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Theme:

**Education 4.0 - Changing Paradigms of
Higher Education in the Post-COVID-19 Scenario**

Guest Editor

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Guest Editor's Note

It gives me immense pleasure to present the special edition of the journal of Indus Business Academy, 3-D IBA Journal of Management and Leadership carrying the theme "Education 4.0 - Changing Paradigms of Higher Education in the Post-COVID-19 Scenario". The idea of Education 4.0 evolved from Industry 4.0 where agility in transaction processing and reducing cycle time are the key agenda to increase business profitability. Similarly, in academia, altering the course of andragogical issues like blended teaching, technology intervention, and managing the learner aspirations are some of the factors that have been inculcated to realize the objective of Education 4.0. The special edition brings along six riveting articles highlighting the crucial aspects of primary, secondary, and higher education scenarios in India, and one book review. All articles presented in the special issue reflect personal opinions based on individual perspectives and research done by the authors. The editors do not necessarily concur with them.

Aparajita Sengupta and Harish Kumar Tyagi in their article titled "A Road map of Implementing NEP 2020 through the School Complex Program" explain the challenges of implementation of the New Education Policy 2020. The paper highlights the importance of resource sharing among schools located in the vicinity to foster the idea of a school complex as mentioned in the policy document dated back in the 1960s. Such a pragmatic approach to the development of the school education n needs more focus and encouragement.

Lokesh Kumar Jena brings up the idea of 'helicopter parenting', a term relatively new in the academic context. His thematic review article titled " Helicopter Parenting and Beyond: The Interplay of Academic Motivation in Shaping Learner Satisfaction: A Thematic Review" explains the intrinsic and extrinsic motivational factors for a learner that have a direct bearing on learner satisfaction. The article also explains the repercussions of excessive supervision of the parents on their children which leads to less than desired results.

Karim Ansary in his article titled "Challenges of Higher Education in India: 21st Century Scenario" explains the

challenges faced by the higher education system in India and tries to offer a progressive solution while seeking government intervention to resolve the crisis in terms of teacher training or infrastructure development looking at the student welfare. It is indeed a major concern for academia not only in India but globally as to how should the system of education reorient itself to address the learner needs more effectively and provide value.

The importance of unravelling the facets of learning continuity is paramount especially in tertiary education as it pertains to skill development an important embellishment for a sustainable future for the learners. Subhayan Chakraborty writes about the evolution of educational institutions as Complex Adaptive Systems (CAS) where sustainable education is professed for higher learning gain. The theoretical aspects of learning continuity delve deep into the realms of protecting students from learning disruptions so that they have a better future.

Sayantana Thakur writes emphatically in his article titled, "Navigating the Digital Divide: Challenges and Strategies in Teaching Communicative English Online in Indian Classrooms", about the challenges of English language teaching in Indian classrooms. The authors highlight the importance of using a blended learning model mixing technology solutions for teaching the English language with physical classroom lectures to captivate the student's attention. However, the dearth of suitable physical and technological infrastructure is hurting the efficacy of the English language teaching-learning process.

The last article is written by me and suitably titled "Influence of Dogmatism in Learning Needs Assessment and Evaluation on Learning Continuity", and offers a perspective of the smear of conundrum whirling around the practice of assessment and evaluation at the tertiary level to ensure learning continuity. With each passing day, the number of self-directed students is increasing posing a challenge before the erstwhile andragogical practices. There's an imminent need to reassess our evaluation systems and improve upon them to witness the Pygmalion effect.

The journal issue also carries a book review by Subhayan Chakraborty. He has meticulously written a chapter-wise review of the book titled "Exploring Social Intelligence: The New Education Policy 2020".

I sincerely believe that the esteemed readers will find this issue engaging and insightful as multiple issues relevant to the Indian higher education system have been brought forward supported by a detailed analysis done by the esteemed authors.

Happy Reading!!

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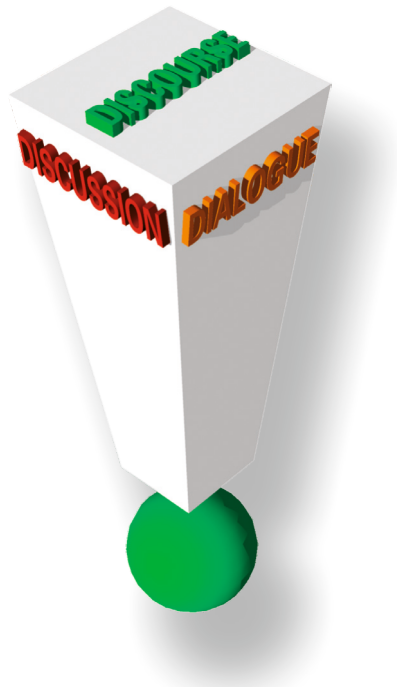
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A Road Map of Implementing NEP 2020 through the School Complex Program

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Abstract

The concept of school complexes was first recommended in the report of the National Education Commission in 1964-66. The idea behind introducing the concept of a school complex was that the nearby schools (within 5-10km) should benefit from each other's facilities in terms of infrastructural resources, expertise that exist in different schools, and also in terms of governance and management. However, over these years the implementation has not been easy and there have been various quality aspects that have turned up. The authors in this article have tried to bring into focus the quality aspect of the school complexes along with suggestions for various strategies with regard to NEP 2020 that could be used for the implementation of school complexes.

The challenges are manifold; but it is time to learn from previous lapses (in the implementation of school complexes) and keep on moving ahead to improve the quality of education and achieve three primary goals of Indian education i.e., access, equity, and equality. Now it is expected that the strategies proposed in the paper will certainly help the stakeholders in strengthening the success rate of the school complexes and achieving the goal of quality.

Key Words: NEP 2020, School Complexes, Quality of Education

Introduction

The concept of school complexes was first recommended in the report of the National Education Commission or the Kothari Commission in 1964-66. As reported by Payal Ruchi (2020),

The dual administration by the Sub-Divisional Education Officer, who is under the District Education Officer for the secondary level, and Block Extension Education Officer, under the Deputy Education Inspector, who is under the District Superintendent of Education for Middle and Primary schools has made the school situation worse. It fragmented the government resources and efforts and broke the flow of education in the same area. The primary, middle, and secondary schools although found in the same area remained uncoordinated. The secondary school teachers blamed the middle school teachers, who further passed on the blame to primary teachers for sending unprepared students. Their universes did not overlap, there was a break in the flow of education within the same school area (p1).

Apart from improper coordination and inadequate resources some of the other problems include the multiple-grade teaching that prevails in most schools in rural areas or villages across the country, the prevalence of single teachers teaching all the subjects, and problems related to governance and management (Payal Ruchi, 2020). Thus the Kothari Commission recommended clustering of schools. The school complex would comprise of “one secondary school together with all other schools offering lower grades in its neighbourhood including Anganwadis, in a radius of five

to ten kilometers” (NEP 2020, pp.29). The main reason for this recommendation was to promote the sharing of expert resources as well as the infrastructure of the schools in a given location. To be specific if in an area, within accessible distances, there are a small and fairly manageable number of teachers, then they could work in collaboration to establish a face-to-face relationship. This is proper utilization of resources both in the form of expertise as well as infrastructure with minimum wastage of both aforementioned.

The idea behind introducing the concept of a school complex was that the schools that are nearby should benefit from each other's facilities in terms of infrastructural resources and expertise that exist in different schools. This could be achieved by the establishment of schools as complex; where learning could occur collaboratively and in cooperation with each other's support. School complexes could comprise a set of primary schools, high schools, and other training schools, which would work jointly towards the educational goal of improving the educational standards and quality of school education.

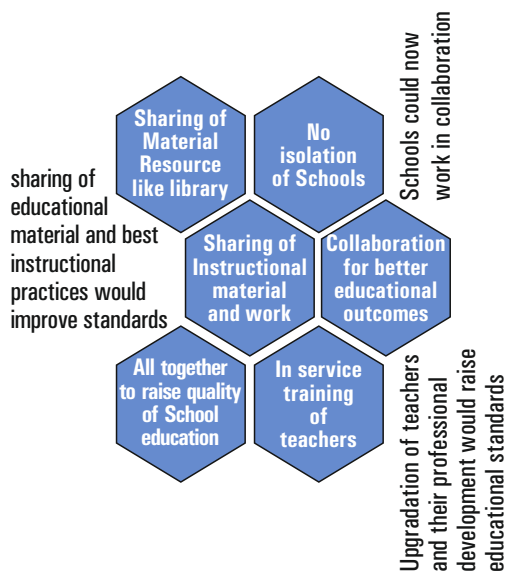
Some of the objectives behind the recommendation of the school complex by the Kothari Commission include:

- To break the barrier faced by schools of functioning in isolation.
- To raise the quality of education by interlinking of the high schools with other schools.
- To help schools work cooperatively to raise standards of education for all.
- To promote the sharing of educational aids and other resources like the library, amongst the various schools of the complex. Also, the complex could provide such resources to the

secondary schools in a given area that are part of the complex.

- To endorse the economical use of resources.
- It would allow the teachers of different schools of the complex to work in collaboration, and make proper use of both human and material resources for the upliftment of standards of education.
- It would provide better opportunities for school teachers to coordinate with the locals and communities to come together and resolve educational issues.
- It would provide in-service training to less qualified teachers to upgrade their teaching skills.
- It would help to develop improved teaching methods and establish best teaching practices in school education.

Figure 1: Importance of school complex



Sahodaya school complexes in India

In the year 1987, the Central Board of Secondary Education (CBSE) came forth with the concept of 'freedom to learn and freedom to grow through *Sahodaya* School Complexes (SSCs)'. The Sahodaya school complexes comprise of certain number of schools who are voluntarily associated and have come together based on common mutual goals of working together for the improvement of educational standards. Sahodaya literally means rising together. The six areas identified for collaboration between schools are given in Figure 2.

Figure 2: Areas of collaboration for Sahodaya School complexes in India

Educative Management	Evaluation	Human Resource Mobilisation
Professional Growth of Teachers	Value-Oriented School Climate	Vocationalisation of Education

Though it was the Kothari Commission that recommended the setting up of school complexes for the first time, but actually it was the National Education Policy 1986, that set the tone of setting up these complexes for quality education. Till date there are 260 such complexes which are active in the country.

According to the 26th Annual Conference of Sahodaya School complexes held in December 2020, various recommendations and resolutions were given. They are given below in Table 1.

Table 1: Recommendations and Resolutions for schools according to 26th Annual Conference of Sahodaya School complexes

RECOMMENDATIONS	
1.	Schools will make efforts for Personalized Competency-based Learning focusing on the student's strengths and providing opportunities to integrate real-life experiences into their learning
2.	Schools will ensure Joyful Learning by adopting experiential learning pedagogies like integration of Arts, Sports, Life Skills, Craft, Values, Toys, Stories, Research etc.
3.	Schools will create an Eco System for ICT integrated teaching learning and will make the best use of e-resources available at different platforms such as DIKSHA and SWAYAM.
4.	Schools must emphasize harnessing Emotional Quotient of every child to cultivate positive emotional health and the right attitudes . For this, mindfulness, meditation, and yoga should be practiced by students as well as teachers. Well-structured School Mental Health and Wellbeing Programs to be implemented appropriately across the developmental span of children.
5.	Schools must work towards the plantation of saplings by their students in and around their campus to carry forward the campaign of One Student One Tree .
6.	Schools will make dedicated efforts to promote Multilingual Learning to support Foundational Literacy.
7.	Schools to emphasize Skill Education to realize the vision of Self-Reliant India. Students need to be trained in Technology-Based Skills as well.
8.	Schools will ensure implementation of the recommendations of NEP 2020 in letter and spirit.
9.	School Leadership should redesign the curriculum, teaching-learning processes, and activities to allow for more inclusivity in all aspects of schooling.
10.	Capacity Building Workshops should be conducted for the School Leaders and Teachers to enhance their ability to adopt Cross-Cutting Themes to achieve standards.
11.	Schools will design Authentic Assessment Tools following the Feed Forward Methodology which offers constructive guidance for self-improvement.
12.	Principals shall act as Change Makers to lead, guide, and support all the concerned stakeholders of the institution.
RESOLUTION	
As envisaged in the NEP 2020, schools will build the competencies in the students to make them self-reliant and global citizens. The attitudes, skills, and knowledge of the learners will be prioritized. Implementation of experiential and research-based learning will be taken up in a mission mode	

Role of school complex on quality education

The New Education Policy, 2020 aims to put into effect the unrealized suggestion of school complexes, given originally by the Kothari Commission. The NEP mentions the various benefits of the school complexes like better support for children with disabilities, “more topic-centered clubs and academic/sports/arts/crafts events across school complexes”, sharing of teachers in various subjects along with the use of ICT tools for virtual classes, sharing of counselors and improved governance through School Complex Management Committees (NEP 2020, MHRD).

One of the quality aspects of school education as raised in the NEP 2020 document. These small school sizes have rendered it economically suboptimal and operationally complex to run good schools, in terms of deployment of teachers as well as the provision of critical physical resources. Teachers often teach multiple grades at a time, and teach multiple subjects, including subjects in which they may have no prior background; key areas such as music, arts, and sports are too often simply not taught; and physical resources, such as lab and sports equipment and library books, are simply not available across schools (p.29, NEP, 2020, MHRD)

Smaller schools pose a “systemic challenge for governance and management.” Thus, the revamping of the school complex was recommended. The school complexes and their quality are one of the issues to ponder upon. There is a need to develop institutional managerial skills amongst the leaders and other teachers to bring about efficiency in the system. Once this is achieved, then only the school complexes can effectively function. There is a need to focus on generating individual and collective capacities of the teachers, administrative staff, and other members to facilitate the smooth functioning of the school complexes.

For any system to work effectively, the leaders have to be efficient and well aware of their system. In the schooling system, the Principal is the leader and captain of the ship who gives direction for the strategic growth of the school. The NEP also focuses on training the principals or leaders of the school for effective functioning. Some of the features or strategies to ensure that quality is maintained in the school complex system are given in the upcoming paragraphs.

Promoting professionalism amongst teachers: The teachers must be open to the idea of a school complex system. There should be no feeling of competing with other teachers, but rather the aim should be to create a healthy environment of collaboration and extension. The motive should be to break all boundaries and try to create the best possible learning environment for the learners as per their needs. Achieving the goals of the school complex is a long-term process, and can't be achieved instantly. For this, efforts have to be made to make the primary stakeholders i.e., the teachers more professionally sound and developed. Professionalism must be promoted amongst the teachers in the form of training and workshops by the relevant authorities. Teachers must be reminded that quality is the prime pillar of the education system and as a teacher, it is our responsibility to contribute wholeheartedly without any hostility with teachers of other institutes.

Improving the quality of educational resources and infrastructure: To maintain the quality; the infrastructure and educational resources available in the schools of the complexes must be overhauled and upgraded. The libraries, the sports facilities, and other related infrastructure must be re-organised so that even the students or teachers from the other schools of the same school complex have easy access.

Common portal for best pedagogical and evaluation practices: Best pedagogical practices must be shared and brought into practice amongst the schools of the complex. This sounds easier than done though. Authentic assessment tools must be brought into practice that helps in proper reviewing and reflection. For the

pedagogical and evaluation-related resources, a common virtual platform must be created where each teacher can upload their best teaching practices and evaluation techniques with examples.

Feedback mechanism for reflection: A Feedback mechanism needs to be generated where the teachers could further reflect upon their teaching practices, for further improvement. For example, observation of a teacher by Senior or master teachers of the school complex. Apart from this, as a part of the professional development of teachers, the open classroom model could be made use of. In this model, lessons are created by teachers, and other teachers are invited to observe and provide feedback after the lesson. Both categories of teachers: those who observe and the teacher who is observed benefitted. Such feedback mechanisms should be a part of the professional development of teachers and could be counted in the CPD (continuous professional development) hours. Similar to this feedback mechanism the school administration must be open to suggestions from the other stakeholders like the teachers, parents, and students.

Family engagement for better learning outcomes: As per the studies by various institutions especially Harvard University, it has been proved with data that family engagement at all levels of school, is beneficial for the student's success and achievement. Family engagement as defined by National Family, School, and Community Engagement Working Group (now the NAFSCE Policy Council) as "Family engagement is a shared responsibility in which schools and other community agencies and organizations are committed to reaching out to engage families in meaningful ways and in which

families are committed to actively supporting their children's learning and development". The family-school collaboration or the parent-teacher association is crucial for the improvement of the child not only academically but socially and emotionally as well. The concept of family engagement is relatively new to India but needs to be brought into practice with greater thrust. Some of the simple examples of family engagement as mentioned by the NAFSCE include the following:

- Building of strong relationships between schools and families through home visits and class meetings.
- Sharing data on the students' skills developed with family regularly (like through messages).
- Guiding families to incorporate effective teaching methods at home.

Effective teacher-family relationships would help teachers to know more about students' interests and challenges and also about the cultural background of the child. This information could be used by the teachers to plan their instructions as per the learner's needs

More autonomy to the teachers: The NEP 2020 also raises the point of giving greater autonomy to the teachers. They should be allowed to use their pedagogical approaches and evaluation techniques. They should be given greater liberty to interact with the community and body of inspectors or policymakers to give their valuable suggestions for improvement in the quality of education.

Better coordination amongst the various administrative levels of the complex: Most of the policies come up with various recommendations, but at the ground level

such suggestions fail to succeed many times due to lack of proper coordination between the administration of various stakeholders involved. The school complex is a great idea on paper, but for it to be effective, there has to be an extreme level of coordination at all levels throughout. Coordination amongst all the schools associated, and the

Use of Technology while ensuring access and equity to improve quality: The use of ICT tools in teaching learning and assessment has become the new normal in education, especially in the pandemic times. COVID-19 has forced us to think and proceed with the new normal in education in India. However, as mentioned by Michael P. A. Murphy (2020); making e-learning the new normal in education would mean generating inequalities in terms of class and race; which the schools have been trying to remove forever. There are several factors involved in the usage of technology or virtual classrooms like language problems, professional training of teachers, lack of motivation and leadership, unavailability of smartphones, and poor internet connection in rural areas. Each problem area needs to be tended to.

Suggestive framework of school complex for different stages of school education as per NEP 2020

The concept of a school complex has to be implemented at various hierarchical levels, and so would have various strategies at each level. As suggested by the National Institute of Educational Planning and Administration, 2020 the broader level would include implementation strategies like:

- Developing the criteria for identification of the lead schools of the complex,

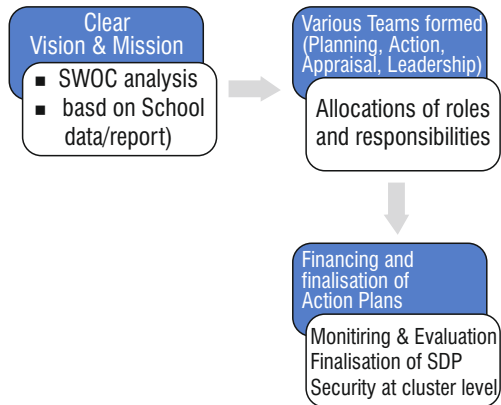
- Specification of both academic and administrative functions,
- Identifying indicators for the school complexes,
- Implementation of the case study of a successful complex school,
- Development of guidelines for the school management committee,
- Setting up various committees under the school complex,
- Development of a School development plan (SDP) and School complex development plan (SCDP),
- Defining the roles of the supporting institutions like DIET, SCERT, and other local authorities
- Development of the school complex Leadership

The above implementation strategies are the steps to be taken by the higher educational bodies in the hierarchy. Now talking about the steps that would be taken at the ground level, i.e., at the school level or the teacher level, there needs to be an implementation plan as well. This would be a part of the SDP and the SCDP. These plans would be both short-term and long-term and would be prepared in collaboration with the school management committees. As highlighted by the National Institute of Educational Planning and Administration, 2020:

The SCDP will be developed by the Principal and teachers associated with the school complex. The SCDP will also include a plan for associated institutions such as vocational educational institutions. The plan will include details in terms of human and material resources, innovative agendas, financial resources, teacher development, and educational outcomes (pp.61).

Before the specific norms, framework, and implementation strategies are given, some of the steps for the development of SDP as given by NIEPA.2020 are given below in Figure 3:

Figure 3: Steps for Development of SDP



The NIEPA has also suggested various criteria or components for the preparation of the SDP. Some of the criteria include strategies for developing overall and academic results of students, an attractive and lively school environment, teachers' training needs and CPD plans, school sports art, music, and health interventions. Based on these components, some of the strategies suggested for the action plans to be developed are given below:

- The focus of the school complex should be to bring about such activities that help to achieve the goals of access, equity, and equality. Activities such as Job and career fairs could be organized for the secondary (IXth & Xth) and senior secondary students (XIth & XIIth). It would help senior secondary students get clarification related to career options in higher education and would help secondary students in choosing their streams after class Xth. The career

counselors having expertise in this area should be invited for career guidance to students.

- The Alumni of the cluster schools, must be contacted and invited to motivate the students of their alma mater and also other cluster schools. The concept of the school complex must not be limited to the current batch of students but must aim to bring back their successful alumni to take learnings from their experiences. For example, the cluster schools could invite a group or individuals who have qualified for national-level exams like NEET or other competitive exams to come and participate in open house discussions or invited lectures to motivate and guide the novices.
- Any teacher of the cluster schools, who has been honored or awarded or has received some recognition at state or national level; must be given opportunities for motivating the other teachers of the complex. This could be done in the form of meetings, workshops, or seminars. This is similar to the cascade model of professional development where the star teachers cascade down their learnings to the other teachers. This could be made as a part of the Continuous Professional Development programs (CPD) as well.
- As mentioned earlier also, the school complex implementation is not possible overnight, and not without the upgradation and professional development of teachers. So, the teacher's training must be brought into focus and it must be ensured that every single teacher of the complex is given appropriate training. There should be no biases in the selection of teachers for

training. Every teacher has a contribution to make, so every teacher needs upgradation professionally. It should not be that every time the best-performing teachers would be given a chance of upgradation. The most important point that must be ingrained in teacher's minds is that CPD is a necessary part of their professional growth, and it should not be taken as a burden or just for completion of CPD hours. It should be a truthful attempt by the teachers to upgrade their skills and knowledge to improve the quality of education.

- As a part of CPD hours the teachers must be allowed to attend it.
- There could be certain community work opportunities be created for both teachers as well as students within the cluster schools; to make them more sensitive towards the various societal problems that exist. For example, there could be a drive where a group of girl students along with a few teachers could go to their nearest village (in collaboration with the panchayats) and spread awareness about the importance of health and hygiene amongst women. They could present posters; present street plays or simply showcase some documentary. Similarly, there could be a certain group of students back at the leader school preparing for some small innovative projects to further make such drives more concrete. Once these little innovative projects are completed; they could be showcased in the form of exhibitions. All these are easier said than done. The biggest problem is the time constraint. The students as well as teachers do not get time after the

regular classes or schedule. Some of such activities must be incorporated into the curriculum and should be taken in true spirit by both teachers as well as students. The ministry must ensure that such activities are considered a part of their curriculum. Also, for such drives, there must be some incentives for both teachers as well as students. For students in the form of marks, and teachers in the form of CPD hours.

- Certain action research projects could be taken up based on the local school problems by the teachers. To do so, the teachers must get full support from the staff and the various committees of the complex. Action research projects would enable the faculty to get an insight into the existing system and how to improve further. For example, action research could be done on absenteeism by certain students of a given grade. The possible reasons could be found based on interaction with parents and other community members.
- The best performers in sports and various games of different cluster teams could be made to form a single team, and they could further represent the school complex as a whole. Similar initiatives could be taken in the field of arts and sciences.
- The technological interventions to the school education system have already geared up in the pandemic times. As highlighted in the NEP 2020, technological interventions are required for “purposes of improving teaching-learning and evaluation processes, supporting teacher preparation and professional

development, enhancing educational access, and streamlining educational planning, management, and administration including processes related to admissions, attendance, assessments, etc” (NEP 2020, MHRD, pp. 57). For such educational technology initiatives to be successful, first the teachers as well as students need to be trained. The offline mode of learning would resume once the pandemic is over, but the educational system has to be prepared for any other kind of such pandemic- i.e., using online modes of education. Thus, teachers must be professionally upgraded in how to use technology in teaching. Faculty development programs must be a frequent feature of the cluster schools. Those teachers of the complex who are already trained must help other teachers of the complex; to get trained through various online sessions and workshops. Similarly, for students such training must be organized by the individual cluster schools for middle, secondary, and senior secondary students of those localities who have less exposure to such facilities.

- Some other activities that could be carried out by the cluster schools, are various club activities and the organization of fairs and exhibitions for each subject.

Conclusion

There are various challenges associated with the successful implementation of the school complexes. Despite all the efforts by the government, the educational resources in schools have not been escalated up to the

mark. Now when resource sharing is brought into focus, it would not be an easy process. It could also lead to misuse or mishandling of the available resources, based on the decision of a few people. Another big challenge is that even if everything is established and implemented as desired, then who will evaluate whether the system is functioning properly and is fruitful or not? There is no clear mention of the Grievance redressal mechanisms; as to where the problems or lacunae in the system be reported so that there are necessary actions taken (Payal Ruchi, 2020). The tendency of the “system” to always show “positive results or outcomes” of any project is generally a biased decision. The reported outcomes of any project must be based on real data, and the ground realities, rather than just to get applauded for something that never happened. One such example as reported by Payal Ruchi, 2020 is:

Maharashtra government's experience (Poona, Bombay, Nagpur, and Aurangabad) brings various problems to the forefront, like problems in the committee meetings, the attitudes of teachers and headmasters towards the school complexes, the orientation of teachers for participation in the school complex activities, the effectiveness of complexes in the Adivasi's areas and backward rural areas, hardships in playground activities due to the distance among the schools.

Implementation of the strategies was not a cakewalk and has faced various hurdles. The implementation of strategies has to be done very carefully and strictly, keeping in mind the views of all the stakeholders. School complex is a concept that when implemented properly could bring about phenomenal changes in the school

education system; provided all the stakeholders understand the crux and importance of the school complex and clustering mechanism. The biggest challenge is again getting all the stakeholders aligned for a single cause- bringing better quality in education. The causes of failures of the earlier school complex models must be thoroughly researched and then only the new mechanisms or strategies must be implemented for re-establishment of the school complexes.

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Helicopter Parenting and Beyond: The Interplay of Academic Motivation in Shaping Learner Satisfaction: A Thematic Review

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Abstract

The effects of helicopter parenting on children's intellectual and psychosocial development have garnered significant attention. Nevertheless, there has been a lack of investigation into its potential effects on learner satisfaction and academic motivation. This thematic study examines the complex relationship between helicopter parenting, academic motivation, and learner satisfaction within educational contexts. It also discusses how helicopter parenting affects internal and extrinsic academic motivation in various dimensions. The finding indicates that helicopter parenting impacts both learner satisfaction and academic motivation. At the same time that academic motivation influences learner satisfaction, it also acts as a moderator between helicopter parenting and learner satisfaction. Additionally, it was shown that academic motivations, whether they are extrinsic or intrinsic, have a positive and negative impact on learners' satisfaction. This review integrates insights from theoretical frameworks and empirical studies to provide a holistic understanding of the complex dynamics and highlight implications for educational practitioners, policymakers, and future research on positive learning environments and student well-being.

Keywords: Helicopter parenting, Academic motivation, Learner satisfaction, Intrinsic motivation, Extrinsic motivation

Introduction

The field of education is continuously changing, which requires a flexible approach to foster successful learning (Plessis et al., 2024). Over the past few years, interest in helicopter parenting has grown in research, education and among parents (Vinson, 2012; Grinshtain & Harpaz, 2021). Helicopter parenting, which involves excessive control, involvement, monitoring, and limited opportunities to explore and learn independently, may affect children's development and well-being (Ratcliff, 2020). These practices may discourage intrinsic motivation and encourage extrinsic motivation (Mario, 2019; Hivick, 2019). There is a growing body of literature on helicopter parenting, learner satisfaction, and academic motivation, but no comprehensive study has explained their relationship. Therefore, this thematic paper addresses these gaps by comprehensively analysing the current literature and proposes a research framework to guide future investigations. This will contribute to the current body of knowledge by examining the relationship between helicopter parenting, learner satisfaction, and academic motivation.

Theoretical Underpinning

Self-determination theory (SDT), proposed by Deci and Ryan in the 1980s, highlights the connection between helicopter parenting and learner satisfaction by examining the interaction between intrinsic and extrinsic motivation (Macias, 2019; Deci & Ryan, 2013; Mario, 2019; Liu et al., 2023; Sergis, 2018; Ardeńska et al., 2019; Ayub, 2010). According to SDT, academic motivation is driven by three essential psychological needs: autonomy,

competence, and relatedness (Mario, 2019; Deci & Ryan, 2013). Individuals also have internalisation and integration requirements that contribute to their extrinsic motivation (Mario, 2019; Deci & Ryan, 2013). SDT says intrinsic motivation predicts better learning experiences and academic performance than extrinsic motivation (Howard et al., 2021; Vansteenkiste, 2006).

Helicopter parenting can diminish autonomy, competence, and relatedness, resulting in decreased intrinsic motivation (Schiffrin, 2014; Mario, 2019). Consequently, this might lead to learner dissatisfaction and lack of involvement in learning (Vigdal & Brønnick, 2022).

Therefore, this review will examine the role of various motivating elements and the relationship between the variables mentioned. Finally, it will guide the construction of a research framework to direct future investigations.

Methodology

This study uses a thematic approach to examine previous literature, including academic papers, publications, conference proceedings, research reports, and unpublished resources. The researchers undertook a thorough literature search to ensure an understanding of the subject area, including unpublished reports and publications wherever possible. The basis of this article is built around a dedication to conducting a comprehensive analysis of all pertinent material. This study considered literature discussing helicopter parenting, learner satisfaction and academic motivation (intrinsic and extrinsic motivation) to portray an insightful and logical research framework for future investigation.

Literature Review

Helicopter Parenting

Helicopter parenting refers to a parenting approach in which parents actively monitor and supervise their children's activities, decisions, and academic pursuits to an excessive extent (LeMoyné and Buchanan, 2011; Padilla-Walker and Nelson, 2012; Schiffrin et al., 2014; Mario, 2019; Vigdal & Brønnick, 2022). The phrase "helicopter parenting" was initially introduced in 1990 (Cline and Fay, 2020) to depict the behaviour of parents who excessively monitor and intervene in their children's lives, resembling helicopters that constantly hover and swoop in to shield their children from disappointments and distressing situations. Parental monitoring became more common in 1985 for several reasons, one of which is that it indicates children are unable to cope with their problems and need constant protection from the dangers of the outside world (Lythcott-Haims, 2015). Helicopter parenting significantly undermines the basic psychological needs of learners' autonomy, competence, and relatedness (intrinsic motivation), ultimately impacting their well-being, motivation, and academic success (Schiffrin et al., 2014; Schiffrin et al., 2019). In contrast, helicopter parenting is mainly related to extrinsic motivation (Schiffrin & Liss, 2017).

Learner Satisfaction

According to Liu (2010) and Rajabalee & Santally (2021), one of the most important topics in online education and learning right now is to focus on learner satisfaction. The term "learner satisfaction" refers to the degree of contentment that students feel throughout the course of instructional and learning activities. Learner satisfaction refers to the overall emotional responses

and feelings that arise from specific interactions with an e-learning system (Goh and Chen 2008; Martin & Bolliger, 2022). Course design, social and professional networks, academic guidance, and digital literacy all impact the satisfaction of students (Allen et al., 2002). Mukherjee et al. (2024) found that perception, emotion, attitude, teacher-student interaction, peer interaction, and motivation affect learner satisfaction. Helicopter parenting, with its constant monitoring and control, can stifle learner satisfaction (Schiffrin & Liss, 2017; Ryan & Deci, 2017; Pautler, 2017). This parenting approach may frustrate, disengage, and lower academic achievement by inhibiting student autonomy, problem-solving abilities, and intrinsic motivation (Wang et al., 2019; Davis, 2022; Minnaer, 2011; Ariani, 2016).

Academic Motivation

Academic motivation drives student engagement and achievement. It includes internal and external factors that affect students' academic choices, effort, and perseverance (Schunk et al., 2008; Usher & Morris, 2012). This desire to learn and achieve can be fueled by a student's interest in the subject matter itself (intrinsic motivation) or by external rewards and recognition (extrinsic motivation) (Ryan & Deci, 2017; Hu & Luo, 2021; Naeghel et al., 2012; Guilloteaux & Dörnyei, 2008). Ultimately, A student's engagement, persistence, and performance are heavily influenced by their academic motivation (Green et al., 2006; Linnenbrink & Pintrich, 2002; Hakan & Münire, 2014). It has been found that helicopter parenting may negatively impact academic motivation and achievements (Schiffrin & Liss, 2017). Academic motivation is mainly derived in two forms in an academic setting, i.e., intrinsic and extrinsic.

Frameworks Reviews

Helicopter Parenting and Learner Satisfaction

In numerous ways, excessive control, micromanagement, and overinvolvement in helicopter parenting may negatively impact learner satisfaction (Ratcliff, 2020; Rainey, 2006; Oh et al., 2021; Schiffrin & Liss, 2017). Overprotective parents can degrade students' independence, leading to feelings of inadequacy, dissatisfaction, and hindering accountability, responsibility, and self-sufficiency (Glass & Tabatsky, 2014; Bronson, 2009; Ungar, 2009; Bradley-Geist & Olson-Buchanan, 2014; Vigdal & Brønnick, 2022). The lack of opportunities to independently make decisions and face challenges may also lower students' self-esteem and academic motivation. Furthermore, children may struggle to develop a feeling of connection and belonging in a learning environment if their parents exhibit helicopter parenting, which may lead to strained relationships between the two. Helicopter parenting can hinder children's participation, exploration, and satisfaction in education, leading to decreased well-being and overall satisfaction (Vigdal & Brønnick, 2022; TNN, 2019; Schiffrin & Liss, 2017). Thus, the practice of helicopter parenting might have a detrimental effect on learner satisfaction.

Academic Motivation and Learner Satisfaction

Academic motivation, including internal and external variables that motivate students to achieve, greatly affects learner satisfaction. A higher level of satisfaction and contentment is attained by students who possess a strong intrinsic motivation to learn. Intrinsic motivation leads to greater learning, academic

accomplishment, and satisfaction than external motivation in students. This is because extrinsic motivation has been found to have potentially negative effects, as demonstrated in multiple studies (Lee, 2022). SDT posits that motivation, even when derived from external factors, has the capacity to undergo a transformation and assume a more self-governing nature. By internalising and integrating an activity, such as aligning it with personal beliefs and acknowledging its value, extrinsic motivators like rewards or avoiding punishment can be transformed into true enthusiasm and dedication (Ryan & Deci, 2000). On the other hand, excessive dependence on external incentives can result in annoyance and a reduced feeling of achievement, ultimately affecting one's satisfaction with the learning process. (Ryan & Deci, 2017; Mario, 2019). According to Benabou and Tirole (2003) and Ryan & Deci (2000), extrinsic motivation, fueled by rewards as positive reinforcements, can promote effort and immediate performance gains with less effort. Additionally, the effectiveness of extrinsic motivators often diminishes over time as the rewards are achieved or removed. Primarily extrinsically motivated students may lose interest, engagement and intrinsic motivation (DeLong & Winter, 2002; Biehler and Snowman, 1990). However, utilising rewards as extrinsic motivators can effectively enhance learner satisfaction, especially when employed strategically to bolster and cultivate intrinsic motivation (Baranek, 1996; Phungphai & Boonmoh, 2021). Additionally, students with high intrinsic motivation can negatively impact learner satisfaction if it leads to perfectionism, fear of failure, or negative feedback. Students driven by a strong

desire to succeed may become self-critical, frustrated with setbacks, and less interested in learning (Elliot & Conroy, 2005; Conroy et al., 2001; Moreno-Murcia et al., 2019; Sagar & Stoeber, 2009; Lee et al., 2024). Academic incentive, whether intrinsic or extrinsic, has a positive and negative effect on students' satisfaction levels. Additionally, The relationship between intrinsic and extrinsic motivation is also influenced by one another (Dhanapala & Hirakawa, 2016; Vansteenkiste, 2006; Mario, 2019).

Helicopter Parenting, Academic Motivation & Learner Satisfaction

Strong academic motivation can mitigate helicopter parenting's negative effects on student satisfaction. The internal drive to learn promotes autonomy and satisfaction in learning. Even with a helicopter parent, this can help students feel proud and in control. External rewards and recognition can also boost motivation temporarily. Strong rewards, especially those recognising effort over results, can keep students going despite parental pressure. Despite helicopter parenting, students with high academic motivation, intrinsic or extrinsic, are more likely to be satisfied with learning (Ryan & Deci, 2017; Deci & Ryan, 2013, Mario, 2019; Vansteenkiste, et al., 2006).

Therefore, the following research framework can be proposed based on the secondary literature review, as seen in Figure 1. Helicopter parenting has been found to influence both learner satisfaction and academic motivation. Simultaneously, Learner satisfaction is concurrently influenced by academic motivation, with academic motivation serving as a moderating factor in the relationship between helicopter parenting and learner satisfaction.

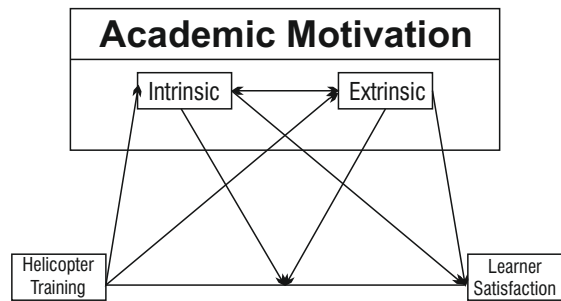


Figure 1. Proposed Research Framework, Source: Author

Limitations of the Study

This study employed a thematic review approach, which involved analysing existing material instead of conducting original experiments. The complexity of this subject renders it challenging to make broad generalisations about the results. The influence of helicopter parenting and motivation on learner satisfaction may differ based on individual learner traits, the extent of parental supervision, and the particular learning environment.

Conclusion

Excessive parental control can have a detrimental effect on learner satisfaction by suppressing student autonomy, problem-solving abilities, and intrinsic motivation. Students may be protected from feeling overly observed and controlled by academic motivation, which could increase their learning satisfaction. Strong intrinsic motivation for learning may lead to autonomy and accomplishment despite parental monitoring. Similarly, Strategically crafted extrinsic motivation via recognition rewards may also increase learner satisfaction in the long run. Hence, kids must be encouraged internally and externally to resist helicopter parenting and succeed academically. Future

directions and factors influencing the satisfaction of students may be better understood with the help of this research framework. Further investigation into this area will focus on conducting empirical tests of the suggested study framework in various learning environments. With a mutual comprehension of the dangers of helicopter parenting and the safeguarding function of motivation, parents and educators may be able to create a more encouraging educational setting for learners.

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Challenges of Higher Education in India: 21st Century Scenario

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Abstract

An essential component of any nation's development is higher education. A nation must first establish a strong foundation for its higher education system before it can establish a strong foundation for its political, social and economic institutions. If the current issues in higher education are not resolved, quality development in the sector will never be achieved. India's higher education system is dealing with a number of difficulties as a result of these issues in the country's higher education sector. If these issues related to higher education cannot be effectively resolved, then there will never be an opportunity to raise the standard of education in the nation. This research work is an attempt to highlight the issues and challenges higher education in India is currently facing as well as potential solutions which can address these issues.

Key Words: Quality, Challenges, Economic, Political, Higher Education, Commission

Introduction

The higher education system plays an important role in the overall development of any country. To put the economic, political, and social systems of a country on a solid foundation, the higher education system of that country needs to be put on a solid foundation first. For the overall development of this higher education system, the first education commission of independent India the University Education Commission, was formed in 1948. Since then, a lot of time has passed; various committees and commissions have been formed for the overall development of the higher education system of the country. Although some of the problems of the higher education of the country have been

solved by those committees and commissions, it has not possible to give an overall shape to the higher education system of the country. Quality improvement in higher education is never possible if the prevailing problems in higher education are not eradicated. There are such problems in the field of higher education in India today, for which the country's higher education system is facing various challenges. Especially in this post-pandemic period, higher education is facing various challenges. It is never possible to improve the quality of higher education in the country if it is not possible to properly solve the problems associated with the various challenges of higher education. So, with the help of this present study, the researcher tries to discuss what are the challenges or problems facing higher education in India today and how to solve them.

Review of the Related Literature

Gupta and Gupta (2012) studied the statistics and challenges of higher education in India. In this study, the researchers said that the size of India's higher education market is about 40 billion per year. Hoque (2022) conducted a study on the higher education system in India: emerging issues and prospects. In this study, the researcher concluded that after independence, there has been a tremendous increase in higher education institutions of learning in all disciplines. But still, India is way behind in providing world-class education. Solanki (2019) said that to develop India as an education hub or to become a prosperous partner in the global economy, India has to qualitatively strengthen education in general and higher education with research and development in particular. Bhatia and Dash (2011) conducted a study on the demand for a

value-based higher education system in India: A comparative study. In this study, the researchers said that the higher education system is essential for the national, social, and economic development of the country. Srinivas (2023) conducted a study on quality concerns in higher education in India. The researcher concluded that education is the key to progress especially higher education which provides cutting edge and skilled manpower. Saravanakumar and Devi (2020) studied issues and opportunities in Indian higher education. In this study, the researchers suggested that in finding solutions to the issues in higher education, the cooperation of international communities should be sought to share their experiences. Singh (2011) said that after independence, there has been a tremendous increase in institutions of higher learning in all disciplines. But with the quantitative growth has it been able to attend to the core issue of quality? Hossain and Mondal (2019) conducted a study on the history and milestones of higher education in India. In this study, the researcher said that the higher education system plays an important role in the country's overall development, which includes industrial, social, economic, etc. Begum (2017) conducted a study on higher education in India: major, contemporary, and international challenges. The researcher said that in the changing context of the emergence of the knowledge economy, higher education institutions need to embrace the concept of lifelong education and training. Sheikh (2018) studied the challenges and opportunities of higher education in India. In this study, the researcher concluded that higher education in India has expanded very rapidly in the last six decades after

independence yet it is not equally accessible to all.

Challenges of Higher Education in India Today

The challenges facing higher education in India today are discussed below:

i. Teaching Quality

One of the biggest problems in higher education in India today is the decreasing teaching quality of higher education. The quality of higher education often declines due to a lack of qualified and trained teachers. Teaching quality needs to be developed to increase the quality of higher education and above all to make higher education suitable for the economic, political one social systems of the country.

ii. Curriculum issues

One of the major problems of higher education in India today is its curriculum-related issues. Curriculum policies followed by higher education have in many cases not become relevant to the real life of the students. After completing higher education students cannot apply the knowledge and experiences gained through higher education to the social environment. Besides, in the field of higher education, it has not been possible to formulate a university-accepted curriculum policy due to different curricular policies prevailing in different stages.

iii. Lack of proper value education

Degradation of value is one of the major problems of modern human civilization. However, value education is not offered in schools and colleges. True education is the only tool in which decadent value can be

prevented. After the Pandemic, the degradation of these values seems to have gained a new momentum. Many of the doctors, lawyers, politicians, and Govt. servants who are supposed to be the saviors of the society, suffer from serious charges of corruption.

iv. Political factor

Political influence is also a bad thing and an issue with higher education in India. Governing bodies do not want any political influence or interference in their affairs. In most higher education institutions, different activities are carried out according to the words of different political leaders. Political leaders interfere in the internal affairs of most colleges and universities in India.

vi. Moral issues

The younger generation is not interested in serving their country and they are more interested in just taking up a job and a hefty pay package. The rapid growth of science and technology and subsequent industrialization has caused great danger to our old morals and values. The younger generation's dissatisfaction and revolt are the outcome of a decaying system of values.

vii. Corruption in higher education

Corruption in India's education system has been eroding the quality of education. It is one of the major contributors to domestic black money. Payment to management in dark rooms and seeking admissions is increasing. Getting full salary in the account, and paying back part to management by blank signed cheques' is also a practice in some

private universities or colleges.

viii. Lack of experienced and trained teacher

The lack of experienced and trained teachers is also one of the biggest problems of the higher education system of India today. The quality of the teaching and learning process in higher education institutions depends to a large extent on the competence and experience of the teacher in that institution. But, at present higher educational institutions are not able to recruit trained and experienced teachers due to various reasons be it political interference or corruption.

ix. Lack of technological equipment

Technology is inextricably linked with modern human life. There is no aspect of human life today where technology has not played an important role. It has been possible to solve many complex problems of education through the use of technology in the field of education. Most of the higher education institutions in India do not use this technology properly or do not have the necessary equipment to use the technology properly. Therefore, lack of equipment is also one of the biggest problems of higher education in India today.

x. Privatization of higher education

There is a particular trend towards privatization of higher education in India today. Privatization is also a big problem that higher education in India faces. If the higher education

institutions of the country are privatized then most of the higher education institutions will not be affordable for common students.

xi. Economic difficulty

Economic difficulty is also one of the major problems of higher education in India today. The number of students who are coming from the ordinary classes, many of them are unable to provide the minimum necessities of life for themselves. Most of the students are forced to drop out midway because they cannot afford higher education. Scholarships that are given to the students to continue their course are not given to all categories of students and the amount of money is not enough.

xii. Poor women's education

Currently, various policies given by the government for the development of women's education have encouraged in the field of women's education. But, the reservation of girls in employment is very low. Most of the women in India engaged in domestic work after completing their higher education. As a result, women's interest in higher education is decreasing day by day.

xiii. Lack of employment

Lack of employment is one of the major burning problems facing higher education in India today. As there are no employment opportunities for the students after completing higher education, most of the students are not paying more attention to higher

education.

Ways to Overcome the Challenges of Higher Education in India

The following steps need to be taken to overcome the challenges faced by the higher education sector in India today:

I. Quality development

First of all, the quality of the higher education system of the country needs to be developed. Quality depends on its function and activities such as teaching and academic programs, research and scholarship, staffing, students, library, equipment, and the academic environment. To improve the quality of higher education, all necessary measures should be taken.

ii. World-class education

The higher education system of the country should be given considerable importance to make it at par with the international level. Many national universities like in the USA, UK Australia, etc. allow studies in higher education for foreign students in their countries and through correspondence courses as well. As a result, we will be able to be aware of the various aspects of the educational institutions of those countries.

iii. Flexible and life-centric curriculum

The curriculum of the higher education system has to change along with the changing society. For a long time, traditional curriculum can never be kept in the education system. While determining the curriculum of a higher education institution, one must look at the needs of the students in that particular region. Because if the curriculum is not connected with the

life of the students then the students will never show interest in that type of curriculum.

iv. Emphasis on research and innovative activities

More importance should be given to research and different types of innovative activities in various higher educational institutions of the country. State and central governments should take various measures to make students interested in research work. The amount of scholarship given for carrying out research work on various subjects should be increased.

v. Experienced and trained teachers should be appointed

The quality of teaching and learning in the higher educational institutions of a country largely depends on the efficiency of the teachers. As a result of corruption, the teachers recruited in various higher educational institutions are mostly inexperienced and untrained. Therefore, the central and state governments should be more aware of the recruitment of teachers in various educational institutions.

vi. Public-private partnership

PPP is essential to bring quality in the higher education system. The government can ensure PPP through an appropriate policy. University Grant Commission and Ministry of Human Resource Development should play an important role in developing a purposeful interface between the universities, Industries, and National Research Laboratories as a step towards public-private partnership.

1. Fair quality assurance system

Every college and university that has an internal quality assurance cell needs to be more active. Agencies like NAAC which are there to analyze the quality judgment of various colleges and universities need to work more fairly. It should also be seen that these agencies do not follow the words of any political leader.

ii. Emphasis on vocational education

In 1882, the Hunter Commission recommended the introduction of vocational education for the first time in India to prevent all students from rushing to higher education institutions after completing their school education. Vocational education should be given importance so that students who are getting admission in various educational institutions for higher education can engage themselves in any profession after the completion of their general education.

iii. Creating employment

The number of jobs being created in the country is not enough to meet the needs of all the students passing out from all the higher education institutions in the country. As a result, most of the students are unemployed after completing higher education. Day by day students are losing interest in higher education. To solve this problem, a large number of employment needs to be created.

Conclusion

The higher education system plays an important role in the overall development of any country. To put the economic, political, and social system of a country on a solid foundation, the higher education system of that country needs to be put on a solid foundation first. It is satisfying to note that the Ministry of Human Resource Development of the government of India has embarked upon a motivated project of renovating and overhauling the present education system to develop excellence in higher education to sustain the growing economy of the country. However, there are still many problems in the field of higher education which are major obstacles in improving the quality of higher education, which are also preventing the higher education system of India from rising to the level of world-class education. All the problems need to be solved with the help of proper planning to put the higher education system of the country on a solid foundation and to utilize the higher education system in improving the political, social, and economical system of the country.

Social Implication of this study

Higher education plays an important role in the progress of any country. Especially in developing countries like India, the higher education system plays an important role in putting the country's economic, political, social etc. on a solid foundation. Degradation of values is also one of the biggest problems of the current civilization. An adequate and qualitative higher education system can prevent the degradation of the values of individuals

within the country. Higher education in particular plays a crucial role in reducing socio-economic inequalities. It provides individuals from diverse backgrounds the chance to overcome barriers and achieve their aspirations, contributing to a more equitable society. The higher education system also plays an important role in developing new knowledge and skills and preserving that in a suitable manner for transfer to future generations. Higher education institutions serve as reservoirs of knowledge, offering a wide array of subjects and disciplines to study. Higher education institutions are hubs of research and innovation. Professors, researchers, and students collaboratively push the boundaries of knowledge and develop new technologies, medicine, theories, and solutions to pressing global challenges. The higher education system accelerates social mobility and helps in establishing equality by eliminating the disparities observed in society. India is no exception; higher education plays an important role in making India at par with the rest of the world in terms of social, political and economics etc. Hence it is very important to know about the higher education system of India and analyze the higher education system thoroughly. Since the post-independence period, various planning commissions have been constituted to put the Indian higher education system on a solid footing and to improve the quality of the higher education system. But till now the Indian government has not been able to make the Indian higher education system at par with the higher education system of other countries in the world. There are various problems behind India's higher education system not being at par with other developed countries in the world. All these problems need to be addressed properly. Otherwise, it is never possible to improve the quality of the higher education system of the country. With the help of the present study, the people associated with the higher education system of the country will know and be aware of the various problems in the higher education system of India. With the help of the present research, they will not only know or be aware of the problems of the higher education system but also acquire the necessary knowledge or information about how to take the higher education system of the country to a better place by solving those problems. This present study will provide the necessary help to those people who formulate plans to solve various problems of higher education to improve the quality of higher education and analyze the current problems of higher education.

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Learning Continuity in the Complex Adaptive Environment for a Sustainable Future

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Abstract

Education in the new normal encourages students to become self-reliant and use technology to increase self-paced learning and ensure learning continuity. The broader constructs of learning continuity can be explored by focusing on learners' agility, behavioural, and cognitive dimensions. Agility in learning routines influences student engagement when integrating digital technologies into their education. With the advent of Society 5.0 and metaverse research, digital contents gradually seek to replace sporadic technology interventions, thus promoting competency-based agile learning. The paper will suggest a direction toward sustainable learning considering a CAS (Complex Adaptive System) environment. This study investigates the intersection of Complex Adaptive Systems (CAS) theory, learning continuity, and Education for Sustainable Development (ESD) in a dynamic educational environment. It also suggests one innate model, which is a novel element in the field of ESD. It highlights the importance of promoting collaboration and collaborative skills in CAS learning environments, which represents a departure from conventional, individual-focused approaches.

Keywords. Learning Continuity, Complex Adaptive System, Education for Sustainable Development, Chaos Theory, Society 5.0.

Introduction

Innovations in learning and adopting new educational technologies have been sped up significantly compared to the last five years, especially after the global pandemic. Despite the COVID-19 pandemic causing a critical health threat, it has also been able to highlight the strengths and weaknesses of the digitisation of education (UNESCO, 2020). Such innovations lead to the growing role of effective team performance, which has been considered one of the critical parameters for working in an agile learning system (Laux et al., 2016). Due to the changing nature of work, it becomes difficult for a single individual to efficiently perform all the possible tasks due to the multi-faceted nature of the job. Indeed, mere collaboration in an online learning environment will never ensure optimum learning gain as it is essential for the learners to assimilate that skill of working in a collaborative environment (Miller & Hadwin, 2015). Therefore, for fruitful learning gain in a Complex Adaptive System (CAS), the behavioural mutation needs to happen among the peer learners, which ultimately facilitates learning in a dynamic and continuous environment (Notarnicola et al., 2019). The advent of society 5.0 is causing the physical and digital worlds to converge, resulting in the development of smart communities of learners (Salgues, 2018). With the popularisation of 'Metaverse,' a virtual digital world, users will be able to connect with one another and exchange ideas and expressions, erasing the distinction between physical and digital learning environments (De Lucia et al., 2009). Artificial Intelligence (AI), Robotics, Big Data (BD), the Internet of Things (IoT), etc., are bringing significant changes in the life of common individuals for solving day-to-

day issues. In order to address social issues and improve people's lives, Information and Communication Technology (ICT) interventions are gaining significance since they allow learning new things and making links between the real and virtual worlds (Fukuyama, 2018). Because of the rapid changes in the environment, the education world is also facing an enormous challenge in updating the current learners' skills, as they are the ones who will shape the future. Basic student-centred learning interventions need to be restructured quickly to develop critical, inductive and deductive thinking abilities among learners in the era of disruption (Vong & Kaewurai, 2017). The term 'sustainable development' refers to development that meets the needs of today without compromising the ability of future generations to meet their own needs (Brundland, 1987). There are two different ways people talk about sustainability in education: education for sustainability and sustainability of education (Stepanyan et al., 2017). Education for sustainability focuses on environmental sustainability through educational practices, while sustainability of education emphasises developments in education, leadership, and innovation in order to sustain successful, sustainable practices. Sustainability in the context of e-learning is the ability to adapt to a constantly changing educational environment and keep up with new educational changes without breaking down due to a lack of resources or becoming less effective (Valverde-Berrocso et al., 2020). Mikes, (2012) mentioned interactivity, clarity, surge in productivity and relatedness as some of the important determinant for sustainable online learning. As a result, the above-mentioned characteristics can be given the greatest focus in order to ensure learning

continuity, as online learning without them is similar to face-to-face (F2F) and has a detrimental impact on students' attitudes and motivations (Park & Kim, 2022). Metaverse's primary users are referred to by Park et al., (2021) as 'Generation Z'. They also believe that gamification, which incorporates aspects like points, batching, and other game mechanics, can increase student enthusiasm and attitude in the online classroom environment. An educational research line that generates efficient andragogical designs that assist the learning of competencies is essential to the success of online education. The main aim of this research study is to investigate current patterns in e-learning, specifically within the framework of Society 5.0. The objective is to clarify the prevailing methodological viewpoints, so providing a better understanding of the advances of these learning in online educational settings. This theme analysis attempts to provide thorough knowledge by exploring the main areas of focus in the scientific community, such as the approaches used to examine online educational dynamics and their possible consequences for educational advancement. Furthermore, it aims to examine educational studies related to e-learning, utilizing knowledge from the Complex Adaptive Systems (CAS) framework. The ultimate objective is to offer significant insights that can steer the course of sustainable educational practices.

Complex Adaptive System and Learning:

The purpose of learning and teaching is to provide students with knowledge that is relevant to the future (Bransford et al., 2000), which can help them overcome any deficiencies in their skills (Colvin, 2009) and prepare them to solve unexpected issues (Beach, 2010). This method, also

known as teaching for transfer (Perkins & Farady, 2005), focuses on cultivating critical thinking abilities (Facione, 2011) and metacognition (Schraw & Dennison, 1994), which involves the capacity to analyze and learn from one's own learning processes. By developing these transferable abilities, students may effectively tackle unfamiliar situations by employing the essential tools to assess problems, find innovative solutions, and adjust their knowledge to other contexts. The fact gives a clear indication of the total learning process, which is bidirectional, chaotic and complex in nature.

Chaotic behaviour in a system occurs when the relationships between its components are non-linear (Strogatz, 2015). This indicates that little alterations in the starting conditions of the system might result in significantly divergent long-term consequences, making its overall state highly unpredictable (Schuster, 1988). In a similar vein, Radzicki (1990) pioneered the application of Chaos Theory to the realms of economics and social science, drawing inspiration from the principles established in physics. Surprisingly, disorder can emerge from relatively uncomplicated systems that have only a small number of variables as long as these variables interact in ways that are not straightforward or predictable (Alligood et al., 1996). The phenomena referred to as sensitive dependency on beginning conditions, as described by Li and Yorke in 1975, is a crucial property of chaotic systems. Comparing the

A system can be categorized as complex if it has sophisticated interactions among a multitude of components. In addition, intricate systems frequently exhibit a level of instability (Holland, 1992), in which their behaviour can vary or change

dynamically over time. The intrinsic unpredictability of the system makes it difficult, if not impossible, to determine the overall state of the system by evaluating its constituent components alone (Anderson, 1972). CAS is a complex system that includes autonomous agents (Miller & Page, 2007). These agents can consist of single creatures, social collectives, or even computational entities. They exhibit a degree of autonomy and have the ability to engage with one another in a decentralized fashion. CAS can display emergent features that result from the collective interactions of the agents due to their self-organizing nature (Camazine et al., 2001). The actions of individual agents alone cannot adequately describe the emergence of these qualities; instead, they arise from the complex interactions between the individuals and their environment (Holland, 1995). Consequently, the overall condition of a CAS is always changing and adjusting, which adds to the difficulty of accurately forecasting it compared to a conventional complex system.

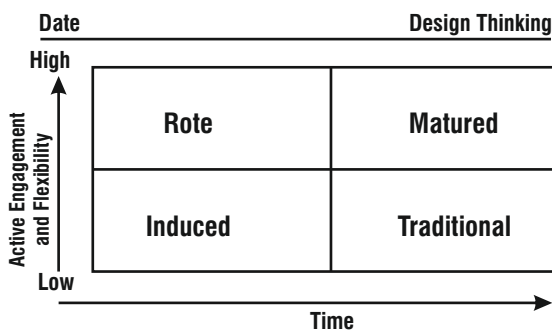
The CAS often exhibit chaotic dynamics due to their intricate and non-linear interactions in the field of learning. Although individuals follow simple principles, the combined effect of these elements typically leads to a complex and unpredictable terrain (Mitchell, 2009). This phenomenon highlights the complex interaction inside a CAS, where seemingly simple behaviours come together to create a system-wide pattern of unpredictability (Holland, 2014). Therefore, CAS poses a significant difficulty when it comes to understanding and controlling their behaviour in school settings (Kim et al., 2019). The study emphasizes the idea that although the individual components of CAS may appear simple on their own, their combined behaviour reflects a

sophisticated and detailed pattern, similar to the dynamics found in learning settings (Levin, 1998).

“Learning Continuity and Sustainable Education. Learning is widely acknowledged as a fundamental element in promoting sustainable development. It is crucial in enhancing people’s understanding and skills, promoting sustainable actions, and fostering a sense of responsibility towards the environment and society. In recent years, there has been a growing focus on education for sustainable development (ESD), which aims to incorporate principles and practices of sustainability into all aspects of education, including curriculum development, teaching methods, and educational environments (Boeve-de Pauw et al., 2015).”

Learning continuity is a crucial principle in the context of education for sustainable development. This term embodies the idea that education goes beyond formal schooling and encompasses an individual's entire existence, influencing different periods of life. As to Mostafa et al. (2021), learning continuity refers to the act of persisting with studying even in the absence of instructions. At the core of this viewpoint is the understanding that sustainable growth requires a continuous process of acquiring knowledge and adjusting, allowing individuals to effectively deal with new and changing obstacles and opportunities as they arise (Fullan, 2005). Extensive academic investigations emphasise the importance of maintaining a consistent learning process in order to achieve sustainable development goals. The incorporation of new communication and operational technologies, which are essential components of ESD, requires significant

changes to the system, making it an essential part of learning continuity models. Mukherjee and Hasan (2020) conducted a parallel experiment that employed a method similar to learning continuity. The scholars presented a learner matrix that categorised pupils into four distinct cohorts. This stratification allowed for the important contextualization of learner classification prior to evaluating their level of engagement. The cohorts were formed by taking into account many factors, such as the amount of class involvement, allotted duties, and willingness to embrace new teaching methods and instructional strategies (Mukherjee & Hasan, 2020).



Source: (Mukherjee & Hasan, 2020)

Emphasising this discussion, a thorough investigation carried out by UNESCO emphasises that education for sustainable development should go beyond traditional educational institutions and reach all levels of society (UNESCO, 2014). This encompasses traditional educational institutions, alternative learning spaces, and casual educational settings. By advocating for the uninterrupted continuation of learning, individuals are equipped with the necessary skills and understanding to address complex sustainability challenges, including climate change mitigation, poverty reduction, biodiversity conservation, and the promotion of sustainable consumption

patterns (UNESCO, 2015). Furthermore, the promotion of consistent education encourages a deep understanding of the interdependence between humans and the natural world, fostering a feeling of ecological awareness and a commitment to sustainable behaviours. Moreover, it fosters a more profound comprehension of the complex interplay between human behaviour and environmental consequences, motivating individuals to embrace sustainable lifestyles and behaviours. Furthermore, the ability to maintain consistent learning is crucial for strengthening the ability of individuals, communities, and organisations to develop and improve their capacity to overcome challenges associated with sustainability (Ferri et al., 2020). Education for sustainable development emphasises the importance of promoting continuous learning to cultivate knowledgeable, empowered, and environmentally aware global citizens who can guide society towards a more sustainable and fair future. Learning continuity plays a crucial role in promoting transformative change and furthering the global sustainability agenda through its many initiatives.

Concerns about attaining ESD. Scholarly investigations have demonstrated that the incorporation of sustainability principles into educational curricula fosters the cultivation of critical thinking aptitudes, problem-solving capacities, and an enhanced sense of civic duty towards local communities and the environment. Education for Sustainable Development (ESD) emerges as a potent catalyst for engendering constructive behavioural transformations and heightening awareness regarding pertinent global challenges (Tabucanon, 2023). The interruption in learning trajectories poses a

significant barrier to the acquisition of essential skills and knowledge crucial for fostering sustainable practices. Additionally, the intricate dynamics within complex adaptive systems add layers of complexity to the endeavour of maintaining consistent learning environments. Tackling these challenges mandates a comprehensive approach that amalgamates pioneering pedagogical methodologies, adaptable technologies, and inclusive policies aimed at ensuring continuous and efficacious learning opportunities for all stakeholders. Through the recognition and surmounting of these impediments, educators can adeptly equip students to navigate the intricacies of an ever-evolving world while nurturing a profound grasp of sustainability principles (Domingo et al., 2023). The intricate interplay among heterogeneous elements engenders emergent behaviours characterized by unpredictability and nonlinearity. To comprehend and proficiently govern these systems, there is a pressing need to transition from conventional linear thought processes to embracing complexity and uncertainty. As underscored by van Kemenade, (2023), the dynamic nature of complex adaptive systems within education necessitates the adoption of flexible strategies capable of adeptly responding to evolving contexts and emergent patterns. Educators must be equipped with the requisite competencies to navigate these intricate systems, thereby fostering resilience and fostering innovation within educational milieus.

Academic establishments are vital in providing learners with the information, abilities, and principles required to tackle the many problems associated with sustainability. Moving away from traditional lecture-based learning and

towards active learning approaches that encourage student interaction is a crucial part of this process (Astin, 1993). Wibowo (2023) identifies two particularly successful tactics:

- *Active Learning Methodologies:* Teachers can change their students from passive information consumers into active learners by implementing strategies including group discussions, problem-solving exercises, simulations, and service-learning (Prince, 2004). According to Brundiers et al. (2018), this encourages critical thinking, teamwork, and the capacity to apply theoretical knowledge to practical situations.
- *Real-World Sustainability Projects:* Students gain priceless practical experience when they are involved in real-world sustainability projects. By doing this, they not only gain a deeper comprehension of sustainability concepts but also develop a sense of agency and become more capable of making changes in the world (Sterling, 2010).

Working together with nearby groups and communities also has many benefits. By collaborating with these parties, students can:

- Learn about many viewpoints on the sustainability issues that the neighbourhood is facing (Sipper et al., 2020).
- Gain vital collaboration skills by working in teams with professionals and communities (Baş & Borden, 2018).
- Make a significant contribution to regional sustainability programmes, encouraging a sense of civic duty and solution ownership (Shultz et al., 2014).

Role of Matured Learners in attaining ESD and developing an innate model.

Traditionally, educational models often painted a one-size-fits-all picture of

learners. However, a growing body of research emphasizes the inherent variability among individual learners (Coffield, 2006). This calls for educational approaches that acknowledge and cater to this diversity. On the same line, Mukherjee & Hasan, (2020) proposed the learners matrix where they categorized learners into four classes on the basis of their learning traits, namely Matured Learner, Traditional Learner, Rote Learner and Induced Learner.

Among the various types of learners, mature students, who are often older than regular college-age students, often stand out as a highly promising group. This is a result of a combination of elements that contribute to their achievement in educational environments. Mature learners demonstrate a robust intrinsic motivation to acquire knowledge, as indicated by research (King, 1998). They are attracted to challenging and stimulating activities that promote a feeling of achievement and individual development (King, 1998). This is consistent with the principles of self-determination theory (Deci & Ryan, 2000), which emphasises the significance of autonomy, competence, and relatedness in stimulating intrinsic motivation. Mature learners typically have a greater understanding and expertise in many areas due to their life experiences, which leads to improved competency and communication skills (Ruble et al., 1991). Additionally, their refined communication abilities (Dochy et al., 2002) enable them to express their thoughts effectively and engage actively in classroom conversations.

According to Marecek & Metee, (1972), mature students generally demonstrate greater levels of motivation compared to

younger learners, indicating stronger levels of resilience and confidence. Their inherent drive motivates them to endure despite academic hurdles (Dodgson & Wood, 1998). In addition, the higher levels of self-esteem and self-confidence that individuals possess (Marshall & Nicolson, 1991) lead to a continuous effort to acquire knowledge (Hoskins et al., 1997). Mature learners exhibit a robust aptitude for critical thinking (Facione & Facione, 1996). They possess the ability to impartially analyse information and tackle new difficulties with a perceptive mindset. The ability to think critically is complemented by a well-developed capacity for empathy (Walker & Venker Weidenbenner, 2019). They possess the ability to negotiate intricate problems while also demonstrating compassion and empathy.

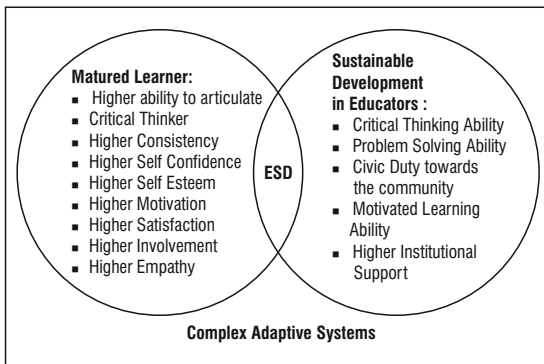
Ultimately, the combination of innate drive, expanded understanding, self-assurance, and analytical thinking abilities renders mature learners a highly advantageous resource in any academic environment. Their attendance enhances classroom discussions, cultivates a culture of continuous learning, and motivates their classmates.

Figure 2: ESD Model ensuring Learning Continuity (Source: Author)

The proposed models of ESD, ensuring Learning Continuity, emphasize the active role of mature learners in constructing their knowledge towards Sustainable Development. Learner maturity is indeed a recognized success factor in adult learning (Phillips, 1995). However, it is essential to consider the changing demographics of learners and the rise of Self-Learning Environments (SLEs) (Benson, 2019), which ultimately support the concept of Complex Adaptive Systems in Education.

Implications and Future Studies.

This study examines the convergence of Complex Adaptive Systems (CAS) theory, learning continuity, and Education for Sustainable Development (ESD) within the framework of a swiftly evolving educational environment. The research emphasises the necessity of efficient team performance in CAS learning contexts. This indicates a transition from conventional, self-centred learning methods to the cultivation of collaboration and collaborative abilities. Mature learners who possess inherent drive, confidence in their talents, and the capacity for analytical thinking are considered useful resources in



attaining ESD objectives. This indicates a requirement for educational methods that specifically target self-directed learners and make use of their abilities. On a similar line, it also recognises the increasing significance of SLEs and virtual worlds, such as the Metaverse, in promoting self-directed learning. This calls for additional investigation into the development of efficient learning experiences within these environments. The idea of learning continuity stresses the significance of flexible and responsive educational systems in an ever-changing world. This calls for adaptable learning frameworks that can handle new sustainability issues as they arise.

The paper establishes the foundation for future research on utilising CAS theory to comprehend the intricate dynamics among learners, educators, and technologies in educational environments. The study discusses the capacity of artificial intelligence (AI) and big data in the field of education. Subsequent research endeavours could investigate the potential of these technologies to customise learning experiences and facilitate uninterrupted learning. It is essential to create reliable techniques for assessing learning outcomes in CAS contexts. This would enable educators to evaluate the efficacy of their teaching methodologies in advancing sustainable development objectives.

The study establishes the foundation for future research on utilising CAS theory to comprehend the intricate dynamics among learners, educators, and technologies in educational environments. It provides a concise overview of the potential of artificial intelligence (AI) and big data in education. However, doing a more comprehensive inquiry at this point would contribute significantly to the existing body of literature. Subsequent research endeavours could investigate the potential of these technologies to customise learning experiences and facilitate uninterrupted learning. It is essential to create reliable techniques for assessing learning outcomes in CAS contexts. This would enable educators to evaluate the efficacy of their teaching methodologies in advancing sustainable development objectives. In light of the rapid evolution of the Metaverse, it is imperative to conduct research in order to comprehend its potential ramifications on ESD. One possible area of investigation is the utilisation of virtual worlds to enhance collaborative learning, foster empathy, and raise knowledge about the

environment. The research proposes that mature learners have a crucial impact on Education for Sustainable Development (ESD). Longitudinal studies have the capacity to monitor the influence of individuals' involvement on the overall improvement of learning outcomes and sustainability efforts.

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Navigating the Digital Divide : Challenges and Strategies in Teaching Communicative English Online in Indian Classrooms

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Abstract

The advent of online learning platforms is providing new opportunities for English language learning (ELL) in India. However, there is a significant challenge posed by the digital divide - the gap in accessing technology. This study investigates what causes the digital divide in internet ELL classrooms such as infrastructure limitations, device ownership and usage, and digital literacy skills; and how they affect student engagement, development of communication skills, and overall learning experiences. It suggests ways to bridge this gap which include government policies on infrastructure development; affordable tech solutions like mobile apps; teaching programs that enhance digital literacy among learners; support for teachers involved in web-based pedagogy. Through these recommendations, education stakeholders can create an inclusive cyberspace for all students where their communication abilities will be nurtured throughout different parts of India.

Keywords : Digital Divide, Online English Language Learning (ELL), Communicative English Skills, India, Educational Equity, Online Pedagogy

The 21st century has ushered in a revolution in education, with online learning platforms offering unparalleled access to knowledge. However, in a nation as diverse and vast as India, this revolution faces a formidable obstacle – the digital divide. This chasm separates those who have access to information and communication technologies (ICTs) from those who are left behind. The divide poses a significant challenge to one of India's most sought-after educational pursuits – mastering communicative English.

English proficiency unlocks a multitude of opportunities in India. It serves as a bridge between a multitude of communities, fuels economic growth by facilitating international interaction, and paves the way for higher education and lucrative careers. Yet, traditional classroom methods often prioritize rote learning and grammar drills, neglecting the crucial aspects of communication. Communicative English, on the other hand, emphasizes real-world application, equipping students with practical language skills – speaking, listening, reading, and writing – that empower them to navigate various social and professional settings.

Online environments present a unique opportunity to foster these communicative skills. Interactive tools, simulations, and collaborative activities can transform passive learning into a dynamic and engaging experience. Students can connect with peers and native speakers across geographical boundaries, fostering a richer understanding of the language. However, the potential of online learning for enhancing communicative English in India remains unrealized due to the stark realities of the digital divide.

This article delves deep into the challenges educators face in facilitating online English

learning within the Indian context. We explore the limitations imposed by unequal access to infrastructure, the hurdles of limited digital literacy, and the socioeconomic factors that can hinder participation. We will also acknowledge the anxieties students may experience in virtual environments and the need for teachers to adapt their pedagogy to effectively utilize online tools.

The article does not simply diagnose the challenges. It goes a step further by proposing practical strategies to bridge the digital divide and ensure inclusive access to online communicative English learning. It will explore how government initiatives, innovative low-cost technology solutions, and community-based learning centres can create a more equitable landscape. We will also emphasize the importance of equipping both students and teachers with digital literacy skills, fostering a culture of collaboration among educators, and developing culturally relevant learning content. Finally, it will delve into the specific methods that educators can utilize within online classrooms to promote the development of essential communicative skills. From interactive activities and gamification to project-based learning and opportunities for authentic communication, this will showcase strategies that can make online learning environments dynamic and effective in fostering communicative English proficiency.

This exploration aims to provide a roadmap for educators and policymakers in India to navigate the complexities of the digital divide and harness the immense potential of online learning to democratize access to communicative English, empowering students across the nation to thrive in an increasingly interconnected world.

Literature Review: Navigating the Digital Divide: Challenges and Strategies in Teaching Communicative English Online in Indian Classrooms

English proficiency plays a pivotal role in shaping India's educational landscape, career prospects, and national development. English serves as a medium for communication among different language communities within the country hence enhancing national unity (The Role of English as a Global Language in India, n.d.). It equips individuals with skills that enable them to get higher education not only within their country but also worldwide thus increasing their chances of employability in the present interconnected job market (C Mehta, 2024).

Nonetheless, conventional classroom techniques followed in India concentrate on teaching grammar through memorization and drilling isolated vocabulary items which do not help learners develop real life communication skills. According to Kumaravadivelu (2006), these methods fail to give students necessary tools for dealing with authentic situations. While students can analyse sentence structures based on grammatical rules and cram words from lists into their minds, they may lack self-assurance and fluency needed to speak, listen, read or write English effectively for different communicative purposes. (Kumaravadivelu 2006)

Limitations of Traditional Teaching Methods

Traditional teaching methods often focus on grammar drills and rote memorization. The Grammar-Translation Method prioritizes memorizing grammar rules and translating sentences between English and regional languages (Rahman, 2012). While this might aid in understanding sentence structure, it neglects practical language

use. Similarly, the Audiolingual Method emphasizes repetition and drills to improve pronunciation and fluency (Harmer, 2007). Repetition can be beneficial, but an overreliance on drills creates a monotonous environment and hinders development of critical thinking and creative expression. Both methods fail to provide opportunities for practicing English in real-life contexts, leaving students struggling to understand spoken English and hesitant to participate in conversations due to a lack of confidence.

Benefits of Online Learning Environments for Communicative Skills

Research indicates that virtual classrooms enable learners to noticeably get acquainted with English skills underpinning interaction. The internet serves as the main means for the learners to interact and cooperate with their peers and with the native speakers by using forum discussions, chat rooms, and video conferencing (Warschauer et al., 1998). This cooperative atmosphere let students embrace speaking and listening skills in real-life situations that, as a result, can contribute to the development of fluency and confidence. Moreover, many sources of those materials are online that can be shared with students teaching them the way people communicate on television or on the internet, which helps them better understand reading and improving their language skills (Kozhevnikova, 2014). Besides, virtual worlds supply the learners with the tools necessary to engage like activities such as simulations and role playing in addition to gaming that are created to make learning practical thereby enhancing communication in skills (Haleem et al., 2022). The resultant mixture of theory and practice leads to the magnification of informational

environment which in turn promotes the emergence of communication skills.

Investigations of Warschauer and Healey(2008) signify that online media is a good way for simultaneous collaboration with others, language learning from native speakers, and real material usage. These components provide basic functions as well that support fluency and communication. Reinforced by the online environment, practice and application can take place in advance of the class, like the traditional ways, but it is assumed that they provide learners with more ample opportunity to exercise and refine their communication skills.

Purpose of the Study: Navigating the Digital Divide in Online English Language Learning

The revolutionary development of e-learning portals opened up innumerable doors for ELL worldwide, enticing people with many avenues of learning English. Online English Language Learning in India carries the distinction of being a great tool for meeting the growing need for proficiency in the English language. Nevertheless, the digital “divide” (the inequality which occurs with respect to the ability of using ICTs) is an essential obstacle for an equal access to online education and the development of good communication skills. The research study which I am to undertake intends to examine the online ELL classrooms challenges which are brought by students and instructors within the virtual learning environment in India. Hence, this study concentrates on the students' and instructors' side of the digital divide within the online ELL classrooms in India. It recognizes additionally ways in which to identify and examine possibility strategies, which can fill that gap and may make a

more equitable learning environment that is the foundation of fostering communication skill development.

Rationale and Significance

English language proficiency remains a valuable asset in the Indian educational and professional landscape (The Role of English as a Global Language in India, n.d.). Online learning platforms offer the potential to expand access to quality ELL instruction beyond the limitations of physical classrooms. However, the digital divide creates a significant barrier, particularly for students from rural areas and underprivileged communities (Afzal et al., 2023). These students may lack access to reliable internet connectivity, devices, and the necessary digital literacy skills required for effective online learning.

Understanding the specific challenges associated with the digital divide in online ELL classrooms is crucial for ensuring equitable access to communication skill development opportunities. This study aims to contribute to the existing body of knowledge by:

- Identifying the key factors that contribute to the digital divide in the Indian context of online ELL classrooms, including infrastructure limitations, device access, and digital literacy skills. (Singh et al., 2013)
- Examining the impact of the digital divide on student participation, communication skill development, and overall online learning experiences. (Warschauer et al., 1998).
- Exploring potential strategies that can be implemented by stakeholders in education to bridge the digital divide and create a more inclusive learning environment. This includes analysing initiatives related to infrastructure

development, low-cost technology solutions, digital literacy training programs, and support for teachers in online pedagogy.

Navigating the Digital Divide: A Multifaceted Challenge in Online English Language Learning for India

The rise of online learning platforms has opened doors to new possibilities in language education, particularly for English language learning (ELL) in India. However, the digital divide – the disparity in access to and utilization of information and communication technologies (ICTs) – presents a significant challenge to equitable access to online English learning and the development of crucial communication skills. This paper explores the key factors contributing to the digital divide in the Indian context and their impact on online ELL opportunities.

Infrastructure Limitations: A Foundation of Inequality

Establishment of internet infrastructure imbalance in India is the pressing problem of online education sector. Many initial difficulties may provide limitations in using the internet or digital platforms best for students from rural areas and poor communities (Singh et al., 2013). Even in urban city areas, you may encounter uneven internet speeds which in the long will bring about irritating pauses and therefore affect the learning experiences online (Kumari, 2022). Furthermore, the accessibility of internet data packages has been highlighted as an area of concern. The result is that families in the difficult financial situation cannot afford internet and stations for internet learning where internet connection is a prerequisite for carrying out activities and assessments may limit students' engagement in online

learning platforms (Shubhasri, 2018).

Beyond Connectivity: The Necessity of Devices

Only internet connectivity does not ensure that all persons can participate in the online world. The lack of 'equal chances' in using devices like computer, laptop or even smartphone is another root cause of the disproportion in the digital divide (Kumari, 2022). In most homes, especially those with misbegotten resources, a single computer may be used by the whole family, making it difficult for each kid to have his or her private learning period. However, the incredible expense of devices ownership for low-income families can also be the primary cost that holds back digital learning opportunities.

Digital Literacy Skills: A Bridge Across the Gap

Although, having the internet and digital devices are unavoidable in online learning, using the tools properly is still a very big aspect in this. Plenty of students, mostly from the less privileged classes, might not be able to use digital literacy skills hence excluded completely from digital learning (World Bank, 2019). These skills are however not just the ability to type a search query, download a file or navigate an online learning platform, but also the extemporaneous one of using interactive tools and participate in online forums. There may be the issue of students not learning digital fluency which can in turn make them incapable of fully capitalizing on the interactive nature of online learning platforms; particularly those that focus on communication skills development.

Socio-economic Factors: Compounding the Disadvantage

Socio-economic factors play a significant role in perpetuating the digital divide.

Financial constraints can restrict families from affording internet data plans or subscribing to online learning platforms. Additionally, in shared living spaces, students from low-income backgrounds may not have access to dedicated study time or quiet environments conducive to online learning (Kumari, 2022). These factors further compound the existing challenges and create an uneven playing field for students from different backgrounds.

Impact on Communication Skill Development: A Missed Opportunity

The digital divide affects the development of verbal capabilities in virtual environments on an online basis. The limited access to the internet and devices hampers the most original sources of student learning and the scope for practice of the language (Warschauer, 2018). This will prevent them from fully developing the ability to speak English with fluency and with a wide range of vocabulary. Furthermore, illiteracy of digital skills may condemn some students to exclude themselves from such digital activities like online discussions and group project. Being engaged in this kind of activity is an important way of acquiring skills that are applicable socially, such as critical thinking, active listening, and expressing your opinion fluently in English language (Low, 2023). Facilitating the personal nature of the online courses is also one of the factors which should be taken into account. Students, who do not have a consistent internet connection, may find it hard to be part of synchronous online discussions, hence, may feel they are left out and not part of their classmates (Kumari, 2022). Such characteristics of the virtual environment prevents learners from gaining communication skills by way

of interaction and direct usage.

Strategies for Bridging the Digital Divide: Fostering Communication Skills in Online English Learning

Digital divide in the Indian classrooms where the students are taught the communicative English online ceases the chance of students towards success and hence this problem should be dealt with by adopting the strategies. The digital divide refers to the social divide between those who can access the latest digital technology and the internet and those who don't. This divide in access to technology and internet connectivity is highly pronounced in India with some areas and social strata hold as back as compared to other areas. The digital divide remains a barrier for equitable education, but educators can overcome it with the help of different techniques that ensure the digital competence of students.

Government Initiatives: While the government's "Digital India" policy helps to provide inclusivity in internet connectivity, research suggests more aims to be made to close the digital gap in education (if it comes as a source). Equal access to connecting to the internet and using it must be given attention; especially in the case of the community who does not enjoy full benefits offered by the internet. Joint work with private internet service providers could be done so that students from the low-income backgrounds could enjoy data plan subsidies. Also, an ongoing campaign like "Digital India" should be equipped with targeted programs. Implementation could be done by offering public schools some upgrades like providing tablets or laptops for the students, reliable computer connections, and access to government-subsidized learning portals online, all available free

for students from poor families, or at significantly lower rates than the norm.

Low-Cost Technology Solutions:The open-source learning platforms like Moodle provide the cost-effective alternative to proprietary learning management systems in order to allow schools and educators to create learning environments without any incurred expenses. Mobile learning apps not only resolve the problem of the absence but also offer students flexibility and on-the-go access to the learning materials which are very helpful for those students who do not have the ability to access the computers. Nonetheless, mobile learning has limited features such as data consumption and the temptation of being entertained by the mobile phones. E-book, audio lesson, and offline exercise which is installable on devices as a learning material can be made to address these limitations as they allow students to still learn even with minimal or no internet coverage.

Digital Literacy Training Programs: Providing the required skills to students and teachers is important to guarantee online learning success. Digital literacy workshops and online learning classes can be delivered to enhance the digital skills across the spectrum. It includes it all from online platform use, effective learning tools working well, and balanced in e-learning. Moreover, training programs must put emphasis on developing online learning capabilities like time management, online conversation etiquette and critical thinking skills that would help in effective participation when working with the online learning materials. Such kind of holistic approach will let the students and teachers be in a better place with the inner side of digital learning.

Community-Based Learning Centres:

Establishing shared learning centres equipped with internet access, computers, tablets, and facilitators in underprivileged communities can provide students with a dedicated space for online learning. These centres can address multiple needs – offering reliable internet connectivity, access to devices, and on-site support. The presence of a facilitator or trained community volunteer can provide additional guidance in navigating online platforms, registering for courses, participating in online discussions, and utilizing offline resources. These centres can act as hubs for facilitating online learning opportunities and fostering a sense of community for students engaged in online English language learning.

Teacher Training and Support: To facilitate the delivery of the online learning experiences, a pragmatic and unique method course should be used. Before everything, e-teaching course teaches teachers technical skills and knowledge necessary for the creation and management of interactive online classrooms. Thus, the students can be immersed in the online environment. Hence, teachers should build their competence with online classes to increase a degree of students' involvement in them. Training programs is more effective if it is about interactive tools, engaging online activities and building communication and cooperation conditionally. Another thing is that making online communities of learning for the teachers would be a platform for them to interact and exchange knowledge as well as support each other. Through this, the teaching community is formed, and teachers help each other by sharing diverse practices and useful approaches for promoting communication skills set in online settings.

Content Localization and Culturally Responsive Teaching: Developing Cultural appropriate online learning content that touches the Indian context is very vital. This can be realized by using numerous local examples and case studies which will help students engage with the material and in the search for common ground. It would also be possible to localize the course by offering subtitles or translated versions in the regional languages of the students that will paint a better picture and widen the understanding of various concepts. Through the implementation of a combination of such strategies, the players in education system will be able to bridge the digital divide, enable teachers to possess online teaching skills, and enhance online learning spaces to be inclusive. The process of facilitating learning in English in India in this manner includes the building of communication skills in English for all students, whatever background or location they may be from, thereby assuring that they can prosper in a globalizing world.

The National Education Policy (NEP) 2020 and the Digital Divide

The National Education Policy (NEP) 2020 which is an attempt to renew India's education system in such a way that the comprehension of digital literacy and the learner-centric approach can be nurtured. Though nevertheless, the digital gap – the difference in accessing and the using of information and communication technologies (ICT) – is considered as a hard challenge in the online ELL classrooms. Here, it is outlined how, thanks to the NEP, the digital divide can be reduced and a more egalitarian learning environment formed.

The NEP outlines several initiatives that have the potential to address the digital divide in online ELL classrooms:

- Focus on Foundational Literacy and Numeracy (FLN): Through expansion of basic digital skill training in early childhood education, the NEP aims to give students the digital literacy skills they will need to get through the online platforms of learning.
- Promoting Multilingualism: The NEP cites the value of the mother tongue for education purposes. This enhances the online ELL courses by supplying glossaries and translations hence establishing a cultural identity as well as availing for multicultural learners.
- Operation Digital Shakti: This is an initiative aimed at fostering the role of women as entrepreneurs within the digital environment. Through public-private partnerships, this could be one way that increases the availability of affordable digital devices and internet connectivity in rural settings, especially for female students.
- Integration of Technology in Teacher Training: Training the teachers in diverse digital tools can improve their capability to provide captivating online learning controlling the challenges imposed by the digital divide.
- Setting Up Virtual Labs: The NEP plans to open virtual labs to students through which they can conduct simulations as well as have access to resources, which might reduce some schools that do not have a physical lab facility.

The NEP presents a good opportunity to work towards narrowing down the digital gap in the economy. Stakeholders at the education system could have more inclusive and supportive language learning

environment by using their initiatives and adopting other strategies. This will, as a result, make all the students, irrespective of their backgrounds, be able to nurture the language skills that are a crucial part of living in the 21st century. (HRD. Ministry of Human Resource Development, Government of India, undated).

Integrating Tagore's Philosophy into Bridging the Digital Divide in Online English Learning

Rabindranath Tagore's philosophy of education emphasizes holistic development, self-realization, and a connection with nature. (Quayum, 2016) These principles can be surprisingly relevant when addressing the challenges of the digital divide in online English language learning (ELL) classrooms in India. Here's how Tagore's ideas can be integrated into this topic:

1. Bridging the Gap Between Formal and Informal Learning:

The educational concepts and the ideas that Rabindranath Tagore has introduced can be useful if these are applied and adopted in the Online English Language Learning (ELL) classes. Education – from virtual walks through natural habitat, documentary movies dedicated to Indian plants and animals, to student assignments based on their nature observations – can be a powerful way to underline the message that Tagore is trying to convey about the central role nature holds in education. Furthermore, introducing project-based

instruction as well as learning about local problems and traditions through internet sources such as texts and collaborative projects can motivate students to bridge their knowledge with their reality which is achieved by among other things Tagore's emphasis on the holistic and expression of oneself. These strategies may be an essential part of the creation of a learning environment of online ELL classrooms in accordance with the educational philosophy of Tagore.

2. Fostering Creativity and Critical Thinking in Online Environments:

Online ELL classrooms can promote critical thinking, creative exploration, and self-expression in alignment with Tagore's philosophy. Encouraging students to utilize Open Educational Resources (OERs) like multimedia podcasts, videos, and interactive games enriches their learning experience. Additionally, online platforms can facilitate interactive discussions on literary works, current events, or cultural topics. Collaborative writing activities further encourage students to express their ideas and build communication skills in a social online environment, reflecting Tagore's emphasis on fostering self-expression and intellectual discourse (Quayum, 2016). This approach creates a dynamic learning space that resonates with Tagore's vision of education.

3. Addressing Individual Needs and Overcoming Anonymity:

Technological innovations in virtual ELL

classrooms can be used to shape an education that is more personalized, and interactive to align to Tagore's philosophy of education. The platforms can provide some degree of personalization, where the student can pace themselves and focus on the areas needing their attention. Comparing this to Tagore's idea about every individual's needs and the emphasis on student-centered learning (Quayum, 2016), one can easily know the usefulness of this approach. In addition, online forums can cultivate a feeling of being a part of the group and fighting the chance that e-education engulfs the student in loneliness by providing students with an opportunity for communication with peers and teachers. By the fact that it involves a community building aspect the students learn cooperation and they create an atmosphere of the learning society (which Tagore mentions in his work in 2009). The implementation of such techniques leads to the creation of a dynamic and diverse learning environment which accommodates and makes every learner comfortable. Also, there is a sense of belonging between learners and their teachers that is created.

4. Language Learning as a Tool for Self-Discovery:

Rabindranath Tagore's philosophy offers valuable insights for creating a more engaging and inclusive online ELL learning environment. Online platforms can provide access to a wealth of Indian literature, poetry, and cultural artifacts, allowing students to connect with their

heritage and explore the English language within the context of their own culture. This aligns with Tagore's focus on fostering self-realization through language and cultural understanding. Furthermore, encouraging students to use online tools for self-reflection, journaling about their learning experiences, and exploring their own identities through the English language resonates with Tagore's emphasis on self-discovery and critical thinking. By integrating these elements, online ELL classrooms can move beyond rote memorization and create a more holistic learning experience that addresses the challenges of the digital divide. The focus on local context, creativity, and individual needs can make online English language learning a more meaningful journey for students of diverse backgrounds in India (Quayum, 2016; Roysinha et al., 1998).

It is important to note that completely replicating a Tagore-inspired classroom online may not be possible. However, by incorporating aspects of his philosophy that resonate with online learning, educators can create a more well-rounded and engaging learning experience for students navigating the digital divide.

Conclusion

This paper has discussed the issues of and the strategies of teaching interactive English to Indian students on the web while operating the digital divide. These results demonstrate the factor behind the reduction in users to the on-line services and the online education participants. Students from a rural area or a disadvantaged community are often hindered by the limited internet connectivity, access to devices and basic digital skills in their daily lives. These factors along with other feelings of stage

fright and isolation which typical to online learning, make for a complex set of obstacles to develop fluency in English using online learning. Nonetheless, in the research these areas were also highlighted as being the need for the teacher training improvement of the online pedagogy. The teachers, whose skills allow them to use interactive tools, prepare interesting online activities, and moderate online discussions successfully, can shape more suitable conditions for communication skill growth.

Strategies for Bridging the Divide and Fostering Communication Skills

The research suggests the integration of numerous strategies to tackle these problems with the goal to make learning more equitable and fairer. Infrastructure development, extending internet access to less privileged communities and making the global digital learning avenues affordable to low-income students are just few of the initiatives taken by the government to popularize online education. Likewise, through less expensive technological alternatives such as open-source platforms, mobile learning apps, and downloadable audio/video learning materials, these will expand the digital learning scope and thus make it more accessible to everyone. Teachers and students have to be given the digital skills through online platforms workshops and training courses will be an important prerequisite for efficiently reaching the target. Setting up community-based e-learning centres which have the internet and facilitators can also provide the dedicated space and support for online learning, particularly in economically challenged communities. Moreover, the attention to diversity should also involve the implementation of culturally relevant

online learning content and the localization of existing resources in order to create a more interesting and friendly learning environment for everyone regardless of their educational circumstances.

Limitations and Future Research Directions:

In the research, a mixed-methods approach was used to consider the difficulties and remedies of online EFL for Indian classrooms. It became apparent that there were critical lessons and however, some constraints are also there. There can be self-reported bias in data from survey and interview. This survey might not represent the whole population of India. The research will be expected in the future to be based on a larger, regionally diverse sample. Moreover, one would need to examine the effectiveness of online learning techniques on communication skill development in conjunction with research on creative and purposeful assessment methods in online learning contexts, in order to have better understanding of the role of online ELL practices in India.

The Importance of Bridging the Divide:

Despite these limitations, this research underscores the critical need to address the digital divide to ensure equitable access to quality English language education in India. Communication skills in English remain crucial for educational and career opportunities in a globalized world. By implementing the proposed strategies and continuously exploring innovative solutions, stakeholders in education can work towards creating a more inclusive learning environment where all students, irrespective of their background, can thrive in online English learning and develop the communication skills needed to succeed in the 21st century.

Academic Insights: Navigating the Digital Divide in Teaching Communicative English Online in Indian Classroom

The research on "Navigating the Digital Divide: Challenges and Strategies in Teaching Communicative English Online in Indian Classrooms" contributes to academic literature by illuminating the unique problems teachers in India face when they use the online platform to teach English. The research clarifies that the challenges, such as the technology access and digital literacy, are the ones that highlight the complexities of online education in the diverse, technologically advanced environment. On the other hand, the research also provides practical steps to deal with these problems, leveraging cutting-edge solutions, and integrating with Rabindranath Tagore's views on education. This is not only beneficial in the context of educational theory and practice but also becomes a prerequisite for solving the digital divide and raising the quality of English language education in Indian classrooms.

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Influence of Dogmatism in Learning Needs Assessment and Evaluation on Learning Continuity

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Abstract

Every learning content that one consumes becomes a subject for analysis intrinsically affected by individual merit and assimilated by collective or individual wisdom. Therefore, let's resolve that learning was, is, and will never be a subject of linear growth. A new breed of learners i.e., self-directed learners are prospering who seek from multiple and alternate sources to quench this knowledge thirst. The conundrum of a hybrid learning ecosystem and the proliferation in the number of such students has raised a very serious question on the efficacy of instructor-led training within the classroom. Are we approaching a complete virtualization of the learning ecosystem? Must we not forget that the students inside the classrooms in their respective singular forms are the most vulnerable entities in the entire educational ecosystem? The all-important question is, while teaching where must we concentrate? Subject or the student? The learning curve dips as we cross the age of forty. Many of us face the tricky situation of engaging an audience of almost half of the age of the teachers with their learning curve moving upwards. Placing trust in Skinner's Reinforcement theory, we must consider a structural reform of the classroom if we are aspiring to experience the Pygmalion effect.

Keywords: Learning Continuity, reinforcement, Learner Matrix, learning needs

Introduction

How do we learn? The question may sound rote, naïve, and uninteresting but to many, it would return a void. We all have been learning as agile living organisms but often tend to overlook the mechanism associated with the process, thus failing to record the desired outcome. The connected generation of the present era which is significantly more evolved than their predecessors are the digital natives. The present imperfect societal norms of society 5.0 which echo the nativity of interpersonal connections as one of the contributing factors to foster harmony in society, also need to learn and improvise for a better tomorrow. The learning scientists advocate four basic learning styles, i.e., auditory, visual, read/write, and physical activity with an overbearing exposure of experience to refine the learning process at every step. Interestingly, psychologists travel deep inside our neurons and return with three specific learning domains, i.e., affective (sense of emotions), cognitive (ability to think or articulate), and psychomotor (physical movement ability or kinaesthetic) (Bloom, 1956). Every learning content that one consumes becomes a subject for analysis intrinsically affected by individual merit and assimilated by collective or individual wisdom. Therefore, let's resolve that learning was, is, and will never be a subject of linear growth.

Burrhus Frederick Skinner, an American psychologist with Harvard University offered his seminal work on his theory of learning where he emphasized ABC's of behaviorism i.e., antecedents (stimulus), behaviour (response), and consequences (reinforcement) (Skinner, 1938). Primarily Skinner's theory of learning which advocates a structured form of learning or a

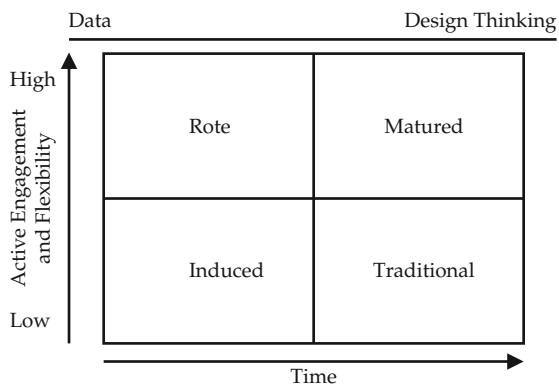
systematic approach is based on another famous American psychologist Edward Thorndike's Law of Effect (1905) suggests that if a learner elicits an expected behaviour as an outcome of a desired stimulus, it's likely to occur again if the similar conditions prevail again indicating a pattern of predicting stimulus-response behaviour which affects learning in a larger canvas. Skinner further went on to emphasize that by adding or removing operant develops positive or negative reinforcements for the learners. For example, if a student can complete an assignment within the deadline, he/she gets rewarded with a certificate or a special mention in the class making it a positive reinforcement and exempting the student from doing mandatory house duty work as a negative reinforcement. Unfortunately, the present education ecosystem at the primary, secondary, or tertiary doesn't get to experience similar reinforcement mechanisms to motivate the students. Similarly, the punishment also works as an operant to influence the learning behaviour, and at times direct rebuke (positive punishment) or ignoring a student (negative punishment) results in desired outcome in the behaviour of one student.

Presumably, this discussion is getting a little complex with the interference of so many theories, but it would be worth mentioning here that Skinner did not consider the fact that there are an array of extraneous variables like individual aspirations, family background, societal influence, culture, and other unfamiliar preconceived notions constitute the contextual learning ecosystem of a student and therefore the learning graph is not linear and similar outcome may not be obtained by the same stimuli if used for two different students. On the contrary, the theory of learning continuity provides a

cohort-based framework to measure a student's progress in a continuum thus helping the students and teachers alike to bridge the gaps whatsoever (Mukherjee, 2024, p. 47).

It's about time we grow beyond the colonial mindset of structured learning mechanisms for our students whereas we know very well that the concentric cycle of learning takes multiple factors under its ambit as a complex adaptive system including the interaction effect among the actors like learning repositories - institution - content - learner - teacher (Meighan, 2023). A teacher assumes the role of an adaptive leader whereas the interconnected academic world assumes the role of a complex adaptive system offering services to the students which are primarily non-linear approaches interlaced with multiple handshakes and dependencies at different intervals (Turner et al., 2018). The collective input and the subsequent assimilation results in learning among the students. Strangely enough, we have always trusted the coded practice of evaluation at different intervals to measure the learning gain of our student instead of putting higher thrusts on the development and measurement of their learning abilities. A student's sojourn in learning starts with engaging with the content and subsequently culminates not only in remembering the content he/she has been to understand but rather how much of it he/she can articulate, reflect, or imbibe to contextualize the present social setting. At times we as students forget what exactly we have been taught inside the classroom and we accumulate knowledge from various sources to build upon it. Hence, Skinner once said, *"Education is what survives when what has been learned has been forgotten."*

Learner Matrix: The Measurement Cohorts



The Learner Matrix (Mukherjee & Hasan, 2020) aims to decode a learner's journey in the realm of academics and identifies his/her position among the four quadrants of the matrix, i.e., induced state (where the content engagement and time involvement are low), rote state (high content engagement within a limited time), traditional (low content engagement over a very long span of time), and finally the matured state (with high content engagement with high time involvement indicating high articulation and knowledge assimilation). The matrix is the derivative of the theory of learning continuity which is placed within the premise that during any formal educational curriculum, any student can't master all subjects in one go but rather exhibits differential learning habits owing to different learning abilities and that each student is blessed with the four types learning abilities but at different proportions. Research has shown empirically that as the course progresses, each student working under the complex adaptive system (CAS) of education tries to improve his position in each quadrant, i.e., by attaining low scores in the Rote quadrant and high scores in the Matured

quadrant (Srinivasan & Mukherjee, 2023). It is interesting to note that research has further shown that the position of the Traditional quadrant which depicts significant dependence of the students on their respective teachers for guidance is reducing with time. A new breed of learners i.e., self-directed learners are growing who learn from multiple and alternate sources to quench this knowledge thirst. This very finding has raised a very serious question of the efficacy of instructor-led training within the classroom. Are we approaching a complete virtualization of the learning ecosystem?

Reverting to the question we started with, let's consider the two most important facets of learning i.e., the ability to reinforce and content synthesis as the primary pillars that operate within a complex adaptive institutional system ensuring learning gain for the students. Students with varying learning needs exhibit varying learning traits and timely interventions can effectively augment their assimilation capacity to new heights.

Measurement of Learning Needs

As we are deeply engrossed in dissecting the learning traits and needs of the learners, often I get intrigued by this rollicking question, "Did I teach the subject or the students?" For many such questions may sound rhetorical, but for the youngsters who just started their journey in teaching, I am sure this question would certainly ring a bell deep inside their uncluttered minds. How often do we enjoy teaching a class? How often do we feel a sense of gratification once a lecture is over? How often do we go to bed with a deep sense of accomplishment of having engaged the students inside the class for meaningful discourse and most importantly how often do we realize that we have been able to

successfully catalyse their thought processes through our insightful words of wisdom? The New Education Policy 2020 demands the fusion of versatile pedagogies, ranging from traditional lecture methods to flipped classroom techniques, from technology-driven monitoring and assessment to mentoring students suffering from exacerbated mental health owing to various reasons like peer pressure, subject discomfiture, or draconian evaluation techniques (Mukherjee, 2024, p. 116). Must we not forget that the students inside the classrooms in their respective singular forms are the most vulnerable entities in the entire educational ecosystem. Although collectively they exercise huge bargaining power that could well account for meeting their aspirational learning gaps which are sometimes stifled by infrastructural, or environmental constraints. The process of teaching-learning is often interlaced with one another creating a scope of inducing thoughts and churning the outcome ensuring higher learning gain. Many learning scientists have opined that progress in learning is didactic and depends upon individual understanding within a cohort, therefore, making the delivery or teaching the forbearing component of the whole exercise. Sometimes, as teachers, we often become subjective, owing to multifarious reasons, be it technicality, overemphasis on developing competitiveness, or at times just to infuse gravity, or it could be utter callousness on its very importance. Whatever may it be, the connection between the topic and the student goes amiss.

One may disagree but the andragogic overtures in the context of present-day practice of academic delivery have been

altered drastically for the connected generation. The way we have been taught in our sophomore days or in the universities, the chalk-n-talk method for the entire cohort may have good merit but the opportunity for experimentation by creating different learning cohorts and subsequent monitoring just wasn't there. As we say in common parlance the 'one-size-fits-all' curriculum pays less dividend offering differentiated learning experiences for different cohorts. On the contrary, experimental learning designs like Rhizomatic Learning (Leander & Rowe, 2006) which draw strength from George Siemens's (2004) theory of Connectivism go beyond the linear learning objectives and inculcates subjectivity in the whole design which offers a rather loose structure of curriculum infusing greater scope for research and discussion. Since learning results in intricate individual understanding thus devoid of the aspersion of linearity, learning practices aspire to develop innate abilities within the students including attitude and subjective skills. We have inherited the legacy of the colonial system of education which was regimented enough to encourage natural inquisition to wither away. Gurudev Rabindranath Tagore realized the importance of breaking out of the cliched marks-based education system and hence wrote, "*And for that they must be trained, not to be soldiers, not to be clerks in a bank, not to be merchants, but to be the makers of their own world and their own destiny. And for that, they must have all their faculties fully developed in the atmosphere of freedom.*" [Schoolmaster, p. 509]

It is therefore paramount important to identify individual learning aspirations and subsequent training needs which vary

even within a class or cohort. It is absolutely normal to find students in the same classroom with different learning abilities and thus would need different learning prescriptions. While we seek an answer to our earlier question of who/what should we prioritize i.e., student or subject, we have to appreciate that we have evolved from colonial learning strictures which were primarily too invasive to some extent as they were to cater to certain specific objectives beyond the charter of learning. However, our traditional knowledge systems have always been open to embracing heterogeneity and believing in the formation of cohesive groups. The traditional Gurukul system of education which espouses definitive guided learning in smaller cohorts has always propounded scientific inquiry-based learning with enormous scope for field-based experimental learning designs. The students thus developed an understanding through their own interpretation of the prevailing cause-and-effect relationships. The versatile roles played by the *Guru* (Teacher) from guide to mentor, from friend to philosopher help students to prosper in their own realm. In this connection, I remember one speech given by a very senior professor of a very prominent institution of eminence on the map of India, given on his retirement day. When he was asked if he had any regrets in life, he agonizingly responded that all through his life he has only taught Physics, but for once he never taught the students. The distinction between these two maxims may not be discernible to many but to the rest, and it would take a strong determination to switch from a traditionalistic approach to focus objectively. From the obfuscation of

deterministic stereotypes in learning, and in the myriad of subjective and objective assessments, the dulcet timbre of a student's vocal generally doesn't resonate with the andragogic styles followed in most of the higher education institutions. As a result, we miss the pulse of the students and often churn out students with good grades but famished with skills.

The all-important question is, while teaching where must we concentrate? Subject or the student? Gerontological shreds of evidence suggest that as people grow old, they continue practicing what they had learned at a younger age. Older people display poor motor function with slow responses to stimuli and low accuracy toward completing a learning task which takes a toll on their decision-making abilities imposing a question mark on their efficacy level (Clark et al., 2015). As a result, there is a higher probability for the students to fall victim to fractal dimensions leading to gradual decay in generative learning aspirations. Fractal dimensions coined by Benoit Mandelbrot, a 20th-century mathematician, represent the metaphorically derived paradigm from the field of Mathematics that embodies self-repeating constructs in learning in a continuum without any change in the content or practice (Fractal Dimension, n.d.).

Psychosocial activities like relationship or personality management, and maintaining social status continue even the age progresses. The learning curve dips as we cross the age of forty. Many of us face the tricky situation of engaging an audience of almost half of the age of the teachers with their learning curve moving upwards. Robert Atchley (1971) posited the continuity theory where he explained the internal and external components of

continuity where people grow age tray and adapt to the situation and set goals accordingly. Similarly, the mechanism of learning appeals to the human mind to understand, assimilate, and articulate learning prescriptions which get time-adjusted as life progresses. Therefore, a student thus prepared will be equipped to absorb learning disruptions without deviations leading to higher learning gain which is always way beyond the anticipated contours of subjective assessments (Atchley, 1989).

Teaching is not only a profession but a responsibility drenched in passion that oozes compassion. To conclude this surreal and ethereal debate, I would like to extend the post-retirement realization of the lamenting Professor who was caught between the subject and the students but chose to teach the subject over his students. Students clamor for guidance, and the navigational mentoring thus provided to them helps to trade through the melee of conjectures of the subjects and develop their own world imbued with imagination bearing the fruits of individual creativity through the path of learning continuity.

Concluding Comments

The entire deliberation above bears a testament to the theoretical perspectives on andragogical interventions that lead to positive and subjective outcomes within as well as outside the classroom. To this effect it's worth mentioning the desire of the teachers and students for better performance could be attributed to the classic Pygmalion effect. According to Greek mythology, Pygmalion was a sculptor from Cyprus who carved out a female statue from marble and he perfected the art so well that the statue ensembled his desired features. He was invested in the statue so deeply that he

wanted it to come alive and with the blessings of the goddess Aphrodite the statue came to life.

The Pygmalion or the Rosenthal effect advocates that when efforts of teachers & students are conjugated in the classroom by the subconscious desire of the teachers for a better performance by fostering an engaging classroom environment, improving the quality of input study materials and techniques, and ensuring a rigorous feedback mechanism, the performance of the students improves multifold (Rosenthal, 2010). The contrary is also true. Pygmalion the sculptor never believed that he was making just another statue, rather he envisioned a state of life with his imagination and nourished it with the skill that he mastered over the years. Even in this era of technology invasion and the ever-growing practice of generative AI, a single teacher's endeavour to modify the behaviour of the students in the class positively can bring out higher performance from the students to which the teachers have aspired thereby fostering higher learning gain among the students.

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Book Review

Title of the Book:

**“Exploring Social Intelligence:
The New Education Policy 2020”**

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Prof. Debarshi Mukherjee

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Review by:

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A Journey into Social Intelligence: Finding Your Way in the New World of Education

Prof. Debarshi Mukherjee's "Exploring Social Intelligence: The New Education Policy 2020" offers significant perspectives on the dynamic nature of social intelligence and its pertinence in the contemporary digital era. The book explores the complex intricacies of social intelligence and its capacity for profound change, specifically within the framework of evolving educational paradigms.

Proficient collaboration and communication are critical in the contemporary, digitally interconnected world. Professor Mukherjee underscores the paramount importance of social intelligence as a means to effectively navigate the intricacies of online interactions and cultivate significant virtual connections. Proficiency in digital signals is imperative for succeeding in an interconnected global setting, promoting harmonious collaboration among individuals spanning various geographic locations, and offering significant contributions to virtual communities.

The book emphasises the critical importance of social intelligence in the face of swift technological progress. This statement underscores how individuals possessing robust social intelligence abilities can effectively navigate virtual environments, make valuable contributions to group undertakings, and maintain ethical principles in their online engagements.

A Complete Understanding of Social Intelligence

The introductory section of the book, "The Path to Wisdom," serves as a navigational tool, directing readers in their pursuit of a thorough understanding of social intelligence. In his analysis, Professor Mukherjee deftly examines this complex notion, focusing on fundamental elements including comprehension, emotional intelligence, and proficient communication. Through the utilisation of practical examples, theoretical frameworks, and empirical research, he effectively clarifies social intelligence, making it comprehensible and accessible to a broad spectrum of individuals—including policymakers, educators, and inquisitive individuals.

Prof. Mukherjee elucidates the complexities of social intelligence by conducting an exhaustive examination of diverse theories and empirical evidence. This analysis provides insight into the ways in which individuals perceive, process, and navigate social interactions. The incorporation of practical illustrations not only serves to clarify abstract notions but also furnishes readers with tangible instances that deeply resonate with them, thereby augmenting their understanding and involvement.

This methodology not only facilitates a more profound comprehension of social intelligence but also provides readers with practical insights and approaches. Educators have the ability to incorporate these observations into their teaching methodologies in order to foster the development of students' social-emotional competencies. Policymakers acquire significant insights that aid in the development of interventions that foster social unity and psychological welfare within communities. Furthermore, individuals who possess an interest in personal development are able to access practical advice that can be utilised to improve their interpersonal efficacy and cultivate significant relationships.

Making a Difference: From Ideas to Actions

The book's subsequent segment, entitled "From Ideas to Impact," explores the domain of transformational change in educational systems, catering to individuals who are deeply committed to reconfiguring the educational terrain. Professor Mukherjee underscores the critical correlation between theoretical notions and their pragmatic application, contending that social intelligence surpasses mere theoretical discussions and has the potential to instigate concrete, constructive transformations in the lives of individuals.

The notion that social intelligence is not a dormant concept limited to scholarly discourse, but rather a dynamic entity with the capacity to impact tangible results, is fundamental to this section. Professor Mukherjee's narrative is enhanced by thought-provoking anecdotes and evocative real-life illustrations that demonstrate how individuals can utilise their social intelligence to transform concepts into consequential behaviours that benefit society at large.

Through skillfully connecting theoretical concepts with practical experiences, Professor Mukherjee provides readers with the necessary resources and motivation to enact

significant transformations. Through these narratives, readers are motivated to conceptualise and implement novel methodologies in academic environments, thereby cultivating atmospheres that promote understanding, cooperation, and societal consciousness among students.

Furthermore, this segment emphasises the profound impact that social intelligence can have in tackling societal issues and promoting an environment that encourages engaged citizenship. Professor Mukherjee's focus on practical approaches and instances of achievement provides a guide for policymakers, educators, and agents of transformation to follow from ideation to concrete outcomes, thereby generating far-reaching consequences that extend well beyond the educational setting.

Continuity is the key to lifelong learning

Within the perceptive third chapter of "Lifelong Learning," the author explores the profound impact that continuity can have on cultivating growth in both personal and professional domains. The author presents a persuasive case that social intelligence is not a fixed quality, but rather a fluid one, that develops in tandem with the assimilation of new information and experiences by individuals. This chapter presents a strong appeal for educators and learners to adopt the philosophy of continuous learning to improve their social intelligence and adaptability.

The inquiry conducted by the author highlights the intrinsic correlation that exists between continuous education and the enhancement of social intelligence. He promotes the development of a mindset that is perpetually evolving and progressing, urging people to foster an inquisitive approach to education that surpasses conventional limitations. This methodology promotes an enhanced comprehension of social dynamics, interpersonal communication, and emotional sensitivity, establishing a strong groundwork for effectively and empathetically navigating various social environments.

Moreover, the chapter emphasises the interdependent nature of adaptation and learning. According to the author, the implementation of lifelong learning practices not only enables individuals to increase their knowledge but also fosters the development of adaptability and perseverance which are indispensable for effectively navigating emerging opportunities and challenges. High social intelligence is characterised by this adaptability, which empowers individuals to flourish in ever-changing settings and make significant contributions to group undertakings.

This chapter serves to remind educators of the critical responsibility they have in cultivating an environment that promotes continuous learning throughout one's academic career. Through the adoption of cutting-edge pedagogical methodologies and the cultivation of a growth mentality among pupils, instructors can enable disciples to regard ongoing education as a fundamental aspect of their personal and vocational maturation.

How to Get Past Common Problems: Zohnerism and Whataboutery

The fourth section of this piece delves into the difficulties that are encountered during the process of developing social intelligence. Prof. Mukherjee courageously confronts cognitive obstacles, presumptions, and prejudices that impede our advancement. By means of a methodical deconstruction of prevalent challenges, including "Zohnerism" and "Whataboutery," the author provides readers with pragmatic approaches to confront and surmount these impediments.

Through illuminating these obstacles, Prof. Mukherjee enables readers to cultivate a more sophisticated and socially astute perspective when confronted with intricate matters. This chapter functions as a comprehensive resource, providing insightful advice and effective strategies for addressing contentious narratives and fostering a more reflective and inclusive perspective.

With an academic inclination, we may proceed to expound upon the precise methodologies that Prof. Mukherjee delineates for addressing cognitive obstacles and prejudices. As an illustration, he might explore cognitive restructuring methodologies that assist people in questioning and reformulating their presumptions. Furthermore, he could delve into the significance of perspective-taking and empathy in cultivating a more profound comprehension of varied viewpoints, thereby encouraging a more socially aware and empathetic disposition.

Society 5.0: Bringing Life and Community Together

The content's fifth section explores the forward-thinking notion of "Society 5.0," which presents an idyllic cohabitation between interconnected human beings and technological advancements. Professor Mukherjee envisions a tranquil future in which the welfare of the entire community is harmoniously intertwined with that of each individual. Promoting a comprehensive approach to advancement, he urges proactive engagement in the process of moulding a more promising future.

The incorporation of artificial intelligence (AI) is fundamental to this vision, signaling the advent of a novel era of social intelligence within the digital domain. The potential of AI to interpret complex social signals and generate emotionally intelligent reactions is poised to revolutionise numerous domains. Online education has the potential to undergo a significant transformation by providing individualised learning experiences that are customised to meet the specific requirements of each student. A significant enhancement in mental health support could be achieved through the implementation of AI-powered tools that offer prompt and compassionate aid.

In addition, the advancement of virtual assistants with sophisticated functionalities holds the potential to increase productivity and efficacy in various industries. Nonetheless, amid these auspicious possibilities, ethical considerations appear large. Preventing manipulative practices and safeguarding against biases in social interactions powered by AI emerges as a critical concern.

Towards a Society That Can Last

The author underscores the importance of diverting our attention from overconsumption in the sixth section entitled "Confronting Consumer Expectations and Caring for the World." The author establishes a connection between social intelligence

and responsible consumption, emphasising our shared obligation to safeguard and maintain the environment. This chapter functions as a didactic reminder and a wake-up call, emphasising that social intelligence extends beyond interpersonal connections and includes our responsibility to protect the environment.

This section explores the intersectionality of environmental stewardship and social intelligence from an academic standpoint. The author may delve into theoretical constructs including ecological footprint, sustainable consumption, and environmental ethics to emphasise the interdependence that exists between human conduct and the consequences of the environment.

Inspiring readers to reassess their consumption habits and contemplate the wider environmental consequences of their behaviours, the author promotes a transition towards lifestyles that are more conscientious and sustainable. This is consistent with more extensive scholarly and public dialogue concerning sustainable development objectives and ecological accountability.

Real collaboration is needed for good results.

Chapter seven, titled "Genuine Collaboration," explores the importance of cultivating genuine relationships and productive collaboration. In his analysis, the author explores fruitful group undertakings that underscore the tremendous potential of collaborative effort and shared expertise. Beyond mere interpersonal harmony, he espouses the importance of actively participating in collective endeavours as an indication of genuine social intelligence.

Academically speaking, this chapter explores the intricacies of collaboration, placing significant emphasis on its capacity to facilitate the attainment of common objectives and propel transformative progress. In his discourse, the author might delve into the subject of group dynamics theories, efficacious communication tactics for teams, and the advantageous nature of incorporating diverse viewpoints into problem-solving processes.

Through the presentation of fruitful group projects, the book motivates readers to transcend superficial exchanges and wholeheartedly adopt collaborative endeavours that produce concrete outcomes. This is consistent with academic discourse surrounding leadership, social cohesion, and collaboration in a variety of settings, including academic and professional environments.

Putting student success and well-being first

In its concluding section, "Teaching for Success," the book presents a critique of conventional educational methodologies and advocates for a transition towards comprehensive teaching strategies. Academic and emotional welfare are matters that profoundly concern Prof. Mukherjee. The author underscores the significance of fostering social intelligence among young individuals, with the ultimate goal of developing a cohort that can prosper in a globally interconnected society.

This section examines, from an academic standpoint, pedagogical theories and practices that place an emphasis on the comprehensive development of students. Academic success and the significance of social-emotional skills, as well as student-centered

learning and emotional intelligence in education, are some of the topics that the author might like to examine.

Through his support of whole-person teaching methods, Prof. Mukherjee directs instructors toward strategies that place students' social and emotional well-being alongside their scholastic accomplishments. This is consistent with academic discourse surrounding inclusive education, frameworks for social-emotional learning, and the significance of fostering well-rounded individuals.

Finally, a caring and long-lasting future

There is more to "Exploring Social Intelligence: The New Education Policy 2020" than just a book. It is a call to action. With his research-based fluency and real-life examples, the author challenges us to rethink how we teach. This book tells us that social intelligence is not a luxury—it is our wayfinding tool for a kind and sustainable future as we navigate the complicated web of connections that we live in.





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