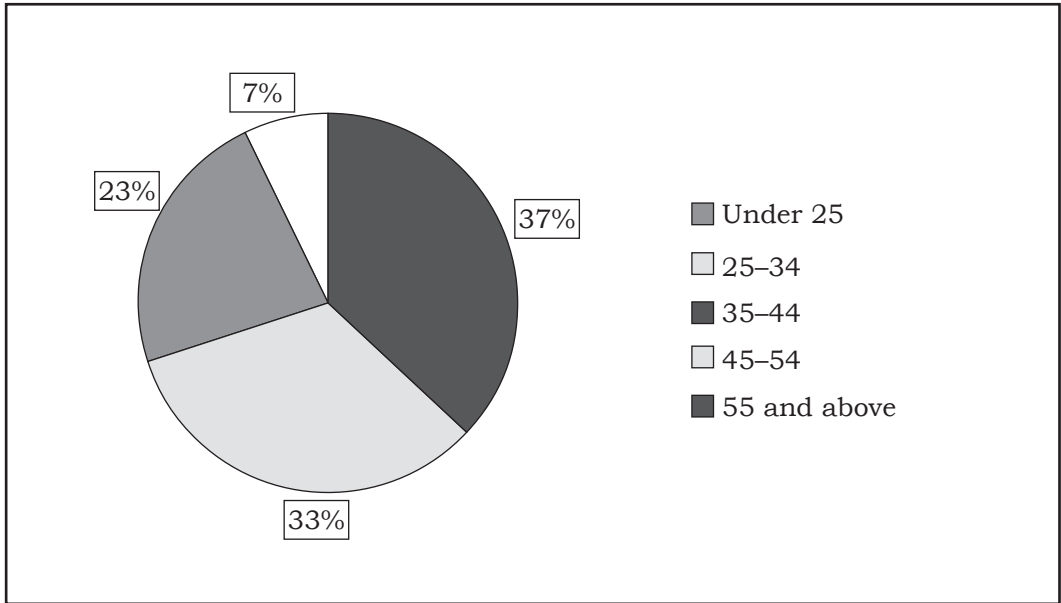
Fig. 7: Teaching level in relation to number of incidents reported by the respondents

Table 1 records how cyber literacy skills are related to the incidents reported by the respondents with themselves. As one can observe, even respondents who consider themselves to have expert cyber literacy, have not only experienced such incidents, but also form the largest chunk of respondents who have encountered such experiences.

Table 1
Cyber Literacy Level Vs Respondents Experiencing 'Untoward Incidents'

Cyber Literacy Level/ experiences of incidences	YES, experienced	NO, Did not experience
Fair	3	6
Excellent	5	15
Expert	9	6

This indicates that though the level of cyber literacy might not be instrumental to the incidents occurring; it creates more awareness and hence increases the recognition and ultimate reporting of such incidents. It indicates that knowledge (awareness) of the subject and the challenges have a positive impact on the ultimate reporting by the victim (Salmivalli et al., 2011) 764 primary school children from Grades 3 to 5 (9–11 years of age. Fig. 8 is a graph based on the data from Table 1.
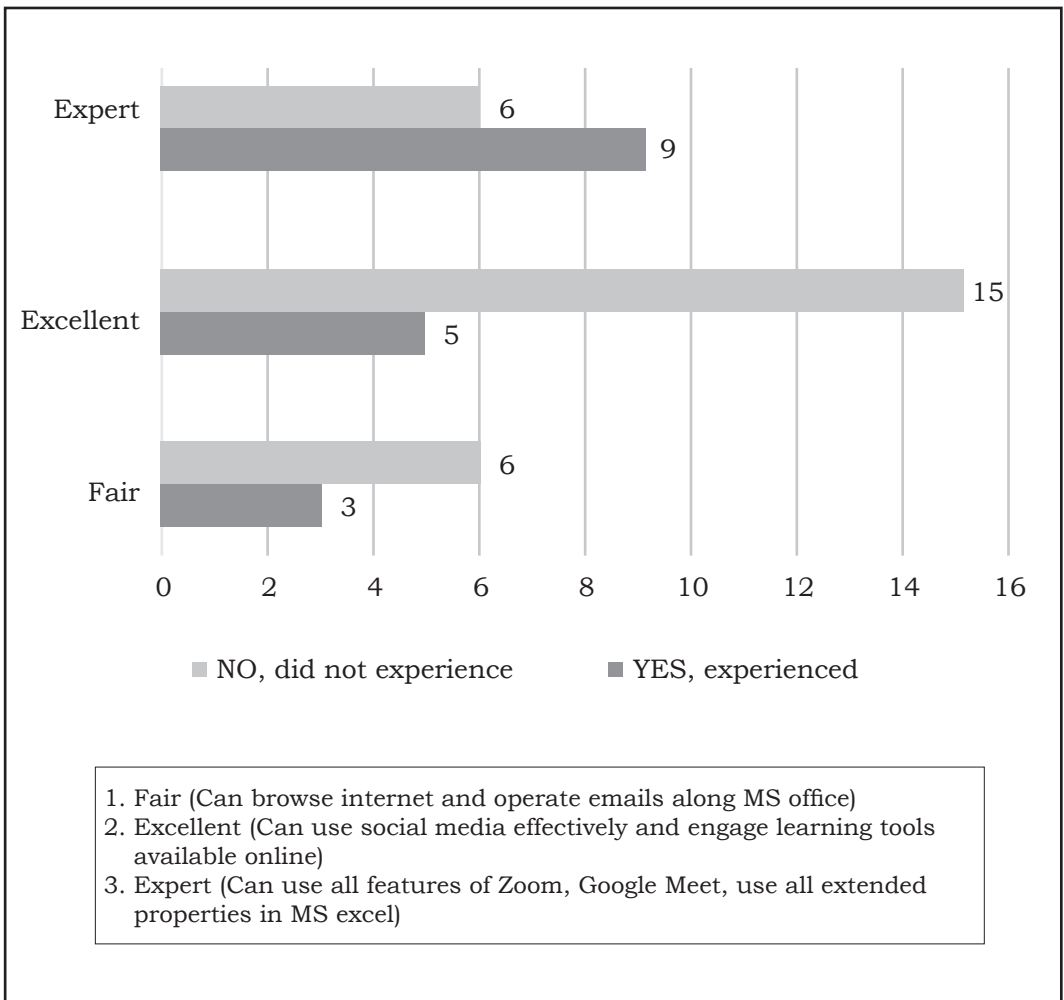

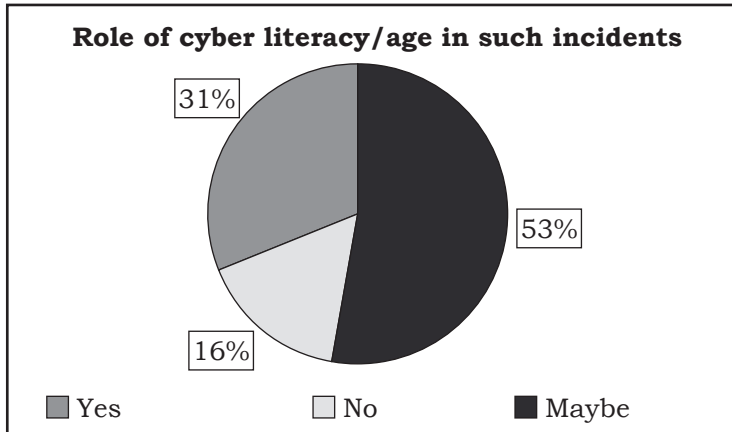Fig. 8: Cyber Literacy Level Vs Respondents Experiencing 'Untoward Incidents'

Role of cyber literacy/age in such incidents

31%

53%

16%

■ Yes   □ No   ■ Maybe

Fig. 9: Perception of respondents on role of cyber literacy and age on untoward incidents

Fig. 9 indicates the perceptions of the respondents on role of cyber literacy on 'untoward incidents' and 53 per cent of the respondents acknowledge that age and cyber literacy have a role to play in the incidents.

Acknowledging the Incidents— Perceiving Harm

When a respondent said that they themselves experienced an untoward incident (n=17), the questionnaire was automated to redirect to learn more about their experiences. While most educators chose 'Loss of Focus and interest in teaching' (n=8) as the repercussion, many perceived that the repercussions were non-existent as they chose the option 'None' (n=4) while merely a couple (n=2) chose to say that such incidents have effects on personal life and conflict as a theme of the aftermath emerged in interaction with students (n=1) and authorities (n=2).

The definition of cyberbullying by Patchin and Hinduja (2006) requires the target to recognise or perceive harm for an incident to be termed cyberbullying. Both loss of focus and interest in teaching and effect on personal and family life is indicative of that perception by the respondents.

In the same question framed for the repercussions of same incidents on colleagues, as many as (n=8) responses recorded said that 'Mental health problems like anxiety, depression' were experienced by their colleagues while (n=18) reported 'Loss of focus and interest in teaching' as a result of such incidents. Conflict as a theme also was more prominent, with n=8 cases with students, (n=3) with parents and (n=4) with authorities recorded.

Incidentally even in this category, respondents chose the 'None' options four times (n=7), indicating that peer involvement in identification and combating of

such incidents as with other anti-bullying interventions will be crucial in near future (Salmivalli et al., 2011) 764 primary school children from Grades 3 to 5 (9–11 years of age.

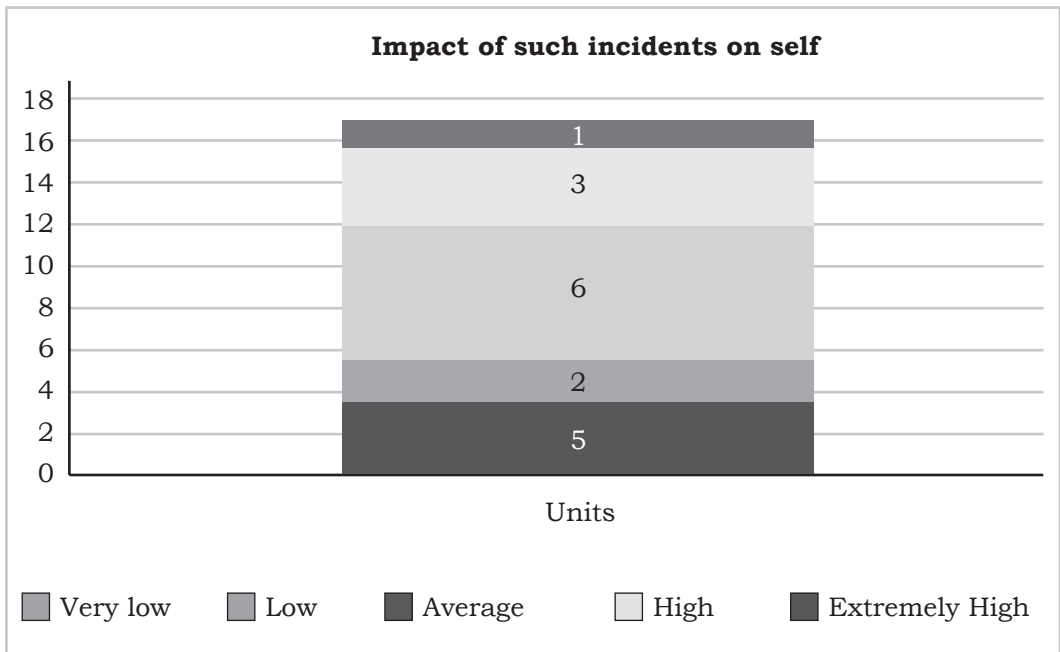Hence, the respondents, though in veiled attempts, acknowledge a certain perception of harm.

Fig. 10: Percieved impact of the 'untoward incidents' on the respondents

The conditional questions for the 17 respondents who answered in affirmative to the question about the experience of untoward incidents in online classrooms included a rating-based question on the extent of impact of such incidents on them mentally. Described on a 5–point Likert scale, 1 being the lowest (Very Low) to 5 being the highest (Extremely High), the distribution was highest at the point 3: (Average) followed by point 1: (very low).

Fig. 10 indicates that n=5 respondents said that the effect on them was 'Extremely High' while n=6 respondents rated the effect as 'Average'.

The Aftermath of the Incidents

When a respondent said that they themselves experienced an untoward incident(n=17), the questionnaire was automated to redirect to learn more about their experiences. In the data that was captured in the responses,

it was apparent that the educators preferred 'corrective' measures in the aftermath of such situations with most educators choosing 'Explain to children and/or have a counselling or interaction session' (n=15) option as one or more of the ways they chose to handle the situation

When redirected to the exact same question with similar options of the experiences shared by the colleagues of the respondents, incidentally, the choice of 'complaint to authorities' (n=18) came as the most retorted to solution chosen by their colleagues as observed by the respondents which was closely followed by "complain to parents" (n=13).

In response to the question asking for suggestions/ experience/ learnings that can be engaged in dealing with the issue, a total of 23 respondents shared insights as it wasn't a compulsory question. The observations are as follows:

Need for Training, Counseling and Sound Mental Well-being

The major theme emerging from the discussions was the need of training: at all levels including that of teachers, students and even parents. Quoted directly from the entry recorded in the excel sheet, the following observation sheds light on how an educator of students between Grades IX–XII perceives the problem:

"The untoward incidents mostly occur among the students of age 13–21. The other cohorts are either mature enough or innocent enough.

Children must be encouraged to take lessons on bullying, creating a learning environment while taking classes at home, and monitored through a stronger IT dept."

The theme of such trainings is continuously repeated with more than 12 respondents arguing for some form of training or other.

The types of trainings suggested include:

1. Training for teachers to make classrooms safer
2. Parent and student training on ethics and moral values
3. Counselling and sensitization towards cyberbullying

Capacity Building and the Power of Inciting Discipline

Capacity building of teachers is also an equally crucial suggestion that comes up but what is more interesting that the three respondents chose to speak of repercussions and punishments to instil a sense of discipline in the students misbehaving in the online classes.

"Most such problems are faced at school level. So, for the present format, I think teachers should be given control of 30 per cent of marks for online behaviour and etiquettes,"

Wrote a respondent adding that a log record checker can be added to exactly determine if the student was actually on the screen attending the class or surfing something else.

Parenting the Bullying Behaviour Out

The onus on parental role in combating the situation is also high in the

responses recorded, especially with a focus on helping joint counselling and training with the students. One respondent wrote:

"Students, be it of any age group should be taught at their homes the simple concept of respect. Parents should play an active role in monitoring their children's behaviour while attending the class. Students should also realise being behind the screen is easy but such activities make them more of a coward and less of a genuine being,"

Another respondent says that a mechanism should be devised so that students don't feel ignored during the online classes. One respondent also suggested for once a week online etiquette class for both parents and students, subtly indicating the need to combat the issue of helicopter parenting and preventing a parent becoming a perpetuator of an untoward incident during online classes recorded across the country (Belur, 2020).

Raising a Complaint, Reporting the Incident

Ranging from a strict parent teacher meeting organised after three warnings and counts of misbehaviour to suggestions to escalate it to the authorities, filing a complaint is a recurrent theme in the answers provided when asked for suggestions on the issue. But, that's not all. Some respondents mentioned filing police complaints and FIRs in response to such incidents. To quote

a respondent, the reply paraphrased for quality says:

"One should report the matter to cyber security department at once without panicking. Don't ignore minor incidents as these can lead to major issues later."

A Support System for Teachers

In what looks as a call for help and a request for stopping such incidents against teachers, a respondent's reply is particularly eye catching.

"They are just done for fun or to unleash personal grudges against the teacher, but no one realizes that it leaves the teacher helpless and anxious," writes the respondent, drawing attention as a call for help for intended perpetuation of harm and bullying. Another respondent observes:

"Teachers need support from authority and society instead of being reprimanded," drawing attention to the fact that online classes have brought teachers under the cruel lens of scrutiny that is not only exhausting but also overwhelming (Sharma, 2020).

The Role of Warnings: Screening Troublemakers

Although some respondents chose to walk the harsh road, many suggested a system of warnings, mostly three, to ensure that the incidents are in fact intentional and no student is reprimanded without establishing their intent to cause disruption. One respondent writes that a student

could be given a warning first, but if 'it' (the untoward behaviour in online classes) continues; the child can be removed from the class.

FINDINGS AND DISCUSSION

On analysis of the data, the researchers arrived at the following inferences and findings:

1. As per definition of cyberbullying considered for purposes of this paper, the incidents can now be categorically defined as 'willful and repeated harm inflicted through the use of computers, cell phones, or other electronic devices', meeting all three requirements willful (done with intent), repeated more than once) harm (harm perceived by target) and perpetuated through computers and cell phones.

   The researchers found that such incidents were not only happening (RQ1) but were also meeting the three parameters that add up to classify them as cyberbullying of female educators (RQ2). The evading of the term cyberbullying and cyber harassment has in fact helped in establishing how many counts of incidents ignored as classroom disruption is in fact by definition cyber bullying of female educators and teachers (Patchin and Hinduja, 2006).

2. There is a relationship between cyber literacy and the incidents (Fig. 8) which is an increased level of awareness resulting in an increased reporting of such incidents both as a victim and a bystander (Salmivalli et al., 2011) 764 primary school children from Grades 3 to 5 (9–11 years of age. This means, the better the level of cyber literacy and awareness, the higher is the reporting of any incident.

3. The perception of harm by the victim is form of effect on mental health to other consequences have been measured and established, with a focus on the loss of interest in teaching as a major aftermath in the majority of cases.

4. As combative interventions, training and capacity building are two crucial elements that need to be brought together and implemented across educational institutions but more importantly, focus should be directed to training of students and parents too to ensure a synchronisation. Teacher support cells, especially since the extensive mentions of 'conflict' with authorities, students and parents are imperative and mechanisms to address the grievances of educators need to be set up so that the victims of cyber bullying amongst them don't have to 'ignore' the problems anymore.

CONCLUSION

The answers from respondents have helped the researchers to develop an understanding of the research questions posed at the beginning of the research. Although the literature

review of existing newspaper and media coverage and social media platforms confirmed the prevalence of such incidents of online classes being disrupted by students, the research questions provided an in-depth insight and a roadmap for a structured probing into various facets like intent, cause and effect of such disruptions and establishing them as cyberbullying. The paper has also explored different approaches at handling such incidents and has found that interventions, training and capacity building are two crucial elements that need to be brought together and implemented across educational institutions. Most importantly, the paper suggests that focus should be directed to training of students and parents too.

Further Research

Though the study has tried to explore the different avenues of the cyberbullying narratives of female educators involved in e-learning during COVID-19, the number of respondents (n=45) is a small sample. Long form qualitative interviews can be done in the future to expand on the knowledge generated by this paper. There is also need for further research into adult cyber bullying as with in other forms of bullying, literature on adult cyberbullying is sparse. This research paper is intended to draw attention to one of the less spoken of and written about aspects of e-learning, a challenge that every educator is trying to overcome.

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Educational Discrimination and Access to Schooling
An Investigative Study of the Santal Girls

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Abstract

Right to Education Act, 2009 ensures educational opportunity to all children however, after so many years since the passing of such an act, we find that the tribal children especially, the Santal girls in the specific region of Odisha are still facing educational discrimination and are denied their fundamental rights to access to education. Against this backdrop, this paper is an attempt to investigate the magnitude and the extent of educational discrimination of Santali girls of Mayurbhanj district in the state of Odisha. The findings of the study reflect the fact that there is a wide gap in the gender parity index. Further the lack of adequate infrastructure, non-conducive learning environment, deplorable socio-economic conditions of the tribal communities, apathy of teachers also causing the dilapidated of girls' education in tribal areas. The tribal girls are excluded from elementary education due to their socio-cultural disparities and barriers. Therefore, policy imperatives call for total revamp of tribal education. However, mere policy inputs will not address real educational problems of tribal girls until much emphasis put on the delivery mechanisms of these policy inputs at the grounds level. So, any policy formulations for enhancing the education of tribal girls in the tribal belt must be insisted on 'process-oriented' rather than 'purpose-oriented'.

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INTRODUCTION

Despite being one of the largest ethnic populations, tribes are the most disadvantaged sections in India and continue to lag behind in every aspect of social life—be it food, housing, health, social and physical security, and human rights issues. They are not only excluded from mainstream society due to their geographical isolation, linguistic and cultural differences, but also excluded from the formal education system. The data and evidence show that amongst the tribal population girls face acute discrimination with respect to educational access and opportunity. Owing to their social and cultural marginalisation, the higher dropout rates and lower school participation amongst the tribal girls emerge as the most conspicuous feature, which places them in the most disadvantaged position. (Das, 2020; ASER, 2014; Nambissan, 2000; Sujatha, 2000).Various national-level educational policies such as the National Policy on Education (1968, 1986, 1992 POA) flag issues related to the educational access and opportunities to be made available to the tribal children. This is iterated through various programmes such as the District Primary Education Programme (DPEP), Sarva Shiksha Abhiyan (SSA), provision of opening up of Ashram Schools and the KGBV scheme.

The main goal of these developmental plans and initiatives undertaken by the government was to bridge the educational gap between tribal and non-tribal groups. The constant and successive efforts taken both at the state and central level aimed to provide hundred per cent successes as far as access, enrolment, retention, and educational achievement of these children was concerned. Despite the concerted efforts, we failed to bridge the educational divide between the rural and urban children and achieve the intended goal and target of equity and access of educational opportunities for the tribal children, especially girls.

This paper is an attempt to explore and analyse the story of deprivation, denial, exclusion, and the discriminatory practices of the Santal community against the girl children.

TRIBAL EDUCATION, GIRLS, AND DEVELOPMENT

Most of the existing literature on tribal education outlines that the growth of tribal people could only be possible through education. Education acts as a catalyst for their social and economic development. According to Sujatha (2002), educational access for tribals can catalyse as input for economic prosperity as well as inner solidarity amongst the tribal communities. However, as a counter-argument, one of the studies highlights that education of tribals remained a secondary issue and paledin comparison to the issues related to their sustainability

and livelihood (Surajit, 1972). Numerous studies delineates that quality education brings intrinsic benefits to the lives of tribal people, especially for tribal girls (Unterhalter, 2005; Ramachandran, 2000; Sen, 2000; UNESCO, 2010). However, the ground reality presents a grim picture when we link education with the overall development of tribal girls. The data provided by the Ministry of Tribal Affairs (2015) pointed out that the dropout rates amongst the tribal children was very high, and there was a substantial decline in the enrolment ratio, especially amongst girls. This alarming situation has many negative consequences for girl children in tribal communities. One of the studies described that girls were not only deprived of educational facilities but were also denied rights such as the right to own a land (Das, 2020). Thus, the educational deprivation of girl children in tribal communities hampers the inclusive growth of these societies. In one of the studies, Nambissan (2000) explains that tribal girls are not so efficacious in language use. This has serious repercussions on their education and results in severe communication gaps and high dropout rates. Lack of adequate infrastructural facilities such as separate toilets for girls, presence of women teachers in the classrooms and existence of schools in the nearby vicinity coerces them to withdraw from schools right after primary grades, and makes conspicuous on the already existent gender divide (Gaurang, 2012). The financial hardships faced by the family act as a major deterrent in the tribal girls' education (Ghosh, 2007). In general, the trend of dropout rates among tribal girls at primary, upper primary and secondary levels was much higher than the general population in the last decade (Census, 2011).

The Context: Mayurbhanj the Tribal Belt of Odisha

The study is descriptive cum analytic in nature. While the whole district was taken as a unit of analysis, but the Tiring and Jamda block were chosen for data collection and field study. The rationale for selecting these two blocks (out of 26 blocks) was because of the fact that there existed a huge gap in the male-female-literacy rates amongst the Scheduled tribes as per the Census of 2011–28 per cent and 27.48 per cent respectively. Tiring and Jamda blocks are situated in the extreme northern part of the Mayurbhanj district adjacent to the East Singbhum district of Jharkhand that falls in Santal Prangans. The physical distance of these two blocks from the district headquarters falls within a radius of 100 km.

One of the interesting features of the Mayurbhanj district was that the tribal literacy rate of both boys and girls was higher compared to other districts of the state. This was because of three main reasons— the King of Mayurbhanj was the first King in Odisha and contributed

immensely to the development of his people by spreading the educational awareness amongst them. Secondly, the Britishers converted the Adivasi community of Mayurbhanj into Christianity. Therefore, the district became home to many Christian missionaries who stayed back to spread the teachings of Bible and Christianity amongst the tribal population. Since Mayurbhanj was declared as a Scheduled Caste and Tribal district of the state post independence, the government took several measures to promote literacy and education amongst the tribal people through the initiation of different educational programmes under the banner of the ST and SC Welfare and Development Department.

However, the latest data shows that the gender wise tribal literacy rate is neither significantly lower nor higher. The detailed description (Table 1) of the literacy status of tribal people in Mayurbhanj explains that the total average female literacy of Mayurbhanj is 52.71 per cent, and the average female literacy rate of tribal girls is only 40.71 per cent with a disparity of 12 per cent. The very fact that 12 per cent of tribal girls are lagging behind the other girls on an average is a matter of serious concern. Further, the gender gap in literacy amongst the tribals is wide and alarming. For boys, the literacy rate is around 65 per cent, and for girls, it is almost 41 per cent. Table 1 also indicates that over the last ten years, i.e., from 2001 to 2011, no significant improvements have been made to bridge the gender wise literacy gap.

Table 1
The Literacy Rate of Mayurbhanj District in Gender-wise

Indicators of Literacy		2011 Census	2001 Census
The Over All Literacy Rate			
Male Literacy	(7 years and above)	73.76	63.8
Female Literacy	(7 years and above)	52.71	35.0
Gap in male-female literacy rate		21.05	28.8
The Literacy Rate among Scheduled Tribes			
Male Literacy	(7 years and above)	64.9	56.3
Female Literacy	(7 years and above)	40.71	22.9
Gap in male-female literacy rate		24.19	30.8

Source: Census Reports of India, 2011 and 2001

Research Objectives

Thus, understanding this uneven schooling profile of tribal girls in Mayurbhanj district of Odisha, the objectives of this research study were to:

- To find and analyse deep-seated socio-cultural biases and apathy towards school education of girls in Santal communities.
- To study the life experiences of Santhal tribal girls on their schooling process.

Research Design and Methods

The design of the present study is descriptive cum analytic in nature. To investigate the educational deprivation of tribal girls in the specific context of the tribal belt, this research design has analysed the conditions, structure, practices as well as the relationships that exist amongst the stakeholders of the tribal society. Observational technique and case study approach have been used in this research to analyse and examine the ground realities. Moreover, observation and interview schedules have been used for the purpose of data collection. Applying the observational technique and case study approach in this study, the questions were framed in such a manner just to explore the dynamic process of girls' schooling and their school exclusion with reference to their daily life experiences in the socio-cultural contexts of tribal

societies. Hence, the aim of the study was to focus on the process of schooling experiences of tribal girls in relation to their familial contexts, a case study approach was used with the small sample. Initially, 40 tribal girls were chosen to take their interviews but finally 25 girls have given proper responses which were recorded for final analysis. In addition to this, 20 parents were also interviewed for the present study. The questionnaire consisted of 12 open-ended questions. The questionnaire explored different socio-cultural dimensions on the schooling of tribal girls. The sample selection was done in two phases. In the first phase, 40 tribal girls were identified and first-hand information was collected about their socio-economic backgrounds. During the second phase, an extensive case study was conducted on 20 girls to unravel the causative factors of their educational discrimination. The interviews conducted on the sample girls who were in the age group of 6 to 17 years. These girls were interviewed individually. The interviews were conducted in the homes as well as in schools where girls were enrolled themselves. However, the interviews were also conducted with parents to explore the educational discrimination of tribal girls in their society. Further, in the analysis section, in addition to the primary data, secondary sources have also been incorporated to address our research questions in this study.

OBSERVATIONS

Tribal girls are educationally deprived and discriminated against on many grounds when we talk about issues related to educational access, quality, retention, achievement, and equity. While analysing the educational situations of girls in general and tribal girls' in particular, the following observations are pertinent.

From the figures in Table 2, it can be drawn easily that the literacy rate of girls in both the districts is almost 50 per cent less than the literacy rates of boys. Thus, access to education for these girls is a challenging task as it is very difficult for these girls to battle against the age old prejudices and discriminatory practices which act as serious impediments from attaining what is rightfully theirs.

Table 2
Literacy Rate in Jamda and Tiring Blocks

S.No	Blocks	Total		
		Male	Female	Total
1.	Jamda	56.71	31.20	48.18
2.	Tiring	65.38	31.05	47.94

Source: Census Reports of India, 2011

The situation of out-of-school children in the concerned areas is another example of educational deprivation of the marginalised tribal girls. The figures (Table 3) indicate that in both these blocks the majority of out-of-school children are girls than boys in the age bracket of six to fourteen years.

Table 3
Out-of-School Children (6–14 yrs) in Jamda and Tiring Blocks, 2007–08

S.No	Blocks	ST			Total		
		Male	Female	Total	Male	Female	Total
1.	Jamda	12.7	14.2	13.4	11.2	13.8	12.4
2.	Tiring	2.4	2.3	2.3	2.4	2.1	2.3

Source: District Human Development Report (Government of Odisha), 2011

## GENDER PARITY INDEX IN JAMDA AND TIRING BLOCK

Gender parity in education is a distant dream for all the girl children of the total Mayurbhanj district. One evinces a grim picture when we see stark gender disparity at block levels.

The census data of 2011 and the Sopher's Disparity Index model (Fig.1) by Jana and Ghosh (2015) clearly indicate that in addition to

Bisoi and Bijatola blocks, Tiring and Jamda were the two blocks where we can see the highest number of educational disparities between girls and boys. The data clearly indicates that the tribal girl children are relatively more vulnerable than boys with respect to attaining educational access and opportunities.
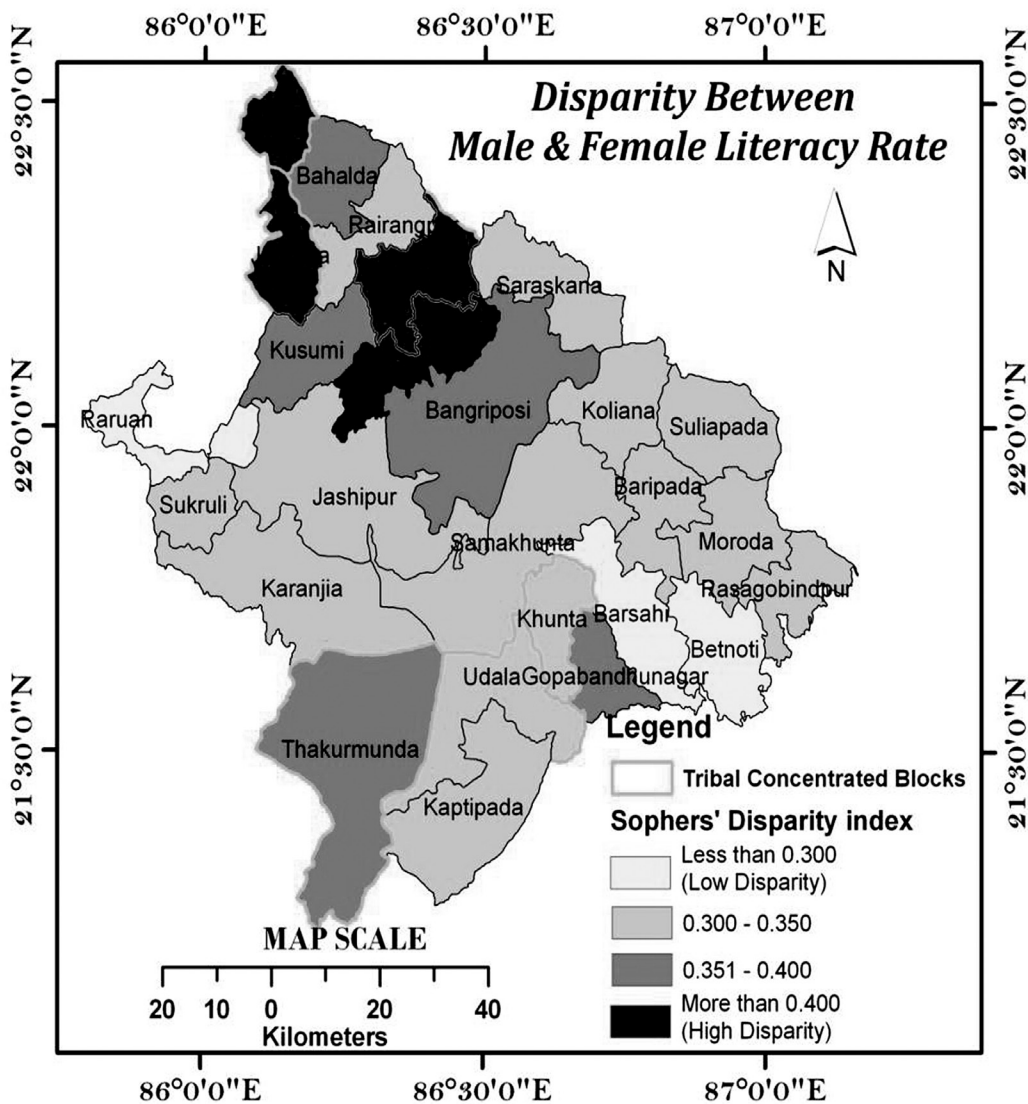
(Source: Jana &Ghosh, 2015. pp. 08)

SCHOOLING ACCESS AND TRIBAL GIRLS

Despite the mapping of areas wherein schooling and educational facilities can be made available, the idea of constructing a school building in the tribal areas becomes difficult due to the rough and hilly geographical terrain. Additionally, the scattered habitation of the tribals over a vast area makes accessibility to schooling quite difficult.The Tiring block is divided into seven clusters of schools; most of the schools are inaccessible to the tribal girls and are situated far away from their homes as is the case with a particular primary school in this block. The primary grade tribal children have to commute almost 4 km every day from their respective villages to reach this school. The long distance and tiring commute results in their absence from schools and coerces them to drop out. Some of these schools are located on the outskirts of the village near the bank of a local river. Lack of proper roads and unfriendly location of the school makes the learning space inaccessible for children. During the rainy season, the situation becomes worse, and children are forced to stay at home. Further, the school does not have a separate toilet facility for girl children, and they use the open fields to defecate. Lack of infrastructural facilities compromises on the safety and security of the girls and makes them vulnerable to abuse, for the local boys and male members behave and pass lewd comments when they see them defecating in open spaces. The same situation prevails in the upper primary school of a village in Jamda block. Almost half the students are tribal girls in this school and parents hesitate to send their pubertal girls to schools as there are no separate toilet facilities for girls. In one of the narratives, a particular parent expressed his views:

"We don't like to send our daughters to school because they are now mature and have attained puberty. Who will protect them from the rural male youths when they go outside to defecate? Since the school does not have separate toilets for girls, we withdrew our girls from the school."

This statement is also supported by the larger quantitative data obtained from the narrative analysis and conversation with the parents, who emerge as the major stakeholders and decision makers about the education of their girls.

Table 4
Multiple Regression Analyses

Predictors	School Dropping out	
	R²	B
No separate toilet for girls	0.45	0.36**
Non-availability of High School		0.22**

** Prediction is significant at the 0.01 level

The multiple regression Table 4 indicates that dropout is significantly determined by the non-availability of separate toilets for girls in the school. Similarly, the 'non-availability of high school' as a predictor suggests that dropping out of school is also predicted significantly by the non-availability of high school in these localities. In this Table, it is observable that R^2 value is 45, which means 45 per cent of children dropped out of school due to non-availability of girls' toilets and also non-availability of high schools according to parents' views.

Thus, problems related to infrastructure compromised largely on the safety, security, health, hygiene and sanitation of the girls. Educational spaces were perceived as unsafe by the parents of these children and thus these girls were forced to perpetually remain in the cage of illiteracy and deprived of their educational rights.

TRIBAL GIRLS AND CLASSROOM PROCESSES

The concept of classroom processes is a vast one that encompasses the dimensions of the teaching-learning process, classroom transactions, teacher-student interactions, peer interactions, etc. Out of these dimensions, teacher-student interactions are of utmost significance when we analyse the incidence of educational discrimination of tribal girl children in their schooling process. During the course of classroom observations in a few schools in both the blocks, teachers had a very unapproachable and unfriendly attitude towards the tribal girls. The lack of communicative skills and proficiency in the state language made the tribal girls feel insecure and further impeded their interaction with their teachers. A girl from the primary grade described her experience, "We hardly interact with teachers. Most of our teachers are from non-tribal communities. They don't like us and always scold us when we fail to give answers in class. Teachers laugh at us whenever we try to say something in class. They always make a mockery of our dialect and blame us as they feel we are learning nothing and wasting the school's time". The demotivating attitude of the non-tribal teachers compel many of the first-generation learners to remain absent from schools. Teachers' favouritism towards the boys from the tribal communities was also observed during the course of two classroom incidents. When the girls were asked to comment on the indifferent attitude of the teachers against them, then the truth came out. According to them, male teachers liked the tribal male students because they used to get free and comfortable services like massaging of their heads and legs. Stark biases are reflected through several studies which explain how girls are subject to unjust treatment in schools (Jha and Jhingran, 2005; Ramachandran, 2003; Nambissan, 2000).

An interaction with a Santali girl from the Jamda block revealed that the linguistic barrier prevented them from comprehending the classroom transactions. These barriers create a negative impact on their psyche and lower their self-esteem and confidence level of such children coercing them to drop out of school. The field observation indicated that most of the tribal girls internalised their teachers' negative attitudes so much that it made them feel as they were weak and dull students (Lakra, 2012; Sujatha, 1996).

The teachers' apathy towards the girl children of the tribal belt can be well explained by Krishna Kumar (2014) who has pointed out that they are just 'meek dictators' in the classrooms. In one of the incidents, it was observed that during the course of the regular class, one of the teachers deliberately ignored the responses of the girl students as they were not able to complete their homework on time. The empathetic and humanitarian lens was missing from the classroom as the girls were subjected to ridicule and humiliation by the teacher, who didn't bother to find out the actual reason for not submitting the work on time. For instance, a girl student of class VII was scolded for not solving a simple arithmetic calculation. The lady teacher said to the girl: "You don't want to study, but coming to school just to play. At home, also you play and do other work but do not study. Why are you coming to school when you don't wish to study? Why don't you ask your parents to marry you?"

There were multiple instances which highlighted the absence of cordial classroom environment in schools. This observation also coincides with the previous studies by Lakra (2012) who observed the lived experiences of tribal children in the classroom. According to her observations, she pointed out that teachers used the conventional pedagogy of teaching emphasising rote memorisation and repetitions, and students were punished for failing to do so. She has vividly explained how the *adivasi* students became victims of the classroom transactions and power politics practised by teachers.

Community Perceptions and Tribal Girls

Apart from these classroom-related issues, community perceptions about the education of tribal girls are another big challenge which impedes the equal educational opportunities for girls from the tribal communities. The tribal males were not in favour of educating the girls and wanted that they should lend a helping hand to their parents by working in paddy fields. During the course of conversation with the fathers of these girls along with the other community members, it was pointed out by one of the girl's fathers, "Why should our girls go to schools and what benefits they will get back? One day they will go to their in-laws' house and will do the cooking and other domestic

chores, so they should get involved now in such activities instead of going to school". The other members of the community had expressed similar views about girls' education. Only two of them were in favour of educating the girls to the primary level. As one of the fathers revealed— "We want our daughters should know reading and writing at the basic level, so that they can read and write the letters to their husbands in future. Now-a-days our boys are going to school and doing some small jobs in towns so they want to marry a girl who should know basic reading and writing. However, we want to educate our daughters not beyond primary as it would be difficult for us to find a suitable tribal educated groom for her marriage in future". The deep seated gender bias is reflected through the negative attitude of the community members who favoured education of sons over daughters. The socio-cultural prejudice led to the denial of educational rights for tribal girls.

Suggestions and Conclusion

According to the OPEPA Report (2013) (Odisha Primary Education Programme), the dropout rates amongst tribals are very high. The data revealed by the same authority points out the grim situation of tribal girls in the district by flashing the figures that show that 29 per cent of children drop out of schools by Class 5 while 77 per cent by Class 10. Similarly, the analysis of the results of the present study indicates that there is a wide gap in the gender parity index in both the selected blocks of the Mayurbhanj district. The tribal girls are excluded from elementary education due to their economic and socio-cultural disparities and barriers. Thus, it becomes imperative to suggest certain intervention strategies which might make education accessible to the tribal girls. Inclusion of tribal girls in mainstreaming education and also in tribal sponsored schools of state government (like the Kanyasharma, Balika Adarsh Vidyalaya, etc) in particular, calls for revamping the whole education system in the tribal belt of Odisha. Thus, for enhancing the education of tribal girls, the state has incorporated several recommendations and suggestions at the policy level. But in spite of such policy interventions, government has failed to implement and monitor these policies at the ground level. For instance, at large numbers, many Kanyashram schools were opened in different parts of tribal Odisha in general and Mayurbhanj in special to provide educational facilities to the tribal girl children. But these kanyashrams failed to retain the tribal girls for longer times. In his study (Panda, 2019) have pointed out that the persistence of unhygienic situations in the residential complexes of Kanyashrams pushed the girl children to remain out of school children. Similar was the case with KGVB and Eklavya Model Residential Schools. The present study field data also revealed similar

facts. In the study areas like Jamda and Tiring blocks in spite of having one Kanyashram, two Eklavya Model Residential Schools, and three KGVBs, the educational situations of Santal girls are in a dilapidated condition. The field study data revealed the fact that the majority of the Santal girls in primary school left before completing the primary and upper primary schools (Das, 2020). Many of these school-going girls dropped out in the mid of the academic session and joined as child labourers. Thus, despite these special measures being introduced to achieve targeted results in elementary education among the tribals, the literacy rate of tribal children in general and Santal girls, in particular, have not reached a significant level. The occurrence of the incidents like long absenteeism, drop-out, and seasonal migration by the tribal children made their educational aspirations a distant dream (Das, 2020).

Thus, need of the hour is that the state will not only to make the roadmap of future tribal education just merely mentioning the equitable, universally accessible, and affordable quality education in the policies but also need to work on the dynamics of delivering these things at the ground levels. Therefore to deliver policy inputs, the educational and institutional measures must be introduced such as context-specific massive retention drive programmes at the district level, creation of student-friendly learning environment at the school levels,

and skill enhancement programmes in the tribal-dominated areas, all of which might result in the reduction of dropout rates and practise of gender based discrimination in education.

Second, the non-tribal teachers must undergo sensitisation, training and counseling programmes before they are posted as teachers in tribal areas. This would enable them to easily understand the needs and problems of the tribal children and take appropriate actions to resolve their problems with empathy and care. More female teachers must be appointed in these areas so that they serve as role models for the girl children and the entire tribal community and succeed in motivating and supporting the girls to continue with their education.

Moreover, teaching pedagogy can be made innovative and attractive to make the learning process more meaningful, context based and applicable in their day today life. Also, mother tongue or home language should be used as a medium of communication in the classrooms so that the children do not experience linguistic alienation. Most of the tribal children in the Mayurbhjan district speak Santali language as their native language and also developed their own *"Al Chiki"* script. Thus, the parents and their children prefer to read textbooks written in *"Al Chiki"*. Therefore, in order to make the curriculum relatable, comprehensible and interesting, it

is advisable to produce and print the school textbooks in *"Al Chiki"*. Last, but not the least, a community awareness building programme must be undertaken to sensitise the members of the tribal community towards the education of girls. An equitable and gender just cannot be created without the support of its community.

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Analysis of Articles Published in Journal of Indian Education (2015–2020)

Alka Bankra* and Vijayan K**

Abstract

The Journal of Indian Education is a quarterly periodical published by NCERT in context of Teacher Education and School Education. Currently, it is on the verge of publishing volume 48, issue 1 against the upcoming May 2022 issue. Several noteworthy and enlightening contributions have already been accounted, speaking of the sparkling glory and success of the journal in the sector of Teacher and School Education. The paper focuses on the thematic reflection of the articles published from February 2015 to November 2020. On summarising, it was found that a sum of 280 articles have been published between the years 2015 to 2020, inclusive of the national and global contributions. The analysis is conducted in terms of demography of the papers, percentage contribution of the categorised partakers, research and analysis methodologies followed in the pursued studies with the discussion on thematic reflections.

Introduction

Journal of Indian Education is a peer reviewed journal, published by the NCERT, New Delhi which provides opportunities to teachers, teacher-educators, educational administrators, researchers and students for discussion on various critical and important aspects of school and teacher education. The journal is also included in the UGC care list of approved journals. The journal is published quarterly in the month of February, May, August and November.

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The scope of the journal includes presentation of novel ideas, critical appraisals of contemporary educational problems and views and experiences on improved educational practices. According to the aims and scope stated by the journal, *JIE* aims to include thought-provoking articles, challenging discussions, analysis, challenges of educational issues, book reviews and other related features. (*JIE, Front back page, February, 2021*). This partaking takes place globally which emboldens and provincially invigorate participation following a multi-disciplinary, comparative and practice based anatomisation in the spheres of teacher and school education.

In order to reach the peak of its objectives and desired goals, the journal requests multifaceted and protean submission on school education which may include research papers, documentary analysis, critical reviews, philosophical and psychological analysis of concepts and theories of education, reflective studies, case studies with case approaches, book reviews, literature commentaries and reviews on both chronicles and extant issues with several other classifications down the list. The journal also encompasses diversified zones in the subject of teacher education with inclusion of manuscripts and writings on professional development of teachers and teacher educators, empirical and experiential accounts of educational practitioners, achievement potential evaluation of teachers.

On summarising, it was found that a sum of 280 articles have been published between the years 2015 to 2020 inclusive of the national and global contributions.

The analysis provides insight about the various topics that have been covered by the journal under the broad subjective range of teacher education and school education. In this study, an analysis of the papers published between the years 2015 to 2020 has been discussed and meta-analysis of thematic reflection has been done. The meta-analysis has been undertaken in context to the theme of articles, similarities and differences in the topics with additions of follow up methodologies in these manuscripts inclusive of the demographic location and frequent author categories.

The key point of the paper that allures attention is the thematic reflection over the publishing span of 5 years form February 2015 Volume 40, Issue 4 to November 2020, Volume 46, Issue 3 including topics that were delved into again and again and those, which were dislodged from the series. The tracking total of the articles is 280 in number with 276 national submissions and 4 international submissions through the period with four issues annually summing to a number of 20 issues.

Education journals are indispensable resources for academicians and researchers to

divulge their research and publish their work authoritatively. Therefore, there has always been an interest by academia to understand how these journals behave and what they publish. For this reason, the activity of doing a content analysis of a journal in order to investigate its characteristics and try to look for some trends inside the journal is pursued and appreciated by scholars.

OBJECTIVES

- The primary objective of this trend analysis is to analyse the trends of the published papers to better explore and encompass the diversified zones of interest of the researchers, readers and scholars during the period of February 2015 and November 2020 in relevance to different thematic dimensions of Teacher Education. School Education and Higher Education.

- To review and determine the credibility and generalisability of study findings with recommendations highlighting upon the transforming educational practices for the period of study which would open forums for discussions, debates, researches and critiques on their scopes and future prospects.

METHODOLOGY

Content analysis was the main method used in this study. Content analysis or sometimes referred to as desk research is a research technique that involves analysing data and information given in written documents and existing literature (Pershing, 2002). The written documents here are the articles, research papers, case studies, book reviews published in the *Journal of Indian Education* during the period of 2015 to 2020. We collected data from 280 articles published in the journal in during the past 6 years (2015–2020).

METHOD OF ANALYSIS

The analysis was done under three different sub sections, namely—

(i) Analysis of author information based on the geographical locations such as states and country and based on their designations

(ii) Analysis based on the type of articles or methodologies used

(iii) Analysis based on thematic areas covered in the articles under broad Domains School Education, Teacher Education, Higher Education and Miscellaneous category.

ANALYSIS AND RESULTS

Analysis of author information based on the geographical locations such as states and country and based on their designations

There was huge demographic diversity seen amongst the authors and contributors within the country with some inclusion and partaking

from cross-borders states as well. The significant partaking was seen from the Capital and UT of the country, i.e., Delhi with a fulsome of 121 articles followed by Odisha marking the second position making a contribution of 15 manuscripts, trailed by Rajasthan and Karnataka with several others down the list. This analysis can be explicitly seen in the Table 2 and Table 3 indicated below; bringing an insight of the collaborative or associative efforts of the national and international contributors adding renowned fame to the journal.

Table 2
Authors Geographical Details (State-wise)

S. No.	States	No. of Papers
1.	Delhi	121
2.	Punjab	09
3.	Haryana	09
4.	Uttar Pradesh	19
5.	Bihar	05
6.	Gujarat	06
7.	Assam	05
8.	Maharashtra	08
9.	Kerala	07
10.	Nagaland	01
11.	Manipur	03
12.	Telangana	03
13.	Jammu	01
14.	Rajasthan	12
15.	Karnataka	11
16.	West Bengal	08
17.	Odisha	15
18.	Jharkhand	01
19.	Andhra Pradesh	03
20.	Kashmir	02
21.	Uttarakhand	03

22.	Chattisgarh	03
23.	Madhya Pradesh	06
24.	Tamil Nadu	06
25.	Arunachal Pradesh	01
26.	Goa	01
27.	Meghalaya	01
28.	Himachal Pradesh	02
29.	Sikkim	01
30.	Tripura	01
	Total	**276**

Table 3
Authors Geographical Details Country-wise

S. No.	Country	No. of Papers
1.	Hong Kong	01
2.	United Kingdom	01
3.	Spain	01
4.	Australia	01
5.	India	276
	Total	**280**

Author Designations

Diversity in research following the multi-disciplinary approach is not only an important aspect of any journal but also plays an important step in crafting the context, body and scope of that specific periodical. For the survival of heterogeneity and multiplicity in research, the journal will demand multifariousness participation. The assertive and distinctive participation of the authors would definitely manifest anomalousness in culture, local stereotypes, background, race, ethnicity, gender, age, mindset, issues and challenges.

This diversity and contrast in studies would open new doors for ideas, experiences and learning which forms an integral part of the education process. The differences and variances in the cognitive skills, divergence in values, skill sets, creativity and intelligence of these authors will flourish the garden of the journal with reliable, valid and qualitative perspectives. The contributors' diversity would also bring new insights in pedagogy, applications and usage of ICT tools, proposing better solutions to wonted issues in an easy and user-friendly way. This medley in the authors is not

only in respect to their demographic locations but also in ear-markings as some participant were readers, whereas some were lecturers and professors. Apart from these groups, a wide arena of contributors was doctoral scholars, research and project fellows, teachers, and teacher-educators and student Teachers. The journal is so open to improve and widen its scope that it gives fair and equal opportunities to everyone and anyone who bestows at writing quality content. This picture of transparency is easily depicted through the consideration and acceptances of articles written by school and college students.

Table 4 provides the lucid portrayal of various contributors' categories based on their designation. In some of the articles or papers, there were multiple authors and hence the total number of authors classified under the Table 4 consists of 331 authors.
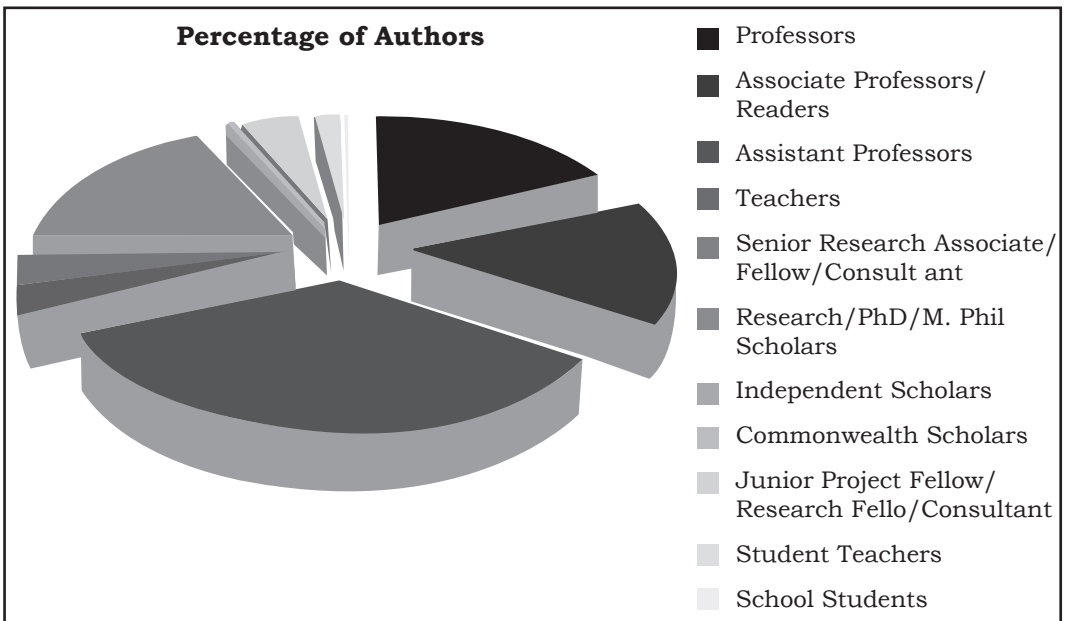

Fig. 1: Classification of Authors based on the designation

It is evident from the Fig. 1 that around one-third of the authors were Assistant Professors from Universities and Colleges followed by 18.43 per cent research scholars and 18.13 per cent of Professors. It is also glad to see that one school student and 6 school teachers were also contributed in this reputed national journal.

Analysis based on the type of articles or methodologies used

An attempt was made to analyse these 280 articles or papers based on

the methodology followed or the type of article. It is very irrelevant for those papers, which are based on research findings. These 280 articles have been classified under eleven categories based on the methodologies used. The detail of the articles or papers under different categories based on the methodologies followed is given in the Table 4.

Table 4
Percentage of Articles or Papers based on Methodology Used

S. No.	Methodology or Research Design	No. of Articles	Contributing Percentage
1.	Theoretical/Reflective	106	37.86
2.	Descriptive Survey	71	25.36
3.	Exploratory Research	5	1.79
4.	Experimental Research	39	13.92
5.	Ex-Post facto Research	1	0.36
6.	Case Study	11	3.93
7.	Document Analysis	24	8.57
8.	Action Research	2	0.71
9.	Literature Review	10	3.57
10.	Book Review	11	3.93
	Total	**280**	**100**

The most abundantly published types were the theoretical and reflective papers followed by papers based on descriptive survey methods and experimental researches which significantly included quantitative, qualitative and mixed methods of analysis for large sample sizes. The quantitative studies captured the market of large samples following questionnaires and statistical analysis tools. There are few papers based on the qualitative studies with the usage of significant tools such as interview schedule, semi structured and face to face personal review, and focused group discussions. The third approach followed in the line under the empirical analysis was mixed method designs which are a composite blend of both quantitative and qualitative strategies.

Overall, a remarkable weightage balance was seen between quantitative and qualitative types with mixed method chasing the race. Less frequent was seen the methodology of action research methods, case studies, book reviews and literature reviews. The striking tool used in majority

of the articles, research designs was questionnaire and interviews with few number of focused group discussions. Document analysis, case studies and case approaches, video podcasts, life history accounts were sporadically seen.

Analysis based on thematic areas covered in the articles

If we delve into the various topics or themes discussed in these 280 papers, it can be classified under different sections, which are given in the following Table.

Table 5
Themes Used to Categorise the Published Articles in JIE

Domain	Themes
School Education	Early Childhood Care and Education
	Primary Education
	Elementary Education
	Secondary and Senior Secondary Education
	Inclusive Education
	Pedagogical Strategies
	Curriculum related studies
	Teaching-learning Materials
	Miscellaneous
Teacher Education	In-service-Teacher Training and Resource Materials related studies
	Pre-service Teacher Education
	Curriculum in Teacher Education
	Miscellaneous
Higher Education	Higher Education
Miscellaneous	Papers cannot be a part of any of the above themes

Articles providing special references to the demographic status of quality school education, education of minorities, girl child education and elementary education with its efficient implementation strategies, challenges and prospects were also seen in the picture. There were special references in respect to states such as Delhi, Himachal Pradesh, West Bengal, Odisha, Tamil Nadu, Rajasthan and North-eastern states in terms of quality education parameters.

The 280 assorted articles widened the scope of the journal with new tendencies. These skyrocketing studies and appraises would open

hidden windows for wholesome research opportunities, novel pedagogy strategies, devising unhackneyed concept, philosophies and theories while adding modernisation to the state of art in education. Some themes were seldom seen and dislodged from these article series. Themes in reference to Village and School library roles and recognition, plagiarism in academics, happiness curriculum, vocational education, Loktak Floating Elementary school, CCE scheme, Madrasas education system and status, private tuitions, peer tutoring, digital literacy with some others in the list were rarely accounted.

In the following sections we will be sharing few important papers that have highlighted various aspects of School Education, Teacher Education and Higher Education.

School Education

School Education is not only a process of getting oneself enrolled in the system of formal education from early years to merely become a part of academic curriculum, but it is a process of rigorous practice and skill sets learning which is vital for the child to develop as a social and humane individual and contribute towards the national duties and responsibilities. The plethora of article's scripts seen in this division streamed from early childhood care education to secondary education on various subjects ranging from language studies to mathematics and science learning, pedagogical innovations with discussions on effective strategies for classroom transactions and curriculum based concerns. Few important papers under school education within the various subsections are elaborated below.

Early Childhood Care and Education: The major insights of this theme which has been discussed by several authors and some of the prime listings are Early Childhood Education in Teachers' Perspectives, Effective Programmes and their Impacts on Cognitive Development, Teaching and Learning in Natural Environment while fostering metacognition skills in early childhood followed by Emergent Comprehension and its Significance in Early Years. The remarkable contribution of authors were also seen in the writings such as The Unsung Saga of ECCE in RTE 2009 and reflecting on the necessity to review Section 11 of Right to Free and Compulsory Education Act, 2009

Primary Education: A noticeable input was put forth was on the topic of Ethnographic Study of a Single Teacher School in Kerala which investigates on the active role of MGLC Multi-grade Learning Centre or a single teacher school in giving primary education to marginalised society. It reveals on the outstanding efforts of the teacher who creates a homely atmosphere in the school so that the students would be fearless and treat the school as a place like

their 'kudi' (home) in line to their motto "if the child cannot reach the school, take the school to the child".

Elementary Education: The Effectiveness of Smart Class on Achievement of Students in Science at the Upper Primary Level have always been the key point of attention and was enthusiastically discussed and debated in several studies. Another paramount inclusions of this section was the "Loktak Floating Elementary School of Champu Khangpok Floating Village", highlighting the assiduous efforts of teachers to reduce the school dropout ratio. Effect of 5–E Model of Teaching on higher order thinking skills in Science, academic achievement evaluations exhibiting the quality of Elementary Education in states of Himachal Pradesh, Chhattisgarh and Odisha were the other remarkable discourses. This segment also encompassed discussions on the Educational Mobility in the country, and estimates of Intergenerational Effects of Parental Education on Child Education.

Secondary Education: Pedagogical design to explore the Class IX secondary school students' alternative conceptions in Physics on themes such as Motion, Force, Sound, Light and Electricity' provided a great idea to capture students' interest to facilitate their learning on these strenuous topics. Persuading students for self-regulated learning through life skill training for effective time management and developing problem solving skills sets forth an approach to balance their school and home learning. Approaches and measures to challenge the gender stereotypes and gender-based violence in Schools following the evidences from Adolescence Education Programme in India are worth mentioning. Discussion on Language Learning Motivation with reference to the socio-economic background was also accounted. The studies depicting notable role of mothers both working and non-working, on the academic achievement and adjustment of secondary school going children in conjugation to the effects on their affective and social domain, are also critical investigations centralising the attention and focus of the readers and stakeholders to this important role of parenting in learning and education of students.

Inclusive Education: The major themes studied under inclusive education includes Behavioural Problems and Management Strategies for Disabled children in Inclusive Classrooms; Critical Analysis of Education Policies and Acts for the People with Disability in India making a deep evaluation of the emerging issues and challenges in inclusive education, discussions on the role of parents and their perceptions and concerns on the programme of Home Based Education initiated by the Sarva Shiksha Abhiyan (SSA) for

children with disabilities, etc. Other listings in the thread were on the utilisation of Web Tools in inclusive teaching-learning for the active engagement of students to enhance their creativity, communication, language comprehension. Effective usage of tactile map book for students with visual impairments was also advocated. Investigations on the impact of life skills training on decision-making skills of dyscalculic students with ways forward to redefine normal classrooms and upgrading them to inclusive classrooms, making them truly accommodative for special children were other the added insights.

Pedagogical Strategies: Classroom pedagogies to optimise learning outcomes with integration of ICT or Web-based learning and teaching following a blended learning approach was keenly examined and reviewed. The analysis of the prevalent pedagogic practices in the schools involved humorous and activity based learning approaches, constructivist approach, and culturally designed pedagogical strategies for effective teaching of subjects like history. Cartooning and storytelling were the other key pedagogical instruments outlined to encourage active learning by motivating the interest of the students.

Curriculum Related Studies: Themes such as Curricular Practices Quest for Sustainable Development,

Universal Curriculum Design in Science based on the 21st Century Requirements presenting the opinions of various educational stakeholders and participants (teachers, teacher trainers, students) about the current science curriculum and its implication on their future life, thus, opening doors for discussions, debates and critiques for the enhancement and advancement of running curriculum designs were the major underlines of this section. The concept of Green School outlined in the Green School Curriculum, adds dynamics to the curriculum development strategies and seems to be cogent idea to be carried forward with needs for integration, implementation and practice. The concept keeps the agenda of sustainable development as base while following the philosophy of naturalism facilitating easy, interesting, creative and experiential learning on the way through. There is always a need for such interesting themes to bring a breakthrough in educational field.

Teaching-Learning Materials: This compartment of School Education provides face and shape to the pedagogical strategies and classroom transactions. A large number of papers or articles in this division added gravity for future research prospects alluring readers from all around. Some prime accounts were Augmentation of Technology Enhanced Learning in 21st Century Education System based

on Multimedia Learning System and learner centred pedagogy, learning algebra and understanding the natural world with the use of algebraic tiles kit and earth science kit, respectively. Use of Technology Supportive Materials (TSM) in comparison to Usual Learning Method (ULM) for developing listening skills among school children exemplified on how the usage of supportive materials help in achieving the optimal learning outcomes with ease, interest and active engagement of students.

Miscellaneous: Other than these major segments there were far-ranging reviews, analysis and inquiries that added vibrant colors to the journal's contents. Some of the important mentions are madrasa education, school counseling, transformative education, School Management Committees (SMC) roles and strategies for encouraging community participation and engagement, role of school administration in school mangement and development, the concept of "Quality School Education" from the pursuit of equality and equity in education, discussions on the philosophies of eminent proponents like Rousseau, Roger, Paulo-Freire, Nel Noddings, Ambedkar and Gandhi. Yoga Education and its roles in school education have also been seen spurring for its eminent place in this segment. Some write ups also gave glances on prominent concepts of peer tutoring, cooperative learning, conventional and cyber

bulling among teens, role and impact of social media in education. Some authors also explored and evaluated on status of various governmental schemes and policies in school education with special references to Mid-day Meal scheme, SSA School leadership, Gandhi Balika Vidyalaya Scheme for girl education.

Teacher Education

Teachers are not just the key players in curriculum transactions but are major participants in the development of a strong educational system and this dynamic role of teachers has impelled for the amelioration of teacher education programmes. To reach the milestone, there would be a need of training on new skill sets to boost their competencies on appropriate use of teaching resources and technology in classrooms in order to achieve the desired learning outcomes and to encourage their participation and professional growth , programs such as PDPs (Professional Development Programs) and CPDs (Continuing Professional Developments) play an important role. Following are some of the contrivances on the subject of Teacher Education that has added gravity to some undercurrent cores in this specific discipline:

In Service-teacher Training and Resource Materials Related Studies: The major listings encompassed topics like strategies to reflective teaching and role play as a reflective practice to build a culture

of inquiry in the schools, the need for competency advancement of teacher educators and student teachers on e-learning tools and the important tools and resource material for effective classroom transactions. Reviews also suggested on the need for integration of ICT which would catalyse the process of optimised learning in schools, and would also amplify on professional development of in-service teachers and teacher educators.

Studies on Pre-service Teacher Education: The subjects under this categorisation included investigations and reviews on the role of critical reflection in practicum of pre-service teacher education while highlighting on the shady and grey areas hindering the advancement of process. Debates on the possibilities for the school observation programme in competency building of pre-service teachers also scored for the segment. Other than these remarkable inputs, authors raised concerns on the duration and practice of school internship programmes to aid the professional development of student teachers while jacking up their pedagogical beliefs. Reviews in the similar line of thought advocated on restructuring of the internship design to bridge the gap between theoretical knowledge and professional practice in classrooms which would adequately enrich the school based practicum experience of these student teacher

and would also strengthen their teaching competency skill sets.

Curriculum in Teacher Education: Discussions on Transactional Aspects of School Internship and Curriculum in Diploma in Elementary Education Course with inclusions of experiences and reflections of student-teachers on school internship of 2–year B.Ed. programme were prominently discussed under this theme section. Multi-grade teaching, the striking challenges in the process of implementation with broad-spectrum opportunities in the field were also explored under this thread list. The studies emphasised on the strategic action plans for curriculum orientation and re-organising the frame of teaching competencies to override the challenges to reach the favourable outcomes.

Miscellaneous: This categorisation covered themes based on fundamental and effective teaching competencies, functional significance of reflective teaching, social constructivist approaches and effective instructional strategies of classroom teaching for teacher trainees using constructivism as a skill for reflective teaching in teacher education programme, book review on the subject of socialisation and identity highlighting on the ethical and moral dimensions of identity of teachers as a facilitator and co-learner, detailed review report on the organisation and status of the secondary teacher education

programme in the North eastern region of the country. A curriculum design was also suggested to investigate on the need and importance of integration of peace education in teacher education programme with application of the ADDIE Model to evaluate the faculty development programme exhibiting on the intense need of training in these arenas.

Higher Education

College education for better carrier choices, vocations and researches has always been a hunting ground for all educational stakeholders (students, researchers, teachers, parents etc.). Some sweeping themes under this categorisation included topics analysing the experiences of University students in terms of learning and student-faculty interaction, status of higher Education in Uttarakhand, implementation and effect of continuing professional development programmes for college teachers, role of social media in learning and its addiction among students of higher education institutions, and barriers encountered by students with disabilities impacting their learning experiences in higher education institutions. The section also included review on the partaking status of tribal youth of Tripura where the author attempted to posturise on how their lack of representation significantly undermines their participation in public sphere of HEIs, which eventually plays an important

role in shaping the contours of public policy.

Miscellaneous: Other than these major segments there were far-ranging reviews, analysis and inquiries that added vibrant colors to the journal's contents. Some of the mentions on these themes are value education, peace education, moral education, girl child education, women empowerment, education for socialisation and civic sense, neuro-education, vedic education, legal education, research education, adult Education, andragogy for teachers, home based learning and education: parents' concerns and roles, vocational education, education for entrepreneurial skills, minority education or tribal education or status of minority and tribal education in states and regions of UP, Delhi, Odisha and Rajasthan, awareness of RTE Act 2009, colonial codification of education in the country until 1920, feminist postcolonial perspectives, colonial analytics, gender paradox', followed by potential roles for a school library in the achievement of school education goals/public libraries as institution of mass education/public libraries in the remote villages of Uttar Pradesh, teaching and learning of languages—English, Marathi, Sanskrit and Hindi/Hindi-English code switching in Indian classrooms/ teaching in regional languages-status and prospects; learning achievement of students in Science, Maths and English with tools constructions such

as achievement test and intelligence test. There were brief account on NSEE (National Scholarship Entrance Examinations) and CCE (Continuous and Comprehensive Evaluation) under RTE 2009 with analysis of papers in different school subjects at Class X Level to provide insights in evaluation and assessment

CONCLUSION AND EDUCATIONAL IMPLICATIONS

The trend in any group or discipline has always been captivating to authors, researchers, students and even common people. These emerging ideas not only provide a road for progress and experimentation but also provide a sizeable room for interactions, discussions and debates. Better pedagogical strategies, effective implementation of curriculum,

CDP programmes for professional development of teachers, strategies and programming for implementation of educational policies are some of the trending examples which could be seen enlivening and boosting the scope of education. The analysis of the inclinations involves massive data assembling and sculpturing to canvas the real-time values which provides efficient and organised data in no time. The recent researches aids in availability of easy and beneficial methodologies to achieve the desired goals of time. During the study, it was found that some important subjects were dropped and overlooked. Discussions lost the sight of some important trends such as massive open online courses (MOOCs), distance education, personalised learning, digital literacy curriculum and game-based education.

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