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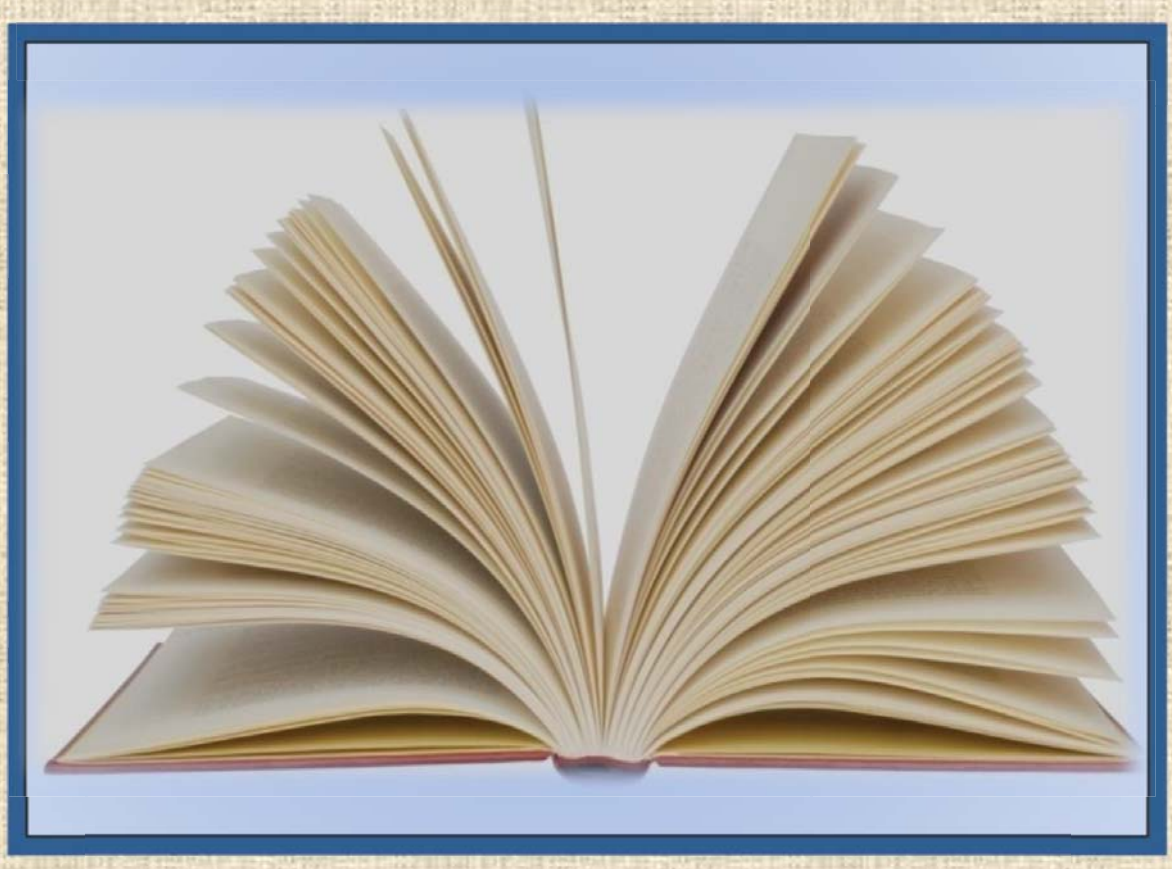

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(ACCREDITED "A" GRADE BY NAAC)

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प्रोफेसर नजमा अख़्तर
कुलपति

Professor Najma Akhtar
Vice Chancellor

پروفیسر نجمہ اختر
شیخ الجامعہ

Vice Chancellor's Message

The sixth volume of Jamia Journal of Education is the latest addition to the splendid array of contributions made by the Faculty of Education, JMI, in the field of education over a span of almost seven decades.

The present journal, with Curriculum as its broader theme, comprises valuable research papers and scholarly articles, promising to arouse readers' interest and afford them insights into the theme. I wish the access to journal would be made much easier so that it could be available to a large audience.

Needless to say, the Journal strikes a balance between the innovative practices that are taking place across the world and Jamia's major contribution to the field.

I congratulate the entire editorial team for making the journal a beautiful treatise for all the stakeholders. With some more efforts the Journal can be widely reckoned to be one of the best quarterly magazines, attracting more foreign readers and contributors.

Najma Akhtar

(Prof. Najma Akhtar)

जामिया मिल्लिया इस्लामिया
(संसदीय अधिनियमानुसार केन्द्रीय विश्वविद्यालय)
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शिक्षा संकाय **Faculty of Education** فیکلٹی برائے تعلیم

Prof. Aejaz Masih
Dean

From the Desk of Editor in Chief

John Franklin Bobbitt explained "The Curriculum" as the course of deeds and experiences through which children grow up into adults and get going for success in the society. A curriculum is more than putting together a set of academically required subjects. It must consider all aspects of the student life, the learning needs of students, the time available for the sessions and the teachers' idea, capability and workload. Thus, there is a need to have humanistic curriculum which is based on intercultural that allows for the plurality of society while striving to ensure a balance between pluralism and universal values, in terms of policy, this view sees curriculum frameworks as tools to bridge broad educational goals and the processes to reach them.

Hence, in view of the crucial role that the curriculum plays in the whole affairs of students' lives in academic institutions and beyond, there is a need to design the curriculum which could shape them into efficient individuals. It is therefore imperative that the present curriculum should keep pace with the time. The fact is the educational institutions should teach the curriculum of the future, not just the curriculum of the past. Hence, the new developments that are taking place round the globe in the advent of globalisation and knowledge explosion by virtue of ICT should therefore be taken into consideration.

The post independent educational commissions and committees along with National Curriculum Frameworks in India stressed the need for restructuring and revision of curriculum with the passage of time. This being recommended so as with the quantitative expansion of education; the classroom dynamics have been changing. And to address the diversity in the classrooms, the curriculum should be designed in such a way that it could create inclusive education friendly space within educational institutions. The teachers' involvement in the curriculum development process is essential in meeting the needs of society. The process of curriculum development requires teachers to act and reflect on society's needs in each stage of the development process.

Nevertheless, sometimes this process which teachers are requested to follow is unclear. For example, in South Africa most teachers are not qualified and lack the necessary skills to participate in curriculum development. Their approach of participation in the process is not well defined and very difficult on teachers, so they face many challenges regarding their involvement in curriculum development (Ramparsad, 2000). Curriculum development should therefore be viewed as a process by which meeting student needs leads to improvement of student learning.

I am pleased to note that the concern with which the broader theme for this volume was visualised are reflected through the research papers and scholarly articles which are included in this edition of the Journal.

I am sure that the readers' inquisitiveness would be generated even more once they go through the contributions of the writers across the world.

I express my sincerest gratitude to all the members of editorial board for meticulously selecting, peer reviewing, editing and proofreading the content of papers and articles before they are published in the present volume of Journal.

Prof. Aejaz Masih

EDITORIAL

Curriculum as the primary pivot of formal education merits close and detailed analysis to ascertain the nature and direction of the educational processes. Curriculum studies which emerged as a field of study in late 1960s and 1970s concerns itself with subjects which span a wide range including the complexities of curricular decisions, curriculum development and transaction and curriculum evaluation. Research in the area has also been undertaken from multiple standpoints resulting in extensive research literature centered around diverse issues. Studies with philosophical bent have sought to examine and analyse the objectives and assumptions and even interrogate the intended curriculum whereas others have focussed on the enacted and received curriculum i.e. on the ways in which the curricular intentions play out in the classrooms and the ways in which they are received by the students. Sociological factors which shape the curriculum have been expounded upon. Assessment of effectiveness and adequacy of curricular materials including the textbook has also come up as a fertile area of investigation. There has also been a considerable number of efforts devoted to assessing the fidelity of various curricula that is assessing how closely the content and processes resonate with the intent. While lamenting the instrumentalist approach to curriculum and its development, critical approaches to study of curricular issues have sought to reveal their neoliberal and dominant leanings. Several innovative efforts and alternatives have been shared to collectively gain new insights and experiences of curricular reform movements have been shared from different countries.

The concerns thus have been variegated in purpose and new vistas keep opening up with fresh issues cropping up as a result of sustained work in and intensive engagement with the field. The ongoing pandemic has poignantly foregrounded many such issues. The outbreak of the disease, the consequent human displacement and suffering coupled with the lockdown requirements that ensued presented extraordinary challenges before society and its institutions. The education system initially numbed by the unprecedented situation struggled to find its feet and frame a suitable response. Information and communication technologies came to be extensively explored for their potential to connect and access resources and their various features were widely utilized in a bid to breakdown the proximity barriers between the teachers and the taught. It can also not be denied that the system became so occupied with the issues of exploration of and capacity building in different digital tools that it became oblivious to the prevailing socio-cultural scenario. The discourse became restricted to delivering online lectures, holding virtual classroom meetings, accessing information on net, exploring innovative pathways to connect and carrying out online assessments. In a bid to prove its resilience and its potential to march on despite the obstacles, the education system rendered invisible the immediate context as also the curricular urgencies which were spotlighted. The pandemic was an ‘outside’ concern and for some reason could not become a part of the educational discourse. It

stood right outside our virtual classrooms but could not enter them. Consequently, the disconnect between life and virtual classroom became more prominent. This quarantined and isolated approach to education which distances student from realities will need to be reconfigured. The content to be taught will need to be brought closer to the context in which it is transacted. Important lessons learnt in the areas of sociology, psychology, environment, physiology, data science, economy, political theory and citizenship education will need to be incorporated in school as well as teacher education. Traditional approaches to dealing with subjects like disaster management and community health will also need to be reexamined.

The situation will abate but the concerns raised will have to become a part of our collective educational consciousness. Finding innovative ways to embed concepts in fluid contexts, instilling sensitivities and concerns which prepare future citizens to respond to emergent situations and making critical and judicious use of technology taking due cognizance of digital inequalities are some of the issues which, though more forcefully articulated by the prevailing situation, are enduring in nature and which have been and are likely to continue to confound and challenge the educationists irrespective of the pandemic. The way forward will therefore have to be informed by these perspectives.

Evaluation within the realm of curriculum studies can be looked at in two broad ways- Evaluation strategies for students and evaluation of the curriculum itself. Though these indicate two different aspects, yet there are some tendencies common to both. In both these kinds of evaluation, focus has steadily been shifting from focusing merely on the outcomes to factoring in the processes. The context is also increasingly being taken due cognizance of. In case of learner assessment there is a wide acknowledgement of the need for assessment and evaluation to be equitable and carried out in authentic contexts. Voices against culture and context-neutral assessment items are becoming stronger. A similar leaning is seen in curriculum evaluation as well. Tyler's curriculum evaluation model which centered around achievement of objectives found a counter-narrative in approaches propounded by people like Scriven, Cronbach and Stufflebeam when deeper questions like the ones regarding the merit of objectives themselves began to be raised. The field continues to remain dynamic and continues to evolve.

The current issue of the journal broadly titled as 'Curriculum and Evaluation' attempts to cover extensive ground by including eleven articles which differ in their concerns and yet are all broadly aligned with the theme. It begins with an article by Ehsanul Haq who raises serious concerns regarding the low learning levels in the country and tries to analyse the sources to which the widely prevalent poverty of learning can be attributed. He also elaborates on how this poverty impedes the creation of knowledge society and the process of knowledge-based development Advocating a blended learning approach which combines classroom and industry teaching, Aleena Ilyaz traces the pedagogical

shifts that have taken place in the area of Human Resource Management education. Shailla Draboo through her assessment of Girl Education under Sarva Shiksha Abhiyan reflects on the factors affecting girls' access to education. Manisha Wadhwa nee Dabas explores the role of stories as tools of curriculum transaction at primary level. Through her own practices tried out in a school, she reflects on the use of stories for developing skills of listening speaking reading and writing as also for developing critical thinking skills among children. Elizabeth Kuruvilla and Sunil Kumar Das, by collecting and analysing the feedback received on a particular video programme; reflect on the adequacy of video programmes in communicating abstract concepts such as *self-awareness*, *empathy*, and *pedagogical* awareness. With technology set to become a significant propeller of curriculum in the coming days, it is important to study its ramifications in totality. Osama Qamar and Ahrar Husain take a step in this direction by studying the effect of mobile technology on leaners and their dependency on it as also the effect of mobile technology on learner's health. Acknowledging the need for future teachers to be capable of effectively integrating pedagogical and subject matter knowledge, SAIDU Abubakar carries out an assessment of pre-service history teachers' content and pedagogical knowledge in the university of Ilorin in Nigeria. Integrating insights from different knowledge domains presents new teaching learning possibilities for teachers and efforts in this direction have recently gained momentum. Taking this thread of thought further; the integrated perspective of science curriculum is understood, elucidated and traced historically by Prerna Sharma and Jasim Ahmad. Smriti Sharma while emphasising the need for curricular materials to bridge the learning assessment divide demonstrates how textbooks can achieve this by citing the example of class V EVS textbook. Zuha Aisha studies prospective teachers' perceptions and problems pertaining to preparation and implementation of lesson plans which are blue prints of curriculum transaction. Tanweer Alam and Kartar Singh have collected data from various panchayats to investigate the reasons behind the high drop out of students in the Araria district of Bihar and on the basis of their findings ascribe the phenomena to a large range of factors such as - financial constraints, unfavorable environment of schools, teachers' attitudes towards education, lack of proper infrastructure, severe climatic conditions, Kosi river's floods, cultural and social factors, political factors, death and sickness of parents and illiterate parents

We hope that this kaleidoscopic view of concerns pertaining to curriculum and evaluation will initiate further thought and deliberation on related issues.

Poverty of Learning and the Knowledge-based Development in India: A Critical Analysis

Ehsanul Haq

Abstract

This paper assumes that the learning-rich societies would have a positive impact on the growth of a knowledge society and on the knowledge-based development but the learning-poor societies would deter the positive impact. To be learning-rich is the basic requirement of making the society knowledge-rich and its development knowledge-based. Faster the speed of reading, learning, accumulation, comprehension, production and dissemination of knowledge and information, faster is the speed of development and reduction of poverty. The World Bank notes that the speed of development and poverty reduction would not be fast enough if the speed of learning and production of knowledge is lagging behind. Further, the target of ending poverty by 2030 as one of the key goals of sustainable development cannot be achieved if we are unable to sufficiently tackle the problem of poverty of learning and its outcomes. We have achieved universalization of education in India but the learning outcome tends to be dismal. The trend sets in from the very early stages of learning with its carry over effects on higher stages of learning. It is in this context, the paper makes qualitatively a critical analysis of whether it is possible to have a knowledge society and knowledge-based development in a situation of phenomenal decline in learning and its outcomes. The paper is based on secondary literature and personal observations and experiences.

Key words: Learning poverty, knowledge society, knowledge-based development, processes of learning, paradigmatic knowledge, deductive-inductive methodology, hermeneutics, reproduction of knowledge, false legitimacy to competence, inconsistency between knowledge acquired and knowledge demonstrated, value-neutral, value-loaded.

Introduction

It may be observed that the phenomenal rise in educational literacy is coupled with phenomenal decline in the quality of learning and its outcome. All over the world, around 48 % school learners are unable to read age-specific text of knowledge. As a result, they are bound to suffer during the rest of their life because of the carry over effects of the deficiency in their foundation of learning over the higher states of learning. In India, more than 50 % learners suffer from learning poverty. This shows that the superstructure of learning is built on weak foundation of learning. In spite of the phenomenal increase in literacy, more than half of the learners are deficient in learning and knowledge. Most important carry over effect of this is that most of the products of

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higher learning are unable to comprehend well the basic foundational or theoretical structure of knowledge of their age-specific text of learning. At a still higher stage of teaching, learning and research, a scholar is seen to be unable to define well the notions of interdisciplinary research, theory and methodology. There is a declining trend in the quality of learning and the outcome of learning at different layers of learning. Such a trend would weaken the prospects of a society to be a knowledge-based society where knowledge is the basis of development. The entire paper addresses this issue with its implications for the knowledge society.

Processes of transmission of information and knowledge

The richness of knowledge and information is the main characteristic of a knowledge society and the basic requirement for the knowledge-based development anywhere in any country. For making the society knowledge-rich, the formal and the informal processes of learning play the vital roles.

Informal processes: The informal sources are relatively much broader sources of the transmission and dissemination of knowledge and information but they largely function in a diffused and less systematic fashion in this process because they lack formal learning structures and systematic planning of what to transmit and disseminate. They also lack better understanding of what would be the consequences of their roles. Although, whatever knowledge and information is transmitted and disseminated by them has relatively much wider public impact and implications. In a multi-ethnic, multi-lingual and multi- cultural societies, their roles in this process are observed to be critical, value-loaded and socially particularised. When we talk of their autonomy, particularly of the media, it makes them free to function, although their roles are always constrained by the internal, as well as, the external pressures. They try to be objective and value-free but most of the time they transmit value-loaded content of their messages due to the pressures. Therefore, their roles in the process of transmission and dissemination of knowledge and information are always questioned by the public for their objective value. The subjective contents of their messages transmitted are so vital that they tend to make the objective contents of formal learning of knowledge and information counterproductive.

Formal processes: The formal source of learning, knowledge and information in the classroom is much smaller and narrower than the broader spectrum of informal exposure to knowledge and information which take place in the society through the family, the peer group, the neighbourhood, the mass media, the workplace and the larger society of which the institution of formal learning is only a small segment. Emile Durkheim (1956) says that the institution of formal learning performs only the subservient role to the broader society. Its role in the process of transmission of knowledge and information is structured by the larger society of which it is an integral part. Thus, according to him, the formal education is largely externally constrained and the informal processes of

education are also not independent of the external conditioning of their roles. Although, this stand taken up by him is contented by Karl Mannheim (1962) who says that the formal institution is relatively an autonomous institution of learning to bring about necessary changes in the society independent of societal constrains. It is due to this reason education is given a lot of autonomy in the process of production and reproduction of knowledge and information. Although, this stand taken by him is again contested by Pierre Bourdieu (1977) who says that it is through the autonomy that the formal institution of learning transmits and perpetuates the contradictions of the society and the class character of hierarchical learning of knowledge and information in the society. It is due to this the knowledge gap persists in the society in terms of quality, as well as, the quantity of knowledge and information by the class background of the learners. However, in a class-oriented society, it is through both the formal, as well as, the informal processes of learning, the social inequality and the knowledge gap are reproduced. Thus, according to Bourdieu, the institutional autonomy reinforces the process of social reproduction.

Social structure of knowledge

The class-based societies reproduce hierarchical structures of learning and knowledge. Such structures promote the gap in the quantum and quality of knowledge and information acquired (Haq, 1968). The structural and the processual inequalities reinforce each other and thus the basic class character of the society is preserved and reproduced where only a small section of the society is knowledge-rich and the larger section of the society remains knowledge-poor. The differences in the quality, quantity and the level of learning promoted through the efficient and the deficient institutional structures of formal learning constructed by the society degenerates the ideal of symmetrical learning of knowledge and information. Such an apparatus of human processing and learning is bound to have serious implications for the process of transmission and dissemination of knowledge and information because those implications may have the adverse impact on knowledge production and reproduction, on the creation of a knowledge society and on the knowledge-based development of the society (World Bank, 1999). One of the most important implications is the knowledge gap within the country and that gap is severe for the poor learners who come from the poor families and attend mainly the public institutions of learning as compared to the rich who come from better off families and attend mainly the private institutions of learning. The learning failure of a very large section of the poor learners, disadvantaged by knowledge and information, can be seen because they mostly come, not only from the poor families but also because they attend a very large group of poorly managed, low fee charging, mostly Hindi medium, deficient and substandard public institutions as compared to a small section of the rich learners, advantaged by knowledge and information who mostly belong to the rich families and attend a small group of properly managed, high fee charging, invariably English medium, efficient and standard institutions. The two groups of learners, disadvantaged and advantaged by knowledge and information, coupled with their failure and success, are the

products of hierarchically arranged systems of learning created and supported by the society.

Education policy, poverty of quality learning and the ideology of integral humanism

The draft education policy, 2019 focuses on equitable education and social inclusivity by stating that every child irrespective of social background should get 'equal educational opportunity to learn and thrive, so that, the participation in learning and the learning outcomes are equalised across the social categories'. Since the learning and the learning outcomes have not been equalised, the policy document proposes drastic changes in the existing curriculum and the pedagogical structure of schooling in India in order to achieve the ideals of social inclusivity and equitable education but the draft education policy has been criticised on the ground that the superficial changes proposed would not serve the purpose unless the structural reform is made and the quality and the quantity of education is uniformly distributed across social categories (EPW,2019). If this is not done, social inclusivity cannot be achieved in terms of equal quantity and quality of education among the children of all social categories. Further, if the structural changes are not brought about, the disadvantaged children would continue to suffer from the poverty of quality learning as compared to the advantaged children. There would be learning gap in terms of knowledge and information acquired through formal institutions of education. If the larger section of the children is excluded from the quality contents of learned knowledge and information, they would neither be able to make their valuable contributions in the process of nation-building, nor in the process of acquiring and generating knowledge and information. This would neither make the holistic development of the individual learner possible, nor of the society to which they belong. And therefore, the larger section of the disadvantaged children at the bottom of the social ladder have to be uplifted educationally, included and mainstreamed. The ideology of integral humanism stands for this section of deprived children in particular and the people in general. It stands for 'the rise of the last person at the bottom of the social ladder' in order to include them and integrate them to meet the goals of social inclusivity and holistic development. According to the doctrine of integral humanism, there are three-fold objectives of education: to raise the status of those who are at the bottom of the society, to rise above poverty and disharmony and to eradicate the poverty of knowledge and information (Jaffrelot, 2007).

Poverty of learning and knowledge: empirical status

The poverty of learning, knowledge and information, as pointed out by the World Bank in its report (2018) on '*Ending Learning Poverty'* is a function of deficiency in learning and acquiring knowledge and information. This deficiency is caused by the lack of interest and improper processes of learning. As a result, the learners are unable to learn and understand properly the text of knowledge, neither of their own standard, nor of the standard below their age and standard. The World Bank has pointed out that almost half

of the children globally suffer from poverty of learning with its carry over effect on the rest of their social and academic life, although the proportion of children who are learning-poor varies by the income levels of various regions. **Globally, the proportion such children is** about 48 % but this varies from 87 % in the Sub-Saharan Africa, 63 % in the Middle East & North Africa, 58 % in the South Asia and 53 % in the low and middle income societies to 21 % in the East Asia Pacific, 13 % in the East Europe & Central Asia and 51 % in Latin American societies. This shows as if the problem of the deficit in learning, knowledge and information is the problem of mainly those societies which come under the low and middle income range (*The Times of India*, 15 Nov. 2019, P.1). Mainly in these societies, the foundation of learning is shaky which might adversely affect the entire superstructure of learning and acquisition of knowledge. If the child is unable to read age-specific text of knowledge, it is quite possible that the struggle to recover learning deficiency might affect the rest of their academic life. India's achievement in enhancing literacy level and bringing virtually every child to attend the school is remarkable but the World Bank report observes that over half of the children in the school suffer from learning poverty and they cannot read properly and comprehend well the text below their school standard. A solid learning foundation in the classroom needs to be built to promote learning interest to acquire necessary knowledge and information in order to build the knowledge base of the society stronger and to promote greater interest in higher stages of learning, acquisition and creation of knowledge. The children in the school who suffer from learning poverty are those who are deficient in reading and learning and have not achieved the minimum level of knowledge proficiency. This indicates a shaky learning foundation which needs to be stronger, so that, we can make our society knowledge-rich to protect the superstructure of knowledge.

The level of learning poverty among the school children of South Asia, on an average, is 58 % while it is 55 % in India, about 93 % in Afghanistan, 58 % in Bangladesh and 75 % in Pakistan but it is quite low in China (18 %), Sri Lanka (15 %) and Russia (3 %). The Annual Status of Education Report (Rural, 2018) shows that only 50.3 % of class 5-level children in rural India can read class 2-level school texts of knowledge. This indicates poor learning, although changes have taken place but still the learning and learning outcomes of schooling in India are poor as shown in the following Table. On an average, 55 % children have learning deficit because they cannot properly read and understand the school textbooks prescribed for the children lower their standard. Although, the reading and learning deficiency, on an average, has declined from 61 % in 2008 to 52 % in 2012 and it has gradually increased from 52 % to 55% in 2018. The relative picture, by the type of schools, indicates that the learning proficiency is better in the private schools than in the public schools.

	Y E A R					
	2008	2010	2012	2014	2016	2018
Private School	68	64	61	63	63	65
Public School	53	51	42	42	42	44
Average	**61**	**58**	**52**	**53**	**53**	**55**

Note: *The relative position of the % of children whose learning outcome is better.*

Source: *Ending Learning Poverty: What will it take? , report by the World Bank 2018, reproduced in The Times of India, 15 Nov.2019, P1.*

In 2018, 35 % children suffered from learning deficiency in the private schools while it is 56% in the public schools. Although, the deficiency trend has declined and the efficiency trend has increased from the year 2016 to 2018 in both the categories of schools but in both the categories, the performance of children is lower in 2018 as compared to 2008. If the present level of learning does not improve, the children would continue to suffer from learning deficiency and that would affect adversely the process of accumulation of knowledge and information which would ultimately reduce the knowledge level, weaken the knowledge base structure of the society and the knowledge-based development. When the level of literacy, numeracy and the learning outcomes are deficient, the employability and the work performance of undergraduates and graduates would be adversely affected. It is due to knowledge deficiency and unemployability in the labour force, the participation rate among both the male and the female educated job-seekers is lower than the illiterate or barely literate job-seekers (*The Times of India*, Jan. 21, 2020, P.1). The problem of employability among the educated youth is aggravated by their attitude to work. The employability and attitudinal problems among them have adversely affected the speed of development. The report of the United States Agency for International Development (USAID, 2020) shows that at the state level in India, the proportion of learners who failed in the assessment of their learning outcomes in their own mother tongue is very high. It is as high as 76 % in Uttar Pradesh, 63 % in Rajasthan, 53 % in Karnataka, 39 % in Odisha, 30 % in Uttarakhand, 23 % in Chhattisgarh and 4 % in Maharashtra (USAID Report, 2020). The report has pointed out that there is a serious learning crisis in Indian states because of the lack of basic literacy and numeracy skills. If the learners are deficient in their basic understanding, they cannot to do basic mathematical operation, fractions and algebra. This finding is supported by the World Bank and ASER reports on learning poverty. The surprising fact is that we have achieved universalization of education but the learning outcome is dismal and around 18 million learners suffer from learning poverty because the very foundation of learning is poor across the Indian states, as if, more kids are now going to school, not for learning but for fun (*The Times of India*, Jan.16, 2019, P.1 and Feb.23, 2020, P. 15) and surprisingly, the learning deficiency gets worse in higher classes of learning. The Education Commission

Report (1964-66:72) had long back shown its serious concern for declining motivation for reading, learning and acquiring knowledge and information.

Carry over effects of deficiency in learning and knowledge

The problem of deficiency in learning and knowledge at the undergraduate level would certainly have the carry over effect on the higher levels of learning. It is very often said that most graduates are not only deficient in learning and learning outcomes but also in productive skills and values, and therefore, they are not employable. The high rate of unemployment among them is partly a function of the lack of job opportunities but mainly the function of knowledge deficiency, including technical skills and the attitude to work. The knowledge deficiency is a function of learning deficiency, lack of interest to invest time, energy and efforts in education and career-building opportunities. The process of knowledge acquisition continues till the certification of knowledge is over, and thereafter, only general understanding of the issues coupled with some kind of work experience accumulates. In fact, after certification of knowledge, further knowledge acquisition generally stops. It may be seen that the graduates coming out of the educational institutions, particularly from the private institutions come out invariably with very high marks in their knowledge acquired as it manifests in their marks obtained, considered to be an index of high quantum of knowledge and information acquired but it seems that the marks given to them tend to be virtual (in effect, though not in fact) if not fake or unreal because the gap exists between the virtual and the real knowledge. The virtual knowledge acquired during the process of graduation exists in effect in terms of marks but the real knowledge is the actual knowledge which exists in fact and can be demonstrated in the presence of area experts. The virtual knowledge is the basis of the actual knowledge demonstrated but the knowledge-base structure of the actual knowledge is weak, not only among the learners of lower education but also among the learners of higher education. It is because of the failure in the actual or real knowledge in spite of high virtual knowledge in the form of high marks obtained; the products of higher learning remain unemployable. Invariably, the inconsistency exists between the virtual knowledge acquired and the actual knowledge demonstrated. The virtual knowledge manifesting numerically into high marks is illusionary because it is based on fake or inflated marks obtained through different ways and the real knowledge is the actual knowledge which is demonstrated correctly or incorrectly. For example, the graduates, post-graduates and even Ph.D. holders (mostly teachers/officials of colleges & Universities) very often come to the Centres of Human Resource Development (Academic Staff Colleges) for their knowledge upgradation and the certification of their knowledge upgraded. The knowledge acquired by them during the upgradation process is presented and demonstrated by them in the classroom before the experts and the audience for evaluation of their knowledge and competence gained but the grading of their presentation/demonstration of knowledge does not follow the principle of objectivity and the quality of presentation/demonstration. After the presentation is over,

almost all the participants, separately and confidentially, are given standardised grades (inflated) of not less than first class. The reason given by the Centre is that they have to run the knowledge upgradation courses and if the objectivity is strictly followed and the trainees are downgraded, nobody would come to their Centre for knowledge upgradation. This means that the objective opinion of the experts has no meaning and the objectivity is not the basis of awarding grades or marks. The experts say that if we insist for objective and critical assessment of the actual knowledge and competence acquired and demostrated, we may be shunted out by the Centre and may not be invited again for being critical and objectively strict evaluator who is neither appreciated by the trainees, nor by the management of the Centre. The inflated grades(virtual) as an index gives a good impression of the actual competence and the quality of knowledge acquired but beneath this kind of illusionary achievement, subjectivity presides, resulting into large scale recruitment/promotion of unemployable graduates/post-graduates/Ph.D. holders who can neither teach and work effectively, nor transmit and generate objective knowledge well. This is an example of the inconsistent relationship between the virtual knowledge acquired and the actual knowledge performed or demonstrated. This is how officially 'false legitimacy to competence' is granted to the participants and the learners according to Evan Illich (1974). The reasons are known as to how the high marks, being considered as an index of quality learning, is acquired and why the learners fail in actual demonstration of knowledge and understanding in the effective role-enactment at the work place. There is phenomenal gap between the role achieved and the role enacted. This is the reason why the standard of learning is declining and the learning poverty is phenomenal among both the teacher and the taught, although there is the phenomenal rise in the literacy level. Invariably, in the teacher training courses at the teacher training colleges, the teachers come out with high virtual marks awarded to them in both the theory and the practical courses and they are recruited in schools on the basis of their marks but in the same schools where the teachers are considered to be well qualified and trained, the children suffer from reading, learning and knowledge deficiency. A study conducted on 300 trained teacher aspirants (Haq, 2019) comes out with the fact of glaring inconsistency between the scores achieved by the teachers in the tests related to four competencies (competence in subject knowledge & general understanding, competence in teaching & application of teaching methods, competence in language skill and the skill of communication and expression, and the competence in cultivation of appropriate personality traits. The details about these competencies may be seen in the *Secondary Education Commission* and the *National Curriculum Framework for School Education, NCERT*) and the scores achieved in the demonstration of these competencies. Almost all the aspirants secured more than 65 % marks in the written tests of competencies but more than 65 % of them are poor in the actual demonstration of the comprehension to their competencies. For example, a trained graduate teacher who is an aspirant to become a school teacher, when asked to spell and write '*formative-assessment'*, writes it as

'*formulative-assessment'.* Further, another candidate was asked to spell and write *lieutenant*, the candidate writes it as '*leftinent'.* This is an example of the extent of language competency of the trained graduates who wanted to become English language teacher in the school. The CBSE result shows that the subject-wise the total average in the problem solving assessment of the children declined from 28.5 % in 2013 to 25.5 % in 2014 for class IX and it declined from 40.1 % in 1913 to 24.4 % in 2014 for class XI. This was considered as a worrying trend and the CBSE raised figure against the quality of teaching and the teaching method competency of the teachers. The CBSE called this as the 'lack of competency in the methodologies of teaching applied in the classroom' (*The Times of India*, 21 May, 2014:4). However, the alarming inconsistency is the result of more interest in mugging up and the use of cheap note books available in the market for preparation to get qualifying marks and less interest in hardcore learning, understanding and pedagogical proficiency among the teachers. The regular reading and learning habits and hardcore theoretical understanding has almost disappeared at all the levels of learning which can adversely affect the transmission, dissemination and the production of meaningful knowledge.

Static and dynamic processes of learning and the production of knowledge

Almost all the stages of learning tend to be more static rather than dynamic stages of knowledge because they generally reproduce knowledge. This is more specific for the schooling where knowledge is reproduced at large but the higher stage of teaching and research is considered to be more dynamic because at this level, learning is required to create knowledge along with certain degree of reproduction of knowledge. There is a great expectation from the research department of higher learning, particularly in the fields of physical or natural sciences for the advancement of research based objective knowledge to be used for the developmental purposes. The expectation from these fields is justified because these areas are methodologically advanced as compared to the social sciences where no concerted effort has been made to make social sciences equally advanced methodologically. The social sciences are considered as soft sciences. They are advancing towards greater methodological precision for the production of objective and scientific body of knowledge. The problem with the soft sciences is that they deal with the dynamic character of the subject of inquiry. The study of human beings is their subject but the character of human beings is narrative in nature (Taylor, 1985). This character is not the one-way but the two-way process of interaction, conversation, dialogue, interpretation and sharing of human experiences. There is the double self-interpretation which Giddens (1976) calls as the 'double hermeneutics' or the two-way interaction between the object of inquiry (the investigator) and the subject of inquiry (the investigated). Both are the human beings and they are free to interact with each other. As a result, in the process of knowledge production, the social-science research is subjected to a great deal of inter-subjectivity, individualism and relativism. The double ontology (the object-subject & the subject-object) makes the role of social-science research in the

production of knowledge more dynamic but more difficult to apply the natural-science methodology to produce objective and scientific body of knowledge. Whereas, in the natural-science research, there is the single hermeneutic at work because of one-way interaction between the object (the investigator) and the subject (such as the electron, atoms, volcanoes, mountains, hurricanes, molecules, proteins, minerals, plants, animals, galaxies, stars, water, and all such naturally existing and occurring objects but not the self-interpreting phenomena) of inquiry. The one-way ontology keeps the natural-science in a relatively better position to apply efficient causation, correlation and precision in the process of production of objective and scientific body of knowledge. Thus, it is because of the differences in the subjects of inquiry in social and natural sciences that the idea of the extreme form of precision, objectivity, value-neutrality and discovery of the context-fee universal laws is possible in natural sciences but it is difficult in the social-science research, although this stand is contested by the empiricists. Kuhn (1996) has pointed out that the social-science would remain at the pre-paradigmatic or pre-scientific stage because it has not generated sufficiently the precise body of scientific, theoretical and paradigmatic knowledge to achieve the higher scientific and professional status. This is mainly because of methodological reasons coupled with the lack of sustained efforts made to make its methodology stronger at par with natural-science methodology of research and production of knowledge. Even today, the young generation of social scientists engaged in social-science research with the view to generate objective and scientific knowledge are unable to conceive well even the meaning of the notion of methodology. They conceptualize it mainly in terms of technical aspects and inductive logic. As a result, researches are mostly inductive, normative, survey and fact finding types which are unable to make a breakthrough in the existing theoretical structure of knowledge. The paradigm is an indicator of the scientific status of a discipline because it is the specific body of scientific knowledge, characterised by the 'universally accepted body of recognised laws of human behaviour and the dominant set of scientific achievements in a discipline', depending on what methodology is used in the process of scientific discovery (Bishop,2007).These days, the researchers in social sciences, particularly the young researchers, avoid making concerted efforts in using the deductive methodology because it needs hard work, concerted efforts ,extensive reading, learning, theoretical understanding, application of theories and the use of theories as tools of research. The social sciences need to be methodologically stronger in order to play a dynamic role in the process of production of scientific body of knowledge.

Use of deductive and inductive methodologies and the production of knowledge

The logico-deductive component of methodology is the hardcore methodology of research and production of knowledge and the rest is peripheral. The inductive component is generally taken as the soft core methodology because only the technical and grounded theoretical aspects, isolated from the hardcore methodology are included into it by the researchers who generally opt for and use the soft core methodology in the

process of research because they lack research skill of using a theory as a research tool in the process of production of knowledge. There are reasons as given below to opt for the soft core methodology and marginalise the hard core methodology which is almost left out of the purview of research in social sciences. In the process of production of knowledge, the researchers mostly apply the soft core inductive option of methodology because they find it easy and convenience in which no elaborate reading and theoretical insight are needed as per their perception. They simply prepare the research synopsis based on their common sense impression, understanding and observation of the empirical situation, write the introduction along with the objectives of research, review the literature, locate the sample, prepare the tools of data collection, go to the field for data collection, come back from the field, make data analysis and tabulation with the application of simple statistics, write the report and submit for the award of degree or for the acceptance of the report by the funding agencies. It is all based on the imagination of the scholars, their general understanding of empirical situation and the opinion taken from the seniors. It has nothing to do with deductive methodology, theoretical understanding, use of theory as the tool of research, deducing propositions from within the theoretical structures of knowledge in order to make research theoretically sensitive to make necessary breakthrough into the existing quantum of theoretical structure of knowledge. Since the deductive methodology is left out by the researchers, the inductive researches undertaken mostly become merely normative, descriptive, exploratory, survey and fact finding type. Such researches create doubts into the objective and scientific basis of the production of knowledge because this depends on how objectively inductive researches have been conducted. These days the use of the soft core inductive researches to generate norms of knowledge is very common and popular because such researches are easily undertaken without elaborate reading and learning of the existing literature even if it is essentially needed. Such researches can be undertaken even without direct involvement of the researcher into the field situation because of the outsourcing of data collection and the data analysis. There may be no direct involvement of the researcher into the field, into the process of collection of data from various sources and into the data analysis because these days these key research aspects are outsourced by the researcher. As a result, the two-way interaction between the object and subject is disappearing and the real researcher is not directly sensitised into the ground reality. The real researcher sits in the office and the data is generated by the hired individuals or agencies, objectively or subjectively, and set on line to be forward to the sitting researcher. Thus, the inductive research is like the distance research where the actual researcher is absent and there is no or very little interaction between the actual researcher (investigator) and the field and the respondents (investigated). In such a situation the research investigator is not directly exposed to the field situation. This type of distance research is like the distance learning where there is no or very little interaction between the teacher and the taught. There are reasons for undertaking mostly the soft core inductive researches in social sciences.

Firstly, because the young researchers do not want to invest required amount of their personal resources of time, energy and efforts in research because research is not their priority area and the research career is opted when other options are closed. Secondly, because the research is a time consuming strenuous process which requires a lot of reading, learning, writing and research capability which are deficient. Thirdly, because of the growing materialism which has made the researcher more materialist and they want to pursue the career which can bring the sufficient returns in minimum investment of their personal resources. They do not like to invest their personal resources in extensive reading and deep theoretical understanding which are the basic requirements of hardcore deductive system of research. Fourthly**,** because they deliberately maintain the gap between the research skills imparted to them and the kind of researches they actually want to pursue as per their convenience with the view to get research degree at the earliest to qualify for the job opportunities. Fifthly, they do not get adequate research training and skills. As a result, they lack research professionalism. It is due to these reasons, they remain unemployable and wait for employment for longer time. The waiting period makes them rush for post-Ph.D. fellowship as an alternative source of income. They do not take sufficient interest in investing their resources in acquiring greater conceptual clarity and better methodological understanding of research to generate meaningful knowledge to make the breakthrough in the existing quantum of knowledge. The theory based deductive researches are rare and it is also doubtful whether or how far the inductive researches undertaken are objectively done to produce scientific knowledge because of outsourcing of research. The production of scientific knowledge greatly depends on the genuine research interest and the extensive reading and learning habits but the poverty of learning and knowledge from lower to higher levels of learning is the most important barrier in the promotion of knowledge society and the development based on objective knowledge produced. The learning poverty at different levels of learning tends to reinforce each other where the foundation of learning plays the most important role but this foundation itself is the shaky foundation. The building of higher learning and research on the shaky learning foundation is bound to collapse because teaching and/or research being the main source of transmission, dissemination and creation of objective and scientific knowledge is based on deficient foundation of reading, learning and acquisition of knowledge.

Sustainable development goals: Eradication of poverty of learning and promotion of knowledge based-development.

The World Bank observes that the processes of eradication of poverty of learning and the promotion of knowledge based-development are the key sustainable development goals but these processes are not fast enough to achieve the goals in the near future. One of the most important reasons for this is the inability of the system to tackle the problem of deficiency or the lack of interest in reading, learning, acquiring and producing knowledge and information. The low and middle income societies in which India is one of them, are

learning-poor societies where there is considerable inconsistency between the virtual knowledge acquired and the actual knowledge demonstrated. The Annual Status of Education Report (ASER), 2018 observes that more than 50 % children who have reached class 5th to acquire knowledge of that level are unable to read and learn class-2 level texts of knowledge (ASER Centre, 2018). Similarly, at the higher levels of learning, teaching and research, most of the scholars at the level of research degree are unable to conceptualise comprehensively the notion of methodology taught to them at the post-graduate level, if taught to them correctly and comprehensively. Invariably they conceptualize it in terms of only the soft core option of methodology as per their convenience, mainly because of the poverty of learning and understanding, and partly because of their attitudinal problem of low investment of their personal resources of time, energy and efforts in educational attainment. They attach more importance and invest most of their time and energy in the certification of knowledge and short term gains. Like the learners at the lower levels of learning, the learners at the higher levels of learning are unable to reach the minimum proficiency in reading, learning and understanding. The shortcomings in the quality and the quantity of learning are the leading contributory factors of deficient human capital. The efficient human capital is the basic requirement for future prosperity, provided it is learning-rich and attitudinally conducive and work-oriented. The World Bank observes that 60 % of prosperity or development is made up of efficient human capital but in the less developed societies, it is the human capital which is poorly equipped. It is not the quantity of the work force but it is their quality that matters more for development. Appropriate national level strategy is needed to enhance reading and learning proficiency to improve effectiveness of communications in order to foster acquisition of knowledge and to generate objective and scientific body of knowledge. For this, from the bottom to the top, effective conditions of learning need to be created. Only then, the objective and valuable knowledge can be transmitted, disseminated and created to be fed into the system to make the society knowledge society and the development knowledge-based. At present, it looks as if the idea of knowledge society and the knowledge-based development is a distant dream because knowledge acquisition and production as a creative activity is being replaced by fun and recreational activities. The pursuit of knowledge as a career is the lost option. The successive stages of learning are actually not based on genuine interest in reading, learning and acquisition of knowledge and information and that interest is reinforced by the shaky and the weak foundation of education. Therefore, strategies are needed to take immediate remedial measures to bring about drastic changes in the system of learning, teaching and research.

Conclusion

The present analysis is based on the view that knowledge society and knowledge based-development cannot be accelerated unless the learning and knowledge deficiency is eliminated. The evidences support that we still suffer from learning and knowledge poverty created by the system of knowledge which is not only adversely affected by its

own creation but also the larger society is being degenerated by its products. The new mode of learning tends to add fuel to the fire, particularly in the context of developing societies which lack necessary infrastructural facilities and effective use of available facilities. These societies have not reached the stage of being called as the knowledge-rich societies because of alarming learning poverty and deficiency in learning, knowledge and information. This deficiency is both a function of both the internal (values & attitude of the learners) and the external (system of human processing and production) factors. At present, the idea of knowledge society and the knowledge based- development tends to be a remote idea.

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Developing Industry-based HRM Curriculum in Higher Education

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Abstract

The constantly changing market scenario demands a robust set of skills that matches the employer's requirements. With technology and data-driven solutions directing the industry, the education curriculum needs to integrate academic and practical knowledge for developing the students' competency. Since HR domain is undergoing a transformational change in people's processes and tools, a blended learning approach is required which combines classroom and industry teaching. For this, a revised curriculum will help to bridge the gap between theoretical concepts and workplace skills required by HR professionals. Such an innovative approach will build employability skills, entrepreneurial spirit, job-readiness, and emotional quotient by exposing students to real work scenarios and challenges. In this regard, the paper highlights the traditional and modern HRM education and the different curriculum reforms that have been introduced for practical learning and market-competency development. Further, it includes action recommendations based on literature analysis for various HRM stakeholders to improve work-based learning in higher education.

Keywords: HRM, Curriculum Reforms, Higher Education, Employability, Modern Methods, Industry skills

Introduction

Human Resource Management plays a significant role in Higher Education involved with the development of professionals. HRM practices and frameworks have been shaped by the increasing pace of a globalised economy which is accelerated through technological upgradation and new approaches like knowledge management (Escobar-Rodriguez & Monge-Lozano, 2012). With the dynamic changes in the business context, the higher education institutions are faced with the challenge of redesigning the academic curriculum to meet the workplace demands (Avis, Fisher, & Thompson, 2014).

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Further, the curriculum is impacted by the external factors in the social, economic, cultural, and political environment that helps in understanding the new teaching and learning competencies among students and teachers (Conrad & Dunek, 2012). So, HRM, as a core business function, has incorporated new developments in its processes, tools, and techniques associated with HRM planning, recruitment, selection and training, compensation, and performance evaluation. This implies that the curriculum needs to be innovated so that the learner's skills and competencies can match the requirements of the HRM profession in the changing market. Furthermore, it is crucial to link the education to the work domain for improving the employability of students in the industry (Bergmann & Sams, 2012). Thus, the need for developing industry-oriented curriculum emerges to ensure that students possess the knowledge and competencies for flourishing in the global labor market.

Purpose of the Study

There is a dearth of research that focuses on meeting the professional demands of HR through the course curriculum (Awayiga, Onumah, & Tsamenyi, 2010). Hence, the purpose of this study is to see how the HRM curriculum can be revised and updated to develop competencies and skills among the students that match the market demand and technological advancements.

Objective of the Study

The paper mainly focuses on

- Assessing the new curriculum reforms introduced in HRM that will help in developing the competencies and skills of students with an industry-oriented approach.
- Developing recommendations for HR teaching and learning approach to enhance the employability of students in work domain.

Literature Review

Theoretical concepts and frameworks in HRM have undergone a paradigm shift which has brought new developments in the workplaces as well as in the curriculum of higher education institutions. In this regard, critical review of literature will help in identifying the emerging trends in HRM which has shaped the modern HRM education. Thus, the section will discuss the major gaps pertaining to HRM curriculum framework which led to new developments.

Traditional HRM Curriculum Framework

Traditionally, the activities relating to HRM were performed by a group of individuals or the entrepreneur himself without any formal education in Personnel Management. Later, HRM developed into a scientific study of acquiring the right people for doing the job and deciding an optimal pay for the same (Mullins & Christy, 2016). With further transformation of the HRM into a humanistic field, the curriculum shifted towards theories focusing on personality, behavior elements, values and cultural differences (Trompenaars & Woolliams, 2003). However, the course content is built around the explicit knowledge pertaining to recruitment, selection, job analysis, training and development, performance management, and compensation management (Ma, 2019). Such focused course content in HRM ignores the practical application of the concepts learned in the classroom. Consequently, the theory-based curriculum widens the gap between student's competency and corporate demands. Since, HRM deals with managing different people having different personalities and characteristics, so the traditional HRM fail to encompass the challenges of emerging trends in the industry domain. Thus, along with the theoretical knowledge base, the curriculum has to include innovation, strategic decision-making, and competency development so as to match the current market demand for employability.

Contemporary HRM Framework

Internet penetration in every business function has resulted in long-term changes in the workspaces which has also introduced new work trends. Consequently, HRM has also witnessed new work dynamics that demands the use of new HR policies and frameworks. Further, integration of data analytics and other automation softwares has increased the need for students to understand the new work settings. In this regard, literature highlights different variables that contribute together in the building of contemporary frameworks which include heterogeneous workforce, technological recruitment tools, innovation-driven competencies, knowledge economy, and many others (Benuyenah & Boukareva, 2018). In addition to this, modern HRM curriculum will be required to integrate different legislative, technical, human, and market factors for enhancing the viability of overall learning (Critten, 2016). Such course content will focus on the theoretical as well practical knowledge of the course and industry through mentorship, internship, career advising, and helping students develop their own strategy depending upon their skills and personality (Morris & Blaney, 2014). However, implementing such a framework is a challenge as it requires constant effort and commitment from faculty members as well as administration. As of now, countries like Australia and UK have been able to implement the revised curriculum

to match the industry needs. Thus, the curriculum framework needs to be simplified more so that it can be easily implemented in other institutions as well.

Modern HRM Education

Bringing a change in the curriculum requires a paradigm shift in education pattern. The literature suggests a revised alternative for industry-based HRM curriculum that exposes the management students to the realities of the work domain. For this, the business approach and theories in HRM should also be linked with the sociological approach. It will enable students to understand the social problems related to caste, gender, power, and politics at the work places, both at micro and macro level (Wilkinson & Pickett, 2010). Also, the course content is being shifted from being result-centric to student encouragement. This means that the pedagogy needs to focus on the deeper meaning and impact of HRM practices in student's personal and corporate life. Concepts are being introduced for maintaining a balance among profit, people, and planet (Grey, 2002). Furthermore, the literature is gradually moving towards the importance of developing soft skills and emotional intelligence along with cognitive abilities (Bratton & Gold, 2015). Such a holistic approach in developing curriculum is the need of the hour so that the industry changes could be taken care of in the most optimal manner. Thus, an integrative education framework needs to be worked upon so that the students develop the right competencies for becoming industry leaders.

Methodology

The research work done in the paper is accomplished through a systematic literature review. The works and contributions of a number of scholars have been analyzed to study the various curriculum reforms introduced in the HRM education. Further, the studies included in the research have been filtered on the basis of certain keywords mentioned earlier and the timeline. The literature ranging from 2002 till present has only been studied. The previous work and studies have been critically evaluated to carry out further research that could add more value relating to the existing HR curriculum based literature. The objectives of the paper have been formulated on the basis of gaps highlighted in the past literature. Critical analysis and past knowledge have been reused to generate new ideas for developing recommendations that could further be introduced in HRM curriculum for enhancing industry employability.

HRM Curriculum Reforms

Learning does not take place in isolation rather it is the outcome of various factors and sources. With respect to this, the contemporary HRM framework is subjected to be influenced by different approaches to learning including industry-based factors,

student-centred pedagogy, team-based and work-based learning, and recognition of prior learning. This implies that the HRM curriculum reforms result from the integration of learning theories, their practical application, and modification of human behaviour, and experiential learning which is discussed in detail in the section below.

Blended Industry-based learning

Using a blended learning approach is a very rigorous way of teaching and learning as it combines classroom teaching with new forms like workshops, e-learning, conferences, mentoring, and others. Integrating both online and offline teaching approach in the curriculum increases the learning capacity and develops the self-pace professionalism among learners (Iniguez, 2016). The multiple activities and resources help students to understand academics in a practical manner (Orton-Johnson, 2009). Further, blended learning approach also makes the use of HR softwares like SAP that are very prevalent in the industry. SAP stands for System Applications and Products in Data Processing that integrates the different functions of the business including HR and relationship management (Heizer, 2006). Training students in such applications will give them a firsthand experience as HR professionals and will prepare them for future corporate roles. Thus, a mixed approach in course content will empower students in understanding the challenges of the real work environment.

Student-centred Pedagogy

Traditional pedagogical approach focused on delivering one-sided lecture for imparting the knowledge on theories and principles (Xie, Debacker, & Ferguson, 2006). However, there has been a paradigm shift in classroom leading the students towards active learning. This means that priority is being given to students' involvement and self-regulation of learning concepts (Kuiper, et al., 2015). Further, a more engaging learning environment is being developed where students learn through videos and presentations at home shared by teachers beforehand (Bergmann & Sams, 2012). Consequently, more time is spent in classroom for generating new ideas, working on skills, brainstorming case studies, and real time application of concepts learnt at home (Galway, et al., 2014). Such approach results in introducing new dimensions to the curriculum like cognitive and emotional quotient development, leadership training, synthesis activities, data analysis, management techniques, dealing with people and their problems. Thus, a shift in teaching and learning approach is being flipped for better outcomes in the industry.

Recognition of Prior Learning (RPL)

Higher Education is being reformed with the integration of RPL in the curriculum. RPL is a kind of learning process which aims to widen the academic learning domain by involving formal, informal, and uncertified learning (Garnett, Portwood, & Costley, 2004). Regarding this, the formal learning includes the syllabus content; informal learning comes from the experiences and reflects the implicit knowledge; uncertified learning comes through seminars, workshops, and conferences. Further, RPL is shaping new landscape for the HRM education as it ensures that the experiences along with theoretical concepts are included in building the skills and abilities of the future professionals. Additionally, this process motivates students as it recognizes the past achievements and uses them to generate new knowledge and ideas (Garnett & Cavaye, 2015). Such an innovative approach results in collective learning and removes the barrier of limited sources for industry- based competency development.

Work-based Learning (WBL)

Work-based learning is an industry-oriented approach that focuses on imparting education in professional scenario for enhancing employability. Employability highlights the knowledge, skills, and personality that the employers look for in job seekers (Adecco, 2012). Collectively; it is the attitude and belief of an individual that ensures a strong professional role in corporate future. For this, the curriculum in HRM needs to be built around the skills that the market is currently interested in which majorly includes flexibility, innovation, entrepreneurial spirit, and variety of work. Another crucial skill that the curriculum needs to include is the power of learning through reflection (Billett, 2010). Assignments like reflective essays are being adopted so as to develop skills like critical thinking, evaluation, continuous learning, active participation, and self-awareness (Bridgestock, 2009). Such experiential learning helps to share the feedback, knowledge, and experiences of each other and develops cooperation while working. Thus, revising the curriculum for including reflective and work-based learning will prove very helpful in developing HRM competence.

Team-based learning (TBL)

Such a learning strategy focuses on developing the human behavior which is a very crucial trait for HR professionals. The curriculum developed with the TBL approach organizes students into teams with different skills and backgrounds who work in a collaborative manner (Michaelsen & Sweet, 2011). Furthermore, concepts taught through TBL helps in enhancing problem-solving capacity of individuals while working in different work settings through information sharing and collective contribution (Boud, Cohen, & Sampson, 2014). In addition to this, web-based designs

are incorporated in the course content for giving a better experience of on-site management practices and problems (Hew & Cheung, 2012). This directly impacts the learning and retention of students and helps them to grasp the professional traits that will be needed in the work domain. Moreover, team-based interactions reinforce skills developments while working with a diverse group. Hence, this innovative approach for teaching HRM concepts and principles results in effective learning outcomes in the long run.

Recommendations

To shift the focus from traditional lecture curriculum to active-learning industry-oriented curriculum, continuous involvement of all the stakeholders in HR domain is required. The academic administration and faculty can tie up with industry players who can give an informed view of the latest trends and changes happening in the industry. The curriculum should be updated regularly so that new ways of personnel management can be studied along with established theories and concepts. Active participation of students should be encouraged for bringing a paradigm shift in classroom teaching. This means that curriculum should provide flexibility to students for introducing the subjects that they wish to study that will enhance their skills and overall personality. HRM domain is a very industry-oriented course and for successful professionals methods like management games and simulation can be used to instil real-time professional spirit among students. Such initiatives will help in enhancing decision-making, creativity, and competitiveness among individuals. Classroom time and passive lecturing should be replaced with more time spent on industry visits along with full-time and part-time internships for learning the industry requirements and challenges. More work-related problems should be discussed and solutions should be brainstormed for helping students to experience the challenges while working as an HR manager. Such collective contribution will help in bringing the curriculum reforms into practice.

The passive-learning curriculum techniques must be incorporated with industry-prevalent softwares and technologies so that students can leverage from the online space. With ample of learning options and availability of materials, technology offers unlimited opportunity to learn and collaborate. Such approach can also be used for explaining the on-site use of different appraisal methods and recruitment and selection tests. Since the companies are moving towards tech-enabled work-problems, so curriculum should also be supported with IT infrastructure. Furthermore, workshops on analyzing and developing employability skills should be made mandatory for making students industry-competent. Course related to relationship building and networking should be introduced so the students can work upon their soft skills and learn to build

rapport with industry players in the market. HRM curriculum will also be benefitted with subjects on personal development and reflective learning. As future managers, students should be open to continuous learning through self-awareness. This will improve their ability of independent learning and will make them better and self-cultivated leaders. Such an approach will enhance their effectiveness and productivity at the work place. Thus, the curriculum should integrate theoretical knowledge along with the practical application of the same in the industry.

Limitations of the Study

No study is complete without limitations. This research was solely based on secondary data sources for analysis of the existing literature. In this regard, the use of primary data would have helped in giving better insights into the reforms that are required in the HRM curriculum. For this, data collected from students and teachers of different Higher Education Institutions pursuing HRM would have been effective. Further, the impact of all the different stakeholders in the HRM domain also needs to be considered like industry professionals, administrations, policy makers, and others.

Scope for Future Work

Future work can include a deeper study of different learning methods in modern HRM curriculum and how the effectiveness of these methods is affected by individual variables. Such variables include personality, gender, interests, learning behavior, motivation level, and others. The impact of these factors on learning outcomes can be studied. Further, more research is encouraged in developing a more comprehensive evaluation framework. Currently, the students are assessed on the basis of a 3-hour written exam. Such an academic-centred evaluation do not completely represents the skills and abilities. Also, the evaluation system is not industry-oriented as it fails to test the employability in work domain. So, the evaluation curriculum also needs to be researched so that revised curriculum can be developed that measures the industry skills.

Conclusion

The objective of the paper was to assess curriculum reforms that have been introduced in HR domain for instilling industry-based learning approach in higher education. Through the literature review, it was observed that a large gap exists between the job-readiness of students and industry demands due to lack of practical knowledge. Furthermore, the paper explains the modern approaches to learning that combines traditional classroom and web-based techniques to broaden the horizon of skills and

knowledge. Along with using technology and industry- oriented softwares to explain different concepts, a shift towards student-centred pedagogy will encourage knowledge generation and sharing. It was found that team-based and work-based learning helps in developing soft, technical, and hard skills required to match the industry level. Reflective learning approach in HRM was also found to be crucial for personality development, self-awareness, and constructive learning. The recommendations highlighted in the paper will help in strengthening employability factor among students and will also ensure overall personal development. Such innovative curriculum will integrate HRM concepts and theories with industry-driven technical solutions that are used in decision-making and strategy formulation in the HR industry. Future work can be directed towards studying the impact of individual variables on the learning outcomes of HR concepts and practical knowledge in higher education.

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Assessment of Girls' Education under Sarva Shiksha Abhiyan (SSA): A review

Shailla Draboo

Abstract

The universal right to elementary education for growth and development of the nation has been well conceded all over the world. Recognizing the importance of education, the government of India launched the SSA programme which means education for all. Bridging gender and social gap is one of the fundamental goals of SSA. The main objective is to recognise the need for girl education which requires change not only in societal norms but in attitudes as well. Therefore, some critical policy implications are pointed out for breaking down such social and structural barriers. The paper aims to review the provisions that support education of girls under the flagship programme Sarva Shiksha Abhiyan (SSA). *The paper is based on secondary data i.e. government reports, books, journal articles, statistical reports and working papers. The paper outlines key interventions that help to promote gender equality by targeting girls, especially those who are hard to reach out and also identifies the factors affecting girls' access to education both supply as well as demand side measured in view of educational facilities as well as internal dynamics of gendered relations.*

Keywords: Equity, Elementary Education, Empowerment, Girl child, Universalisation

Introduction

Universal Elementary education aims at strengthening the socio-economic structure of the nation by providing equal opportunities and social justice to all. The overall well-being of an individual depends upon the quality of basic education that can be expressed in terms of indicators such as infant motility, life expectancy and nutritional status. India' commitment towards proving free and compulsory education to all dates back to the drafting of the notions of the Constitution. Article 45 in Part IV of Directive Principles of State Policy ensures that state should providing free and compulsory education to the children in the age group of (6-14) years of age (Planning Commission, GOI, 2010).The concept of universalization states that education is for all rather selected few. Men and women are often seen as equal contributors in development process. A large gender difference exists in our country. The 42nd Constitutional amendment has brought a huge reform in India's education system by putting it in concurrent list. Holding centre and state both responsible to deal with various aspects of education from primary to university level (Snehi, 2007).

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Even though school education has traditionally remained a subject for the action of state governments, government of India since past two decades has been following the national policy on education 1986. The NPE 1986 and its programme of action in 1992 gave education a mandate to work for women's equality and empowerment. Further the "Education" was used as an agent of basic change in the status of women (MHRD, 2006).This culminated in launching of the national programme of Sarva Shiksha Abhiyan to promote considerable progress with respect to access, retention, quality and equity in domain of elementary education (UNESCO, 2008).

Sarva Shiksha Abhiyan- An Initiative towards Universalization of Elementary Education

SSA has been operational since 2000-01. It is Government of India's flagship programme for the achievement of universalization of elementary education. The goals of programme include universal access, retention, bridging gender and social gap and enhancement of learning levels among students. The scheme also provides variety of interventions including inter alia, opening of new schools, alternative schooling facilities, additional classrooms, separate toilets, drinking water facilities, teachers' training, academic resource support, free textbooks, uniforms and other teaching and learning material. SSA is being implemented in partnership with State governments across the entire country. The programme is conceived as a set of interventions, the cumulative impact of which is universalization of elementary education. (MHRD, Working Group Report on Elementary education: Twenth five year plan, 2001) SSA or educations for all programme recognise the need to fulfil the educational requirements of girls through specifically targeted interventions that serve as a pull factor towards bringing girls into schools. The main objectives of the scheme are as follows:

i. All children in school, Education Guarantee Centre, Alternate School, Back-to-school, etc.
ii. All children in the age group of (6-14) years of age should complete eight years of elementary schooling.
iii. Focus on quality and equity dimensions at elementary level.
iv. Bridge all gender and social category gaps in elementary education.
v. Universal retention up to VII class without any dropouts (MHRD, 2004)

Right to Education and SSA Mission:

The right to compulsory and free education act RTE was passed in parliament on august 2009, the act represents the constitutional legislation enshrined under A-21 which states

that every child has a right to fulfil the requirement of basic education in equitable quality in the form of formal school that is established under certain norms and conditions. To address the present-day inadequacies with respect to retention, access particularly unreached and hard to target students. Article 21-A and the RTE Act came into effect on 1 April 2010. The title of RTE Act incorporates the words "free and compulsory" (Jha, Das, Mohanty, & Jha, 2008). Free education states that no child, other than who has been admitted by the parents in school which is not supported by appropriate government shall be liable to pay any kind of fees, charges or expenses which may prevent child from perusing towards elementary education. "Compulsory education on the other hand cast an obligation on state government and local authorities to ensure admission, attendance and completion of basic education to all children from 6-14 years of age group (Bopal, 2009). Looking up on this goal, India has moved a way forward towards the right based framework that creates an obligation for both centre and state governments to implement this fundamental right as incorporated in Article-21 A of the constitution on accordance with provision of RTE Act. The act strives for effective and transformative education. As it falls under the domain of universal human rights, the norms under RTE can be summarised under 4A's Availability, Accessibility, Acceptability, Adoptability (Jha & Rani, 2016).

Currently SSA contributes in huge effort in direction towards achieving the goal of universal elementary education. With the launch of RTE Act 2009, A paradigm convergence in the framework of SSA has been initiated to harmonise the vision, strategies and norms of scheme with RTE mandate. In September 2009 the committee was setup by government of India. The committee report entitled as "implementation of RTE Act and resultant revamp of SSA" heralding important changes to ensure comprehensive monitoring and smooth functioning of SSA as per the provision of the Act. Such changes contributed in expanding the vision and approach of elementary education as evidenced in shift to child entitlement and quality in elementary education. (MHRD, 2010)

Girl Education under Sarva Shiksha Abhiyan

Gender disparity has been a major issue in India's pursuit for achieving the goal of universal elementary education. Unequal social, economic and power equations deeply influence children's access to basic education and participation in learning process. Gender is embedded within a complex social and institutional structure in India. It has been assumed that gender equality in education, and enhancing the access of girls to basic education are influenced by three interlocking set of issues- systematic; content and process of education and economy, society and culture. Table 1 provides an overview of various factors affecting the education of girls.

Table 1: Girl Education Related: Issues and Concerns

Systemic issues	Content and process of education	Economy, society and culture
Problems of access	Gender stereotyping	Poverty/ powerless
Quality of schools	Relevance of curriculum learning	Cost of family
Existence of multiple delivery system- normal and non-formal education	Ready access to books, papers and magazines	Child labour/ involvement in domestic household chores
Calendars and timings	Appropriate reading material	Child marriage/ child labour
Motivation of teachers	Joyful learning	Post puberty practices

Source: Adopted from (Ramachandran, 2003), Background Paper for 2004 EFA Global Monitoring Report, pp34-38.

The need is to look at gender inequalities in education within the broader framework of social, economic inequalities and education system. The interplay of socio-economic inequalities and gender relations either encourages or impedes girl's ability through schooling, whereas economic disparities and social inequalities still restrict women or girls from being free against male subjugation. (Sudarshan, 2016)

Girl education under SSA emphasises on two aspects, one is gender parity concerns expressed in terms of enrolment and retention and dropout rate of girls at elementary level whereas other is to bring change in unequal societal norms through promoting equal opportunities to girls. The issue of gender equality and exclusion of girls at elementary level is one of the key goals of SSA (Mehta, 2005). Within the ambit of SSA two focussed intervensions– KGBV and NPEGEL have been effective in building an environment to enhance educational attainment among girls. The targeted approach under these two programmes has been particularly useful in reaching out girls from marginalized and disadvantaged communities. (MHRD, 2013)

Kasturba Gandhi Balika Vidyalaya (KGBV)

The Kasturba Gandhi Balika Vidyalaya scheme was launched in 2004 and merged with Sarva Shiksha Abhiyan in IX Plan from August 2007 for or setting up residential upper primary schools for girls belonging to STs S's and other backward communities. These are setup in Educationally Backward Blocks (EBB) where female literacy is below the national average and gender gap in literacy is more than the national average. The need is

to fulfil the requirement of girls facing multiple disadvantages in terms of schooling, enabling them to develop in a comprehensive learning environment to build self-confidence and positive attitude. Under KGBV 75% of seats are reserved for SCs STs and other minority communities whereas remaining 25% accorded to the girls belonging to below poverty line families (MHRD, 2013) .Apart from imparting education KGBV provides vocational trainings for skill development among girls to ensure their economic independence. KGBV have potential to make significant difference in girls' access to education by providing free education, residential facilities and vocational training to girls belonging to disadvantaged section of society (MHRD, 2010).

National Programme for Girls at Elementary Level (NPEGEL):

NPEGEL is an integral part and distinct gender component plan of SSA. The programme was formulated for enhancing the education level of underprivileged and girls belonging to disadvantaged groups in the age of 6-14 years of age through intense community participation. The model cluster schools at cluster level are opened in all districts/ blocks where the scheme is functional. Model schools in each cluster facilitate circulation of gender sensitive teaching and learning material, early child care education, provisions for need based incentives like uniform, stationery and escorts to girls. It is envisaged that the resources in model cluster schools are shared by girls in and out of schools in entire cluster. In addition, the other resources such as computer aided knowledge, sports kit and other vocational training are provided to girls to enhance their capabilities towards better learning. These schools provide additional space and infrastructure to create better ambience and academic environment to retain girls in classrooms till the completion of their elementary education (Rajagopal, 2013). NPEGEL promises to enhance the supply side improvement, covering geographically targeted area within the overall reach of SSA to increase access in terms of enrolment, retention, attendance and participation of girls in schooling achieved from sustained and coordinated efforts (GOI, 2012).

Equity Concerns under Sarva Shiksha Abhiyan

The gender inequality prevailing in the existing education system is inherited due to two prolonged factors one is social, economic and locational disadvantage and the other is the existing schooling system. Targeted interventions that promote the empowerment of girls and women are often a precondition for true equality. But the gendered division of labour continues to reward women less in society. As a result, the participation of women in education and work reflects the ideological bias against considering them as household bread earners (Bandyopadhyay, 2008). The present-day gender and social equity as an issue in education requires a framework that captures heterogenous gendered realities and multiple disadvantages. The Table 2 shows interplay between socio economic factors and prevailing schooling system.

Table 2: Heterogeneous Gendered Realities that Frame Educational Participation of Girls in India

Prevailing School System ► Socio-Economic Factors ▼		Access	Teachers and Teaching	Learning	Monitoring and Supervision	Account-ability	Transition to next level
Poverty	In abject poverty	No access to schools or school not within reach (walking or Bus)	Teacher attitude / prejudice towards girls	No support for girls at home, no money for tuition	Data collected periodically, does not capture or correlate with incidence of girl child labour/ work and implications for education	Women / girls have no voice in community /in the school	School not Within reach affecting girls more
	Above poverty line						
Location	Rural	Teacher absent, irregular, take turns	High teacher-pupil Ratio leading to low teaching time	School not visited	Village level committees not as effective	Lack of upper primary / high schools	Teacher absent, irregular, take turns
	Urban						
	Tribal						
Community	Tribal	Formal access yes, social distance may prevent	Teacher unfamiliar with tribal language	Social/ cultural language barriers	Not a priority	No voice in village or in school	No girls, only high schools
	SC		Culture/ caste/class biases				
	Muslim						
	Others						
Violence	Home	Poor access due to fear, low self image	Corporal punishment, verbal abuse	Low learning due to fear, insecurity	Not part of monitoring protocol	Not accountable to children or parents	Lead to dropping out
	School						
	Society						
Gender Relations /Attitude	Eldest/ older children	Burden of work, eldest at risk Reaching of Menarche	Teacher attitudes	No time to study at home, work burden	No specific Monitoring done through data / information disaggregated by gender as well as social group	Gender issues not taken on board	Leading to dropping out
	Girl Child						
Health	Health problems including HIV/ AIDS	Prejudice in school / community	Teacher attitudes	No support	Not specifically monitored	Not part of monitoring protocol	Drop out

Source: (Ramachandran V. , 2009), "Towards Gender Equality in Education", NUEPA, pp. 19-21.

In recognition of right of child to free and compulsory education, SSA endeavours to achieve universal access to extend courage to unserved and unreached location providing primary schools within reach of 1 km. The adoption of two-pronged strategy by opening of new primary schools and Educational Guarantee Schemes (EGS) centres in unapproachable habitations across all states has helped to mainstream out of school children in small marginalized zones that do not qualify for regular schools (MHRD, 2015). The Right to Education Act 2009 necessitates the adoption of all possible strategies to prevent implicit and explicit discrimination in persuing and completing elementary education. Under the umbrella of good quality education equity concerns such as circular development, training, enrolment in appropriate classes up to specific age, centrality of classroom practices and processes to the girls from disadvantaged communities, children with special needs and the ones affected due to migration are monitored. Education Guarantee Schemes (EGS) and Alternative Innovative Education System (AIS) are implemented across all states of India to mainstream out of school children who fail to attend schools due to locational disadvantages like distance, enrolment norms and population norms (NUEPA, 2014). To bring improvement in gender parity index SSA has contributed towards bringing equity in all interventions through inclusive approach to create a responsive education system catering educational needs of children like providing residential or non-residential schools, bridge course for dropouts, vocational training for girls and mobile schools.

Challenges and Problems affecting the education of girls at Elementary level

Economic and social privileges have affected gender patterns interlinked with other forms of social inequality like caste, ethnicity and religion constituting the population with increase in drop out and out of school girls. The rapid increase of girls in schools can be attributed to policy focus on alternative and traditional schools' forms such as bridge course and residential schools which are meant to be the essential measures towards integrating out of school girls into formal schools. Girls experience multiple forms of disadvantages with regard to location, curriculum and pedagogical practices. (Ramachandran & Chatterjee, Evaluation of Gender and Equity Issues Under Sarva Shiksha Abhiyaan, 2014). The educational needs of girls can be realized by the formulation of gender sensitive policies and promising interventions to ensure that girls should keep in pace with boys (R.S. 2010). The three major constraints or challenges that deeply influence the education of girls at elementary level arising from family to societal level can be broadly classified under three categories:

1. Constraints in policy implementation
2. Constraints arising out of schooling systems
3. Constraints affecting the quality of education

These are elaborated as under:

Constraints in policy implementation

Through the implementation of numerous policies, legal framework or laws setup to protect the rights of girl child, huge difficulties prevail in attainment of education among the girls. With respect to policy implementation laws particularly relating to' Education for All' targeting girls may or may not be enforced. School performance marked by absenteeism, inadequately trained teacher and non-availability of teaching material are the major problems that restrict the scope of education among girls in rural areas. The unwillingness among the teaching staff to get posted in far-away areas has resulted in schools without adequate staff.

Lack of manpower to support monitoring and capacity building in various BRCs and CRCs has resulted in limited implementation of schemes at district level. Inadequate supply of funds also adds to the negligence in providing various educational benefits to the girls.

Quarterly disbursement of funds at block level leads to better utilization of resources as those of second installment that takes places in January/March. Placement of district funds placed under rigid heads provides no flexibility in deployment. The awareness of SSA intervention is often less among the masses. (Planning Commission, GOI, 2010) Community participation provides assistance to strengthen the implementation of the scheme, though powers are vested with the head of the institutions. Efficient supervision requires well defined roles and responsibilities. Lack of town level committees and nodal agencies at block level is one of the major constraints that confine the implementation of SSA in urban area where the linkage between supervision and monitoring is weak.

Constraints arising out of schooling system

Accessibility is one of the major upcoming challenges towards achieving elementary education. A school that is far away and does not function regularly fails to retain students. Several systemic and structural deficiencies characterize the functioning of schools. School rules and regulations also result in lack of attendance among the girls. For women in the context of extreme poverty, the struggle for everyday existence takes precedence over girl education. There is extreme pressure on adult girls to manage their household responsibilities and prepare them to fulfil their roles as wives and mothers. Puberty plays an important role in participation and retention of girls at elementary level. Ensuring gender socialization and addressing the specific needs of girls during puberty like providing better sanitary conditions such as drinking water, separate toilet facilities, subsidised napkins which allows them to participate freely in the physical activities and prevent them from humiliation. An uninterrupted class schedule with classes ending

early, so as girls reach home safely (Arun, 2004). Personal safety is the major concern due to which v parents do not send their girls to school. Modification in curriculum, academic support and learners' assessment helps to retain and accommodate girls within schools. Early child marriages and pregnancy among girls are two widespread causes that limit the education of girls. Establishment of model schools and alternative schools can encourage girls to return back to schools. Socialization within the family and community may interfere with the process of achievement of her full potential by a girl.

Constraints affecting the quality of education

The present-day reform in higher education is likely to be well connected and better coordinated with economic opportunities than the basic education which is poorly linked with lack of economic and social mobility. Various shortcomings have resulted in failure to ensure good quality in education. The important link between the social structures and policy priorities is often neglected in analysing development performance (Mukherjee, 2007). The initiatives towards bringing in quality in basic education remain a challenge faced by policy makers. While the academic facilities like libraries, teaching and learning material have significant impact on the quality dimension, yet the learning achievement cannot be assessed as many children remain out of schools. Teachers are the solo representatives of education system. Child-centered teaching redesigned with multi-grade teaching techniques influence the learning environment attracting more children to schools. Lack of female teachers also influences the participation among the girls (Abhijit V. Banerjee, 2006).The existence of huge gap between the number of sanctioned posts and availability of teachers impacts the recruitment of female staff within schools. Although the relationship between female teachers and enrolment of girls in schools is more than cause and effect, there are many factors that prevent girls from attending the schools. It is apparent that the absence of female teacher inhibits girls from attending regular schools. There is a sense of discomfort among the parents due to absence of female staff in schools, especially in traditional and conservative settings, to protect their girls against sexual abuse and harassment. The issue of recruiting female teachers in schools is a continuous effort of SSA to enhance the enrolment among girls. The mandate of universal elementary education necessitates the extending of meaningful educational opportunities to the most deprived. The hidden curriculum that operates within the classroom in educational discourse reflects evident spaces that highlight gendered differences. Such differential impact is commonly manifested in seating arrangement, attitude of teachers and task delegation. Teachers should be active participants in curriculum development. Setting up of cluster resource centres close to schools or catchment areas facilitates better communication and guidance for preparation of teaching learning material. Moreover, use of innovative techniques of teaching like audio visual aid and multimedia also helps in enhancing quality of education making it more interesting.

The improvement in educational access has led to a significant increase in the involvement of girls in schools; there are some fundamental and systemic constraints in the progress towards gender equality. Learning outcomes among girls are influenced by a wide range of factors including quality of basic education, assignment of household duties, poverty., level of awareness among parents, marriage, access to balanced nutrition and pre -school attendance. In India the right to education, right to food and right to information campaigns have been successful in strengthening the basic structure of states by forcing responsibility as well as accountability in provisions of services. To conclude, the challenges to achieving gender equality remain significant, in recent times. Policy initiatives contribute towards quality and mainstreaming of gender in education as whole. ICT can be used in schools for generating awareness among the communities to promote girl education. Aspects of multimedia like print material, audio, video, radio broadcast, TV broadcast, teleconferencing etc. can be effectively used for reaching the unreached with quality support system. This can be used for developing positive parental attitude and community participation in educational programmes for reducing gender disparities. Further the impact of commercialization of schooling and rise of diverse providers needs to be addressed. The exigency for programmatic view is to develop and ensure greater decentralization and innovative ways to encourage local communities to bring change in system. The other constituents in elementary education still remain unsolved, some of the main constituents include perpetuation of two track schooling system, the adoption of English as common medium of instruction, alienation of students due to differential attitude of teachers, poor supervision and inadequate capacity of cluster resource centres and district institute of education and trainings, negligence towards girl education and failure to ban child labour. As long as weak incentives continue to be offered to a large and opaque educational bureaucracy, such changes required are unlikely to take place in near future.

Conclusion:

The paradox of India's development towards progress is sustained on an established system that provides elementary education free and compulsory. Indian education system is the matrix of time bound programmes and projects. While the technical interventions are bound to sufficient political will and the backing of financial resources to attain goal of universal elementary education, policy ambiguities continue to cloud thinking and contort the expansion of schooling. The state resource crunch as well as managerial inefficiency to enforce accountability in government schools has deteriorated the quality of education among the schools. The implication of such schooling system with multiple dimensions offering education of varying quality especially in those parts affected by poverty, caste and gender considerations, severely impact the provision of equal access. There has been a failure on the part of state to provide effective public leadership for educational reform. What is needed is -more structural reforms, greater policy clarity,

strong public pressure and public reasoning to overcome the barriers and immediate provision o free and compulsory education of good quality to all. Apart from above several gender gaps are still prominent within Indian education system. Firstly, there is a need to understand the driving forces that shape female access to basic schooling, especially in context of rapid transformation in Indian society. Policy regime on making education system more gender sensitive focus on getting girls back to schools. Hence gender parity is the first step towards ensuring equity outcome assessment. Progress with respect to gender equity can be measured in context of international commitments like millennium development goals and education for all that contribute towards breaking stereotypes and altering gender relations. Secondly, reform in educational landscape based on wide social transformation to promote gender equality. The current emphasis is on supporting gender sensitive interventions. As a result, the focus on gender entitles to bring more girls into schools, rather than altering the school environment and pedagogy. Schools are not ready to provide the institutional space where in the gender strengthening and notions of masculinity and feminism are challenged. The school environment and classrooms continue to contribute towards reproduction of gendered identities. Thirdly, the impact of current strategies needs to be monitored and assessed to make sure that the balance between spending (the current expenditures that are accelerating the change) and need is maintained.. Lastly, identifying equity is an integral step towards achieving gender equality. Right to Education Act has promoted greater emphasis on quality of education and gender equality. Articulation of integrating gender prospective in education system among the administrators, school management system and teachers is important as school ethos cannot be altered without developing a shared vision on gender equality. Education programmes need to be designed in a way to develop critical consciousness towards women's rights and justice.

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Stories in Primary Classrooms: Lessons for Teacher Education Curriculum

Manisha Wadhwa nee Dabas

Abstract

Stories in the classroom provide an opportunity to talk, share, construct meaning and communicate with one another. Children learn to empathize with characters in the story and these also promote their imagination skills. The stories take children to different wonderful places and they learn many things through stories. In this paper it is analyzed how stories as a pedagogical tool can be used in primary classes. Children of class II were taught using stories for a period of about four months. It was found that stories encouraged discussion on the concept by making it familiar to children. Story telling improved children's listening, reading and writing skills thus, motivated children for reading texts and other supplementary texts. Further, it allowed children to imagine and thereby expressing their imagination by creating their own stories. It was found that stories, significantly improve language comprehension of children.

Key words: Stories, Story-telling, Primary School Children, Language learning, Language comprehension skills

Introduction

Each one of us must have enjoyed bed time stories narrated by our grandparents, parents or any other elder while growing up. We still remember stories which touched our heart deeply or engaged us in some kind of thinking. As we learnt alphabets, we started reading stories from books, comics, newspapers and magazines. In primary school classrooms stories occupy a significant place. On the basis of story plots, these can be classified into seven types (Booker, 2004)– Overcoming the monster (The story of Ramayana), Rebirth (Beauty and the beast), Rags to Riches (Cinderella), the Quest (Sherlock Holmes/ The Voyage of the Beagle by Darwin), voyage and return (Alice's Adventures in Wonderland), comedy and tragedy (Shakespeare's Hamlet or Premchand's Godaan). These plots can be easily identified in any given story or a novel or a movie. However, books, stories or magazines written for children are labelled as children's literature. It is classified either by genre or by the age of the reader. There are various genres available for children to read mainly – fantasy, fiction (science fiction), mystery, adventure, biographies, fairy tale, horror, humor, history and many other. Whatever the genre one may choose for, it should be appropriate for the age of the reader or listener. Thus, choosing a story for learners should be in accordance with the cognitive and affective levels of learning.

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Stories are narrative accounts and have a sequential description. In this study, stories are used for enhancement of learning of 7 years old children in a school. Thus, only specific types of stories are used. These are:

Own life story: These are personal stories in which someone tells what had happened to their life. Here one shares about any accident, incident, truths, struggle and learning experiences which brings a change in their life and often inspire and empower others.

Stories from the Culture: These kind of stories and folk tales pass from one generation to other like stories from Panchatantra, animal-based fables known for their wisdom in practical life. They add to the values and belief system of an individual. The folk tales are verbal and are orally communicated through stories and songs.

Stories from news or current events: These types of incidents belong to a particular region. For instance, the success story of wrestlers – Geeta Phogat and Babita Phogat.

Fictional Stories: These are based on imagination rather than on facts. These stories trigger children to think over a story and develop their own idea on a topic that concern them the most. It is the most interactive type of stories where one gets an opportunity to share what they want to add on.

In schools, language learning begins from recognition of alphabet and follows the sequence of alphabet – word – sentence – paragraph. However, the concept of early literacy focuses on stories / paragraph first. Stories introduce learners to a context. These provide a rich opportunity to talk, which enhances their ability to understand and use language. Listening to stories provide opportunities to learn new word, remember narratives and also speak/ talk about it. Gijubhai Badheka, an Indian educational philosopher used storytelling as a method of teaching where he experimented and prepared his class for real world by telling stories. His main purpose behind education was not to prepare learners for examinations by forcing rote memorization but to develop an education based on learners' interest. He focused on a practice where learning should be joyful for children. Cultural tales in classrooms are advocated by Spagnoli (1999) for overall development of human being, development of values of hard work and friendship.

Storytelling is often used with primary school children. Children love listening to stories. When children get interested in a story, they follow it till the end. It helps in engaging learners in the context and providing information in an entertaining way. The National Curriculum Framework (NCERT, 2005) also proposed "an exposure to tales which can be folk, imaginative or cultural". This can add participation of learner in the class. Children tend to retain more, when they connect it with classroom activity. The one of the important features of storytelling is exciting the listener's mind so that they are captivated by the story. Story narration is done by using gestures, theatre techniques, props, or any other attractive stuff to keep the attention of listeners.

Objectives

The following are the objectives of the study:

- To find out the role of stories for developing skills of listening speaking reading and writing.
- To develop critical thinking skills among children using stories as a pedagogical tool in classroom.

Sample

The study was conducted on girl students of class II of the Municipal Corporation Girls School located in Bawana, Delhi. There were 27 girls in that section. Most girls in this class were not able to read. They copied written matter from the Black board in their notebooks. They come from families with monthly income less than 10,000/-. For most of them, mid-day meal is the first meal of the day. Children hardly had access to school library. The school runs in a double shift. Thus, classrooms' walls were also devoid of any print material in forms of charts, calendar or any other.

Procedure

The study started with observation of a section of class II. This section was allotted to us by the school's principal. It was observed that most of the girls were not able to read their textbooks. Teacher would generally ask a girl to read aloud from the book and others would repeat after her. Many of them had memorized chapters word by word but, found difficult to read. Writing, especially on their own was a challenge. Children distracted easily from classroom work. They were restless and would take a lot of time in settling down. We had observed the regular school teacher lost her patience many times thus, shouting at them. Even when teacher was trying to explain a concept, girl would come and complain for any other student like "she has taken my pencil; my notebook is not there in my bag; or asking for washroom or water breaks." Thus, breaking the sequence of the classroom activity. Initially, it seemed a challenge to engage them in any kind of a classroom activity.

We went to the school for four days in a week for a period of three months and carried out this study. A number of stories were identified from text books and other sources of children's literature wherein children can relate to their life, surroundings, events or fantasy. Stories were chosen keeping in mind the age appropriateness, background of learners and concepts to be taught. Stories were used for developing language competencies of listening, speaking, reading and writing. Chapters from the Hindi textbook 'Rim-Jhim' (NCERT) were also chosen -Adhik balwan kon?; Dost ki madad; Meri kitab; Meethi Sarangi; Bus ke neeche bagh; Natkhat chuha; Ekki-Dukki .

Stories were narrated and the following pointers were kept in mind:

- For maintaining children's interest in classroom activities, we tried to engage them in stories by asking questions like 'what do think what would happen next

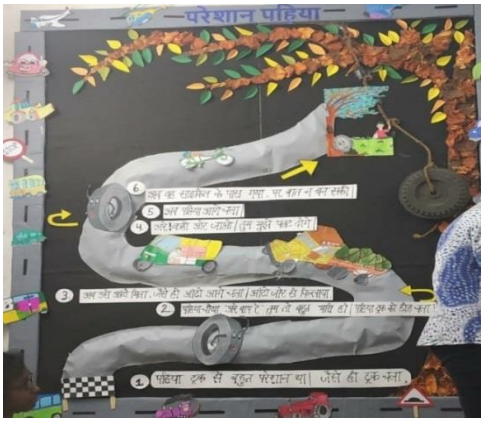
in the story?' or 'what was the name of Veeru's Mausi?' (a recall-based question for ensuring that children were listening).

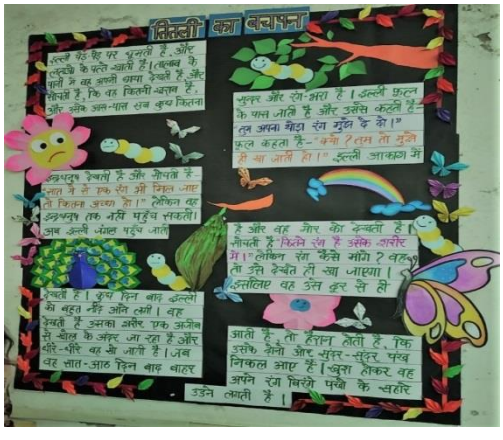
- A variety of storytelling techniques were used like role play, one act play, and puppet show.
- A variety of props like puppets, masks, picture cards, finger puppets and posters were used for making storytelling more interesting for children.
- Theatre skills of acting and voice modulation were used.
- Lastly, the unwanted complaints or chit-chats among themselves were checked time and again during story narration which kept the experience of story narration uninterrupted and interesting for the entire class.

Setting up Story Corner

A story corner was set up in the classroom, where different story boards were displayed. Some examples of story boards were shared through the pictures (given below). These created a print rich environment in the class. A lot of other children's literature was kept. It included books like - Mai toh billi hun (Eklavya); Chuhe ko mili pencil (Eklavya); Gubbare (Eklavya); Patte hi patte (Eklavya); Jangal ka school (Pratham books); Hum sab prani (Pratham books); Subbu signal (Pratham books); Tumne mere ande ko nahi dekha (Eklavya); Chutki gilehri (Eklavya); Meri behen Neha (NBT); Barkha series (NCERT).

During the period of teaching, different story boards were set up in the class. Children were always found to be around the story corner, during their breaks and free time. Whenever we changed the story board, it created a lot of enthusiasm and excitement in children. Initially, the colourful display attracted them but gradually they started reading stories from the boards in groups and later they were able to read them individually. They enjoyed reading stories. These stories comprised simple sentences. Once children felt confident in reading and comprehending stories, they picked up different story books from the corner.





Data Collection and Analysis

Story: Adhik Balwan kon? (from the Hindi Text)

After the story narration, the following was the discussion that took place:

Imagine there would be no air

Teacher: Who will be stronger? (Balwan)

Girl 1: The one who will uproot the tent

Girl 2: The one who will dry clothes

Girl 3: Sun will not be able to uproot the tent. It gives us heat.

Girl 4: We put wet clothes in the Sun, as it gives us heat and help clothes in drying.

Girl 5: The old man in the story wore his coat, air was blowing. It was windy that's why..

This discussion showed that children were able to comprehend the story. Then they were encouraged to read the text on their own and they were asked to encircle words, which they could not read and underline words which were new to them. The two word-lists were prepared and pasted in one corner of the class. The lists helped them to find out meaning of new words. They were asked to write words in their notebooks. They were finding it difficulty in writing sentences. So, they were asked to find sentences in the chapter, having those specific words.

Story: Dost ki madad (from Hindi Text)

After the story narration using masks of different animals, children were asked - How will you like to change the ending of the story of fox, tortoise and tiger? How did fox save tortoise from the leopard?

Children's responses were as follows:

G 1: Fox asked leopard to throw tortoise in water; leopard threw it and tortoise was saved.

G 2: Fox fooled leopard by saying that threw tortoise in water, the hard shell will become soft and then you can eat it.

G 3: Fox could have tricked leopard by saying that it is hard stone, not good for eat, so don't eat.

G 4: Fox could have called its other friends and could have chased the leopard away.

G 5: Leopard agreed to fox's idea, without thinking about it. He could have eaten the tortoise after a while… when tortoise comes out of the shell.

G 6: Tortoise was saved because of fox's intelligence.

Their responses clearly showed that not only they were able to comprehend the sentences but also they were able to speak up their ideas with fluency. They were encouraged to use new words learnt in their speech.

Story - Meri kitab (from Hindi Text)

The face mask of Mausi and Veeru were used for story narration, Children enjoyed listening to the story. After that, they read the chapter and the following discussion:

Teacher: Why did Mausi ask Veeru to bring a scale?

G1: Veeru was observing the length and thickness of books that is why Mausi asked her to bring the scale.

Teacher: Why was not Veeru able to choose a book for herself?

G 2: She was getting confused as sometimes she was liking both picture book and story books. Some books have a lot of pages, others were too thin; some has only pictures and others have too much content for reading.

G 3: She was making excuses that this one is too long it will not come in my bag; that one is too thick; my bag will become heavy.

G 4: This one has too much to read.

Teacher: How will you choose a book for yourself?

G 5: I will buy book with lot of pictures.

G 6: The book which has attractive cover page and interesting from inside too.

G 7: I will buy a colorful book.

G 8: I will buy a story book with lots of animals' tales.

G 9: I will buy interesting story books for children.

This discussion was helpful in creating children's interest in story books. The question that 'how would they chose a story book for themselves' helped in articulating their thoughts about the matter. It helped us in adding more books in the story corner of the class.

Story: Mithi Sarangi - Developing reading Fluency

By this time, children started reading the textbook and they not only comprehended meanings but they understood the expressions of joy, sorrow, sadness, happiness. In the assessment exercise, children were asked to encircle sentences with question mark and underline sentences which have exclamation mark and colour sentences with full stop. It was found that most of children were able to do this task with little support.

Kathavachan: Speaking Activity - Developing Verbal Expression

Children read various stories from the story corner. They narrated the stories in their own words to entire group. This showed that they were able to comprehend and then communicate (speak). They enjoyed the activity. It was often observed children sitting in the story corner

reading something or another. They retold the stories to peers in their groups in simple sentences. This speaking activity enhanced their verbal expression. Children were motivated to write new words in their class corner. A few children were not actively participating in the activity. They were engaged by showing picture books and then predicting the story. Later with the support of their peers they were able to read stories on their own. Children often expressed their ideas with expressions. They even used the available masks in the class. This kind of participation led us to conclude that not only they understood the task but they also enjoyed participating in it.

Newspaper Story corner: Taja khabar

Several stories from news-papers were clipped and put in the corner. Children read those stories, discussed it with teachers and peers. Some of them even marked important events from the given stories. This enhanced their vocabulary bank. They were able to comprehend the story and collect and collate important events/ key points from the stories. Children read aloud stories in groups and then answered questions related to stories. Children learnt to frame questions and then asked questions. Questions generally were of what, when, where, who and how types. There were few why questions also – like why did mausi asked Veeru to bring a scale? Why did leopard throw tortoise in water? It was found that most of children were actively asking questions and also responding to questions.

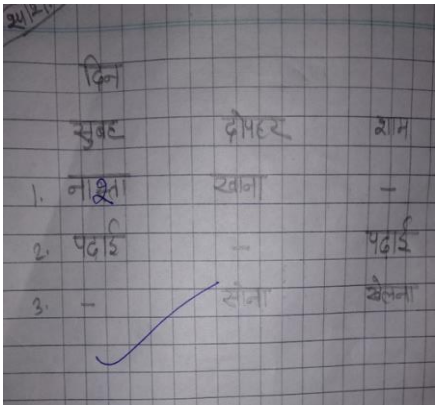
Identification of noun and verb

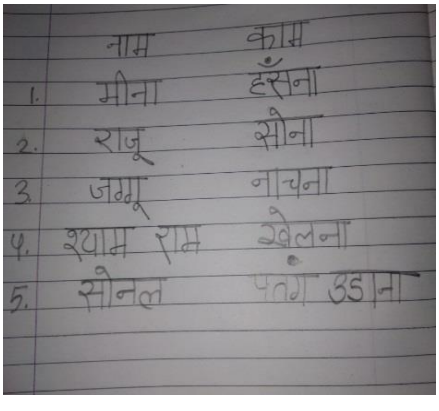
Learners identified nouns and verbs from the given sentences and then listed in their notebooks. In the given picture cards, they were able to identify the action words (verb). It was observed that all children were able to write the noun and verbs from the sentences and picture cards.

Story: Sammy's Day – Developing the concept of time

In the story 'Sammy's day', the main character 'Sammy' does different things in a day. Children after listening to the description identified different activities and then listed those activities in the columns made for different time of the day.

They were able to write simple and short sentences. The following are a few responses (translated from Hindi):





G 1: I go to market for buying vegetables with my mother on every Friday.

G 2: I sell vegetables with my father on Tuesday's and Thursday's evening. On other days he sells in morning.

G 3: Every Sunday I go to my Uncle's house and play with my cousins.

G 4: I play every day with my friends.

It was clearly evident from the samples of their writings that they were able to write short sentences about activities performed in a day. A few of them made errors in spelling. The activity was further extended to read the monthly and yearly calendar. The context was set by creating a hypothetical situation of exchange of goods within 15 days. How to

calculate days in a monthly calendar? If you have bought an item on 8th of the given month, then fifteen days would be on the 22nd of that month. Using such concrete situations, reading of calendar was encouraged. The assessment of children was done by asking questions like how many Fridays are there in the month of February. What day will be on 15th February. Search for the month in the year where there are five Tuesdays in a month. What is the date on 3rd Wednesday of January? Later all children marked their birthdays and school holidays in the calendar displayed in the classroom.

Story: Trees

A picture book was used to discuss the importance of trees. A number of questions were discussed like why did some people want to cut trees in the forest? Why some people were against the idea of cutting trees? What would happen if trees are cut? Why do we need trees? Children were able to write answer for all questions from the story. They were even able to connect it to their daily lives and how trees are important for us for air we breathe in and food we eat and soil we use to grow crops.

The seven years old children were able to connect trees to environmental concerns about pollution, daily requirement of food for everyone in our country and soil erosion. They may not be aware of scientific terminology of conservation or rain water harvesting but, they have clarity of concepts that trees are essential for our lives. It was observed that all children were participating in the discussion and coming up with their suggestions of what can be done to save environment.

Creating your own stories

Using several picture cards and story booklets, children created their own stories. They named characters in the story, thought of a context based on picture cards and then wrote the conversations/ dialogues among different characters. This enhanced their writing expressions. This also helped them understand about punctuation marks – comma, exclamation mark, question mark and full stop.

Findings

The following are the findings of the study with respect to the objectives of the study:

Creating a Learning Environment in the Class: Children are curious and full of energy. Before the study it was observed that they tend to move around in the class after finishing the task assigned to them or talk to each other. This created a lot of disturbance in class and sometimes situations are such that it was practically impossible to engage them in any meaningful activity. The use of stories in the classroom changed the complete ethos of the learning environment. Stories narrated by using theatrical skills created an environment of curiosity/ mystery. We observed that within few seconds the entire group of children settled on their seats and ready to listen. It was found that children were fascinated by different props (masks, colourful picture cards, puppets, finger puppets, stick puppets) used for story-telling. The story corner created in the classroom motivated children to read. It was observed that children picked storybooks on their own during free time and utilized it in a better way.

Improving Listening Skills: It was found that children were engaged in the stories till the end. They were able to answers questions related to stories after listening. Their responses to the questions like who was stronger – The Sun or Air? (in the story *Adhik Balwan Koun*); Why did the fox ask the tiger to throw the tortoise in water (in the story *Dost ki madad*) showed that their listening skills were improved. They also understood the importance of listening to others.

Developing Speaking Skills: Children were able to respond the follow up questions after each story showed that their speaking skills were developing. Initially they responded in few sentences but later they were able to narrate the entire story. It was observed that children participated in speaking activities wherein they read stories from story boards (*Katha vachana)* and story books and newspaper corners and then narrated the stories to their group members. They also learnt to express themselves with emotions. There were also instances when children engaged in discussions about the story like in 'Trees' wherein they discuss why are trees important for us; how is crop harvesting different from that of cutting of trees?

Motivation for Reading: The story corner created in the classroom motivated children for reading. Whenever a new story board was created, children were found standing near those. They guessed stories and then with support of teachers they read and re-read those. It was also observed that they also tried to find same words in their textbook. The practice of encircling new words, underlying difficult words and colouring sentences with the given words, motivated them to read. In this process children learnt to read, comprehend, build upon their vocabulary. They read stories – *Meri Kitab, Mithi Sarangi* and others.

Encouraging Writing: The writing experience began with words. They wrote new words in the story corner of the classroom for the story *Adhik Balwan Koun*. They wrote answers to questions asked for the story *'Sammy's Day'*. They were able to write nouns and verbs from the given sentences. They also crested their own stories. They were able to write simple and short sentences.

Developing Critical Thinking Skills: A lot of opportunities were created during classroom discussion where children were encouraged to think and respond like why was not Veeru able to choose a book for herself in the story *'Meri Kitab'*? How will you change the ending of the story if you were tiger/ fox/ tortoise in the story *'Dost ki Madad'*? What would happen if all trees on the Earth were cut and crops were grown for producing gains/ cereal for everyone in the story *'trees'*? Discussions on the themes like 'Exchange within 15 days' were organized where in children expressed their ideas on - On which products are these offers made by shopkeepers? what are the advantages to customers for such offers? Why do shopkeepers promote such offers? Such discussions encouraged children to think and question thus promoted critical thinking skills among children.

Conclusion

Stories break the boring routine or monotony of a classroom and children look forward to listening stories in classrooms, which are fun. Through stories they learn various concepts and skills. The story telling experience increased children participation in classroom activities. Stories can be used in classrooms for multiple reasons namely, introducing a topic/ concept or building a context or finding out the existing knowledge of learners in classroom or presentations of textbook chapters. It can be concluded that storytelling as a tool of teaching-learning process is highly impactful and brings more positive results in the language comprehension of children.

Implications for Teacher Education Curriculum

There are two aspects of story-telling. One is techniques of story-telling, in which focus is developing styles of story-telling. It requires exposure to theatre, and presentation skills through the practicum courses or workshops. It can be developed by engaging pre-service teachers in a practicum activity wherein they learn to perform. The second aspect is

related to theoretical understanding of children's literature. It should focus on how to select a story for children; how to write/ create a story for children; Why should be story chosen be age appropriate? Which are good children literature available in India? This aspect focuses on developing a strong theoretical background with the pedagogy papers in the teacher education curriculum. Thus, there is a need for teachers, pre-service teachers and teacher educators to understand the usefulness of story-telling in teaching – learning process. It will help pre-service teachers in choosing the right story at the right time for the specific age group. It is imperative to utilize the full potential of story-telling for children's learning in classrooms.

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Children Literature used during Classroom Activities

- Barkha Series (NCERT);
- Chuha ban gaya sher (NBT);
- Chuhe ko mili pencil (Eklavya);
- Chutki gilehri (Eklavya);
- Gubbare (Eklavya);
- Hum sab prani (Pratham books);
- Jangal ka school (Pratham books);
- Mai toh billi hun (Eklavya);
- Meri behen Neha (NBT);
- Patte hi patte (Eklavya);
- Ramu and the Robot (NBT);
- Red Kite (NBT); Ripe and Ready (NBT);
- Sammy the Snail (NBT);
- Sheera and Mithu (NBT);
- Subbu signal (Pratham books);
- Tumne mere ande ko nahi dekha (Eklavya).

A Study on the Feedback of Elementary School Teachers on an Educational Video titled 'Knowing Thyself'

Elizabeth Kuruvilla[1] & Sunil Kumar Das[2]

Abstract

Videos can be used as a supplementary component to enhance learning received from the textual self-learning materials provided to its learners. The objective of the present article is to evaluate the feedback of elementary school teachers about the video programme- 'Knowing Thyself' on various aspects such as structure, content, relevance, and rating. The study adopted a descriptive research design. The experiences of Teacher/Content Coordinator, Producer and Overall Supervisor of the Video "Knowing Thyself" were also reflected after an in-depth discussion. After the development of the video programme, a feedback study was conducted on a sample of 47 elementary school teachers in an un-aided school in Delhi. For the selection of sample, purposive sampling technique was used. Teachers who viewed this video opined that video is the best means to convey abstract concepts such as self-awareness.

Keywords: Educational Video, Use of Video in ODL, Video Production in IGNOU, Reflections on the development of video, Feedback Study

Introduction

A Video can be used as an effective tool in teaching-learning process. Videos can be used as a supplementary component to enhance learning received from the textual self-learning materials provided to its learners. For rapid assimilation of information, video plays an important role. One must consider three things while using video as an educational tool. They are - managing content of video, maximizing student engagement, and promoting active learning among learners. A video can be developed with an eye on pedagogical choices where major concepts need more understanding. It addresses learners' cognitive and emotional domains. It is a powerful medium to engage learners in the teaching-learning process. Videos can playsan important role in conveying abstract concepts appropriate to the understanding level of learners.

Review of Literature

Koumi (2006) has identified 27 categories of videos which can add substantial value to educational/instructional multimedia. These categories are divided into three domains:

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1. Assisting learning and skill development 2. Providing (vicarious) experiences & 3. Nurturing (motivations, feelings). **Brunvand (2010)** provides a review of design strategies and discusses the ways in which various strategies can be used to produce effective videos for teacher education.**Derry et.al. (2010)** stated that rapid development and widespread availability of affordable, usable, high-quality video technology is transforming the practice of learning science research. **Jenkins and Johnson (2011)** discussed about eight video viewing techniques in his paper presented at CATESOL Annual Conference, 2010. It strengthens the argument that depending on the use of videos in teaching-learning scenario (Face-to-Face or Open and Distance Learning mode), the 'design' of these videos should be different from each other. **Spires et al. (2012)** claimed that majority of youth use videos to communicate and express themselves and they also suggest that educators can use video production as a method to tap into pupils' interests and thus engage students to learn across the curriculum. **Morgan (2013)** concedes that besides being a potent motivator for students, videos also allow some students to learn a concept more clearly. **Coffey (2014)** examines the use of videos to enhance the development of reflective practice skills among students.

Objective of the Study

The objective of the present article is to study the feedback of elementary school teachers about the video programme-'Knowing Thyself' on various aspects such as structure, content, relevance, and rating.

Methodology Adopted

The study adopted a descriptive research design. After the development of the video programme, evaluation was done in the form of 'Feedback Study' which was collected from a sample of 47 elementary school teachers in a school in Delhi. The sampling technique used for this purpose was purposive sampling. The tool used for gathering data was closed and open-ended questionnaires. The questionnaires were validated by experts in educational and media production fields. The experiences of Teacher/Content Coordinator, Producer and Overall Supervisor of the Video "Knowing Thyself" were also reflected after an in-depth discussion.

Context of the Study

Video Production in IGNOU

IGNOU provides students multi-channel and multiple-media teaching-learning packages for instruction and self-learning. Video is so far an additional component in the package to enhance student learning received from the textual self-learning materials. Meticulous *planning* is required to harness all the benefits of video. The production of a video programme is a teamwork which transforms an *'idea'*to a *finished video'*. The production process comprises primarily three stages, (i) Stage 1: *Pre-Production*, Stage 2: *Production* and Stage 3: *Post-Production. Pre-Production* is the planning stage of the production. A video production begins with a planning discussion with the teacher

concerned to develop the concept. The most important questions dealt within the planning discussions are: (i) what aspects of the subject matter are indispensable for translating into a video? (ii)Which forms of representation, apart from the real image (e.g. graphics, illustrations, texts, photographs, and archive records) are necessary? (iii) What material cannot be presented in the form of a video? (iv)Which cooperating partners are to be involved, and in which functions (e.g. as interview partners)? (v) What locations are to be used for filming? (Parer, 1993).

An *academic note* is prepared by a Teacher and it gives an overview to the Producer regarding the content, expected learning outcomes of the video programme, the suggestion on the format (whether it should be a Talk or Group/Panel Discussions or Documentary etc.), the experts to be associated in the programme as participants, interviewees, presenters etc., any specific music/sound effects to be used in the programme etc. Once the *academic note* is approved by a Producer, a group meeting between the teacher and the producer is organized for further redefining the objectives, reassessing the content load, deciding the format, treatment, visuals, dialogue, music/sound effects, participants, etc. The *rough draft* –often called the *"Outline"*-- sets down the subject in writing for the first time. Once the shooting script is finalized, *Reece* is conducted with regard to locations/ talents associated with the video programme. When the shooting is completed, the *Post-production* activities follow. The first part of the *Post-production* phase is referred to as the *off-line* stage (Parer, 1993). It includes logging of cassettes, scoring of music/ sound effects, recording of off-screen voice, making animation and graphics, editing, special effects, etc. At this stage, content is carefully considered after discussion and any changes, if required, are also done. *First Edit* (popularly known as *Rough Edit*) is prepared according to the script during which the process of creative shaping starts. The teacher associated with the production (commonly known as *Content Coordinator*), along with the producer do the editing. Once the editing is finalized, the editing version is previewed by the teacher and the producer. Once the programme is found acceptable by the teacher and the producer, the programme is previewed by general audience of the university. After this, programme is transferred to broadcast version and final audio mixing is completed, no further changes can be made, and this is called the *master edit* (Parer, 1993). Sometime, the unmixed-audio copy/*master* is prepared. It happens whenever there is a possibility of change/modification/up-gradation/ preparation of another language version.

Reflections of Authors' Experiences on the Development of Video "Knowing Thyself": From 'Idea' to 'Broadcast'

The prime concerns of this video programme are: what 'self-awareness' a teacher needs in his/her working environment and consequently, how his/her 'behavioural pattern' arising from 'self-awareness' would impact upon the learners. Since 'teaching' is considered as a 'profession', what 'professional awareness' a teacher should acquire was also proposed to be covered in this video. After communicating the basic information and

objectives of the proposed video programme by the concerned teacher/content coordinator to the producer, the next question which was addressed to was: "What would be the expectation of the learners (audience) to learn (know) through this video?" At this juncture, thinking about *"shelf-life"* was an important factor. Shelf-life directed everybody to think about the 'relevance' and the 'usefulness' of the video in future. This obviously was a compelling situation for all to decide: "What should be the 'content' to be covered by this video?" Finally, it was decided that the content would be revolving around "*awareness"* about one's self, '*pedagogical awareness*', '*professional awareness*' and consequently, their impact upon the teaching-learning environment. When the *academic note*, prepared by the Teacher (Content Coordinator), reached the concerned production team, it was easier to have an '*idea*' about the content, expected learning outcomes of the video programme. After a lot of discussion with the teacher, producer, and the overall supervisor, it was unanimously agreed that the '*format*' of the Video would be 'Documentary'. Since the concept like *'self-control* 'on one's anger,*'self-awareness'* and *'attitude'* are 'abstract' in nature**,** it was felt that the visual illustrations were very much essential. Since the target audience were the elementary teachers, the group felt that the illustrations to convey the concept like *'self-control', 'self-awareness'* and *'attitude'* should be picked up from classroom/learning environment. While discussing the role of *'self –control'* on one's anger and behavior with the students the teacher and the producer recalled their experiences during school days. To illustrate that how such interaction could help design the video, the author desires to give the real account of the Producer's own school-day's incident. The Producer narrated thus:

> "*My younger brother was studying in 5th Standard while I was in 7thStandard in the same school. One day, the class teacher of my brother was angry at me saying, "Why can't you take care of your younger brother's study at home? He is not doing well." I was very much surprised that why the teacher is blaming me for the unsatisfactory progress of my younger brother. It was a fact that my brother was not able to pay attention to his study during class as well as at home and he was not doing well in his class test also. The teacher was upset for this, which was genuine. But when the teacher came to know that my brother had a major operation at his right ear and which could be the major reason for him to be a slow learner, then he started taking special care of my brother."*

After this story, it was felt that this real event may be translated as the beginning sequence to capture the 'audience' and this would be visualized to demonstrate that a teacher should show his/her empathy towards a student instead of being sympathetic towards the student. After a series of brainstorming sessions, the script took its shape. The next attempt was the development of 'storyboard'. This storyboard helps to match mental visualizations of scenes with the written script it also conveys a visual format to communicate abstract ideas in its own sense. The phases of shooting, editing, and broadcasting made the teacher learn a lot of things. In short, the video development is the result of the team-based approach of the teacher, producer, supervisor and the camera men.

A Snapshotof 'Knowing Thyself'

The video titled 'Knowing Thyself' starts with a classroom situation showing how a teacher behaves rudely to a child who is not able to complete the dictation test. When she came to know from her colleagues about the ear operation that the child had undergone and how this affects his studies, she starts showing *sympathy* towards the child instead of *empathy* towards the child. On the next day she encourages the child and makes a good rapport with the child. She realizes that understanding others is as important as understanding oneself. The next scene depicts the visuals of a classroom where a teacher finds a boy is not writing anything on his note book and scribbling something. When the teacher enquires about his difficulty, the boy gets frightened and refuses to show the book. Instead of being angry with the boy, the teacher gently handles the boy. Then the presenter and the narrator emphasize the importance of attaining self-awareness. In fact, the video tries to put across the point that a teacher should invariably show empathy instead of sympathy towards each and every disadvantaged learner. Interviews with four teachers handling different subjects were done to narrate how they handled students who show difficulties in their studies. Next, the need of attaining pedagogical awareness is discussed. The video came to an end by highlighting the point that how a teacher should control his/her emotions and how professional awareness helps him/her to develop in terms of professional requirements.

Analysis of the Data

Without evaluation, one cannot find out the effectiveness of any courseware, it may be the print material (SLM), audio or video programme adopted in ODL. After the development of this video programme, an evaluation was done on a sample of 47 elementary school teachers in an un-aided school in Delhi. Both close and open-ended questionnaires were used for data collection.

Analysis of close-ended questionnaire

The close-ended questionnaire is divided into two categories: (i) content appropriateness and (ii) content presentation, with five items in each category and the open- ended questionnaire consists of items related with the pedagogic structure, content and rating of the video programme.

In the closed-ended questionnaire, the respondents were asked to rate according to their choice whereas in the open-ended one, there is scope for offering 'yes' or 'no' as option for a question as well as for giving reasons for their options. Percentage analysis was done in closed-ended questionnaire whereas content analysis was carried out in the case of open-ended questionnaire. The following table shows the rating of video content by the respondents for two categories:

Table 1: Rating of video content by the respondents (Category- I)

A	Content Appropriateness (Category-I)	Poor	Average	Good	Very Good	Excellent
1.	Content is sufficient to meet objectives	-	16.03%	24.40%	34.04%	25.53%
2.	Content is appropriate for the target groups	-	12.77%	19.15%	38.30%	29.78%
3.	Content is pedagogically structured	-	2.13%	29.79%	29.78%	38.30%
4.	Content is supported by relevant examples	2.13%	2.13%	10.64%	51.06%	34.04%
5.	Content is highly enriched	-	2.13%	29.78%	40.43%	27.66%

Table 1 reveals the rating of each item under category-1 i.e. content appropriateness. Item no. 4 scored the highest rating. 51.06% of the respondents were of the opinion that content is supported by relevant examples. Simultaneously, the same item was rated as poor by 2.13% of the respondents. None of the respondents rated 'poor' response option except in item no.4.

Table 2: Rating of video content by the respondents (Category-II)

B	Content Presentation Category- II)	Poor	Average	Good	Very Good	Excellent
1.	Concepts are presented clearly	-	2.13%	10.64%	38.30%	48.93%
2.	Format of the programme is appropriate	-	4.26%	14.89%	57.45%	23.40%
3.	Pace of the programme is appropriate	-	4.26%	19.15%	53.19%	23.40%

4.	Motivate learners to reflect	-	6.38%	10.64%	34.04%	48.94%
5.	Dialogue delivery is comprehensible	-	15.16%	19.38%	38.20%	27.26%

Table 2 reveals the rating of each item under category-1I i.e. content presentation. The above table 2 deputes that Item no. 2 scored the highest rating. 57.45% of the respondents were of the opinion that the format of the programme is appropriate. The lowest scoring was on item no. 1 (2.13%).

Analysis of open-ended questionnaire

The open-ended questionnaire consists of 15 items which deals with the *format* of the video programme and the *pedagogical structure* of this video programme. The response have been .....under different themes.. Analysis of each theme is given below:

- **Teaching of abstract concepts:** All abstract concepts cannot be taught either in a classroom or in self-learning material in its real sense. This video programme consists of abstract concepts such as *self-awareness*, *empathy*, and *pedagogical* awareness. 59.57% responded that video is the best medium to teach abstract concepts in a classroom.34.04% were of the opinion that *Face to Face (F2F)* is the appropriate medium to teach abstract concepts. 6.39% remain silent.
- **Beginning of the programme:** Through a dramatized classroom situation the video programme titled 'Knowing Thyself' is started. Two classroom situations- where a teacher is behaving rudely with a child and the other one behaving in an understandable way- are dramatized. 91.49% of teachers liked the beginning of the video programme whereas 4.26% suggested that the beginning part can be improved. They suggested that the programme can be started by the presenter/scenes of assembly/some other school location instead of classroom/with quotes on self-awareness/by stating objectives.4.25% remain silent.
- **Ending of the programme:** There is precise control over what the learner experiences in pictures, interview, motion, pacing and sequence, which enables a tightly structured educational narrative. With the narration of the presenter about the need to develop *self-awareness* and *pedagogical awareness*, this video programme was ended up. 95.74% appreciated the ending of the programme.4.26% did not make any comment.
- **Purpose of dramatized sequences:** This video contains three dramatized scenes of classroom situations. One related with the scene of a teacher who cannot control her anger as the student didn't complete the dictation test; the second

scene relates with a teacher who is patiently making the students understand the mathematical problem and the third scene of a constructive classroom. These dramatized scenes not only consolidate visual and auditory stimuli but also make the teachers introspect about their behavioural pattern towards their students.91.49% agreed that the 'dramatized sequences' in the video have served the educational purpose.8.51% didn't give any response or comment.

- **Extension of reinforcement to various concepts:** As in a classroom, reinforcement is an essential component in a video programme. In this video, the concept of *self-awareness* on the part of the teacher is reinforced by showing the classroom and staffroom scenes repeatedly. 80.85% agreed that the reinforcement to various concepts had been efficiently extended in the video to enhance learning.4.26% disagreed with the statement. 14.89% remained neutral.
- **Pace of the Programme:** Another factor to consider is the pace of the programme as it affects the attention span of learners. The duration of the present video programme is about 29.41 minutes. As it consists of both visual and verbal explanation, the viewer had to connect both visual and aural explanations. 23.40% opined that the pace of the programme was excellent, 53.19% as very good, 19.15% as good and 4.26% rated as average.
- **Viewing the video programme by teachers only or along with students:** As this video pertains to develop self-awareness, it can be shown to both teachers and students so that both may understand that how one's own reaction is affecting others. 63.83% recommended that this video should be shown to teachers alone and 29.79% suggested that it can be shown to both teachers and students.6.38% remained silent.
- **Aspects in which more attention is needed in teacher-student relationship:** All respondents stated that they already knew about the aspects of relationship that is needed in a teaching-learning process as shown in the video. They agreed that teacher- student rapport and emotional control are essential in a teaching-learning process. One teacher responded that teacher's attitude towards below average students should be improved. A teacher with a teaching experience of 22 years responded that she should be aware about the emotional aspects of children.
- **Disconnection with the subject dealt in the video:** Disconnection is used in the sense of distracting away from the commentary by a strong visual.82.98% responded that they didn't feel disconnected with the subject. 8.51% stated that they felt disconnected with the subject on the part where there is explanation about professional awareness. 8.51% remained neutral.
- **Synergy between words and pictures:** 82.98% responded that the words and pictures used in this video programme are carefully interwoven. 4.26% disagreed

with this. But nobody mentioned about the modification part.12.76% remained silent.

- **Thinking space in the video:** 'Thinking space' means the time received by the viewer to link their experiences in classroom with that of the video scenes. 78.72% felt that there was enough thinking space regarding their own self-awareness.12.77% didn't agree with this. 8.51% respondents remained silent.
- **Linking video scenes with classroom experiences:** All the dramatized scenes in the video are related with the day-today experience of teachers.93.62% agreed that the scenes in this video had real connection with their classroom experience. But 6.38% didn't give any response.
- **Learning points from this video:** All the respondents except 6.38% have listed terms such as patience, politeness, understanding students, sharing difficulties with colleagues, encouraging students, developing empathy instead of sympathy, developing self-awareness and professional awareness as the main learning points in this video.
- **Rating of the Video Programme: 4**.26% rated this video as average, 23.40% as good, 53.19% as very good and 14.89% as excellent. 4.26% remained silent. The respondents who participated in the rating process stated that the video achieved in realizing the objectives.

Findings

Undoubtedly, there are reasons to believe that a motivating way to learn is to use videos in teaching-learning scenario. The strength of video must be exploited since the videos have full potential towards engaging and motivating students as suggested by Morgan, (2013). Research studies mentioned in the literature review claim that students tend to enjoy viewing videos and seem to be viewing them more often. The feedback study provided a detailed rating on the structure, content, and format of the video programme. Teachers who viewed this video opined that the video is based on real classroom experience. With video as a 'supplement' to self-learning material, it opens avenues for to make connections with their real classroom experiences and discover links between their behavioural pattern in the classroom and that with the video scenes. Undoubtedly, it can be emphasized that video is the best medium to teach 'abstract' concepts in subtle way.

Discussion

The study signifies the importance of developing videos for conveying abstract concepts. The feedback study reiterates that the audience' observation will help to improve the format, content and structure of the video programme. In a system of Open and Distance

Learning (ODL), where multiple-media approach is adopted to support the philosophy of 'reaching the unreached' video production is inevitable.

Conclusion

With the advancement of the technology over the past several years, a paradigm shift in the field of education can be seen. In fact, there has been a new demand for educators to teach students in a manner allowing them to function well with multimodal media. Besides promoting the development of multimodal literacy skills, the process of creating videos has the potential to lead to more academic benefits.

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Peril of Mobile Technology: A Pilot Study

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Abstract

The ubiquity of technology and its relationship with education is unparalleled. Technological advancement and its application in teaching and learning can be seen from smartboard, virtual classroom, online learning, and many more. In general, Technologies do help and support the basic infrastructure of human development. However, every technology has its faces and those faces can be broadly classified into- its benefits and the risks it carries. This paper is a part of a larger study which discusses perception, practice, and peril of mobile technology within senior secondary school level science stream learners. In current study, the researchers tried to understand the effects of smartphone or tablet on learners. The study was conducted in the co-educational as well as private schools situated in Delhi. A total of 60 learners participated in the study. 39 participants were male and 21 were female with their ages l in the bracket of 15 to 19 years. The authors constructed a tool to measure the risks associated with smartphone or tablet use among the school learners. To get better understanding, the data was collated on four major dimensions i.e. general effect, leaner's dependency, effect on study and health Effect. The Quantitative data was analysed through descriptive statistics.

Keywords: Mobile Technology, Smartphone, Tablet, Senior Secondary School Learners, Peril

Introduction

The emergence of information communication technology and its influence on human life is exceptional. The presence of technology in almost every one's life is unmatched. It has brought about efficiency and quality in human activities. Especially, our younger generation is becoming dependent on internet supported telecommunication technology, . However, it is also necessary, to understand the technological advancement and its effects on human life. In the current study, the researcher, prima facie tries to understand the peril of mobile technology. According to Cambridge Dictionary, the meaning of peril is "great danger, or something that is very dangerous". (Cambridge University Press 2020). The study is a part of larger ongoing study to determine the perception, practice and peril of mobile technology in access of science e-content by Senior Secondary School Science stream learners.

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Studies conducted earlier found that behavioural, psychological, sleep disturbances or delayed sleep-wake behaviour and inability to concentrate on studies were associated with long-term smartphone use history (Tariq, Tariq, Ayesha, Hussain, & Shahid, 2019). Some studies have found that female students have higher level of smartphone addiction than males. Also, younger students are more addicted than older college students (Lee 2015). According to Scott R. Bartholomew etal (2018) distraction, cheating and viewing inappropriate material, are three biggest disadvantages of mobile devices in K-12 classroom. Kyung Eun Lee et al (2016) found that, the dependency of female students was higher than that of males, suggesting that female might be more vulnerable to smartphone addiction. Also, smartphone dependency was significantly related to anxiety which is a potential public health issue. Personality traits have significant influence on the extent of smartphone use and its excessive use affects the user's emotional (interpersonal and family relationship) and physical (lack of quality sleep and physical comfort) health (Panda & Jain, 2018). The above studies indicate that mobile technology does carry some adverse effects on users. Moreover, the researchers also tried to understand the concern from school level learner's perspective.

Methodology

Design of the Study

It is a preliminary study i.e. pilot in nature. The study was carried out to understand the reliability and validity of a tool developed by the researcher and to understand the initial response of the participants. The study is exploratory and follows quantitative research approach. The researcher used survey method to collect data. The questionnaire consisted of mainly three types of items i.e., rating scale type items, dichotomous items, and multiple-choice items with some open-ended questions. The authors collated responses on the rating scale type items as well as dichotomous items for the current study. The analysis of data was done under four dimensions such as "General Effect, Learners Dependency, Effect on Study and Health Effect". All the above indicators comprised of both dichotomous as well as rating scale type items. Moreover, descriptive statistics such as percentage, mean and standard deviation are used for analysis. The outcome of analysis is shown through table, pie chart and stacked-bar graph, respectively. The finding of the study is interim; however, it is in line with the larger perspective on the theme, "Perception, Practice and Peril of Mobile Technology in Access of Science e-content by Senior Secondary School Learner and Teacher".

Objective of the Study

I. To understand the effect of mobile technology on leaners and their dependency on it.
II. To understand the effect of mobile technology on study as well as on learners' health.

Population and Sample

The population of the study is the higher secondary school science stream learners. The sample consisted of government as well as private co-ed senior secondary science stream schools respectively situated in Delhi. The total number of learners who participated in the study were 60.

Demographic Description

A total of 60 senior secondary level science stream students from 2 separate schools, one government and a private school situated in Delhi participated in the study. In all the participants, 39 were boys and 21 were girls, respectively. The age of the participants lies in the bracket of 15 to 19 years. The respondents were from both eleventh and twelfth standard. The stream of the learners is science and its combinations like Physics, Chemistry and Mathematics (PCM), Physics, Chemistry and Biology (PCB) or their combinations.

Description of Tool

The researchers constructed a tool to understand the peril of mobile technology and its effect on learners. The tool consisted of 23 items. The content validity using both Item Content Validity (I-CVI) and Scale Content Validity (S-CVI) was conducted by ten experts. The mean I-CVI and S-CVI is same, that is 0.903 and its internal consistency test result that is, Cronbach's alpha is .873.

Statistical Approach and Analysis

The data was collated and analysed through descriptive statistics such as percentage, mean and standard deviation. The researcher constructed a tool to collect data on the peril of mobile technology. The items of the tool, as mentioned earlier were organised and analysed dimensionally. The items pertaining to dimensions like general effect, learner's dependency, effect on study and health effect were devised to get better understanding of students' perspective regarding the perils of mobile technology.. The data was analysed through Statistical Package for the Social Science (SPSS) software and at some places manually.

Major Findings

The outcome of the study is initially allocated into four dimensions as mentioned. Each dimension comprised of both rating scale and dichotomous items. However, number of items in each dimension varies. Aspects such as "General Effect and Learner's Dependency" comprised three items, respectively. On the other hand, aspects like "Effect on Study and Effect on Health" incorporated four items, respectively.

General Effect

Effect of mobile technology on learners is analysed through three items, two rating items and one dichotomous item. Responses are shown in Table 1 the means of two items are 2.53 and 2.70 and their standard deviations are 1.78 and 1.82, respectively. The mean and standard deviation reflected mixed responses i.e. loosely centred around mean and it equally falls on left and right of neutral. However, 31.67 percent (combine strongly agree and agree) respondents on first item in Table 1, feel stressed, if they do not use smartphone or tablet and 36.66 percent students on second item in Table 1, agreed that mobile technology devices waste time. Similarly, on third item in Fig.1, 30 percent learners constantly check their devices, so that, they can immediately respond to the notifications. Depending on the items in the dimension, even around 30 percent responses in favour, indicate that in general mobile technology does affect students.

Table 1: General Effect Items Ratings Percentage, Mean and Std. Deviation.

Items Response	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Std. Deviation
1. I feel stressed, if I do not use Smartphone/ Tablet for sometimes.	25.00	6.67	11.67	25.00	16.67	2.53	1.780
2. Smartphone/ Tablet wastes time.	28.33	8.33	15.00	15.00	20.00	2.70	1.825

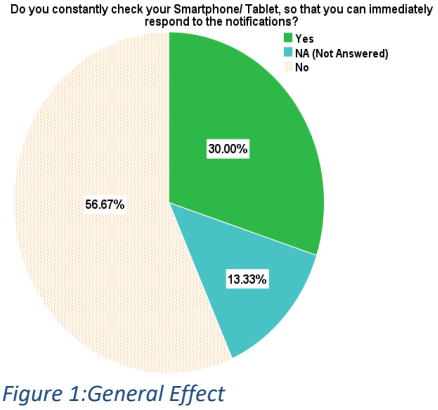

Figure 1:General Effect

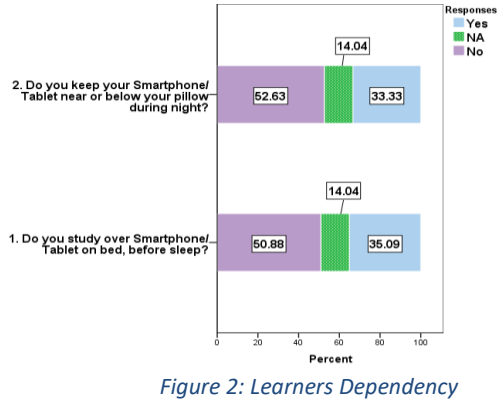

Figure 2: Learners Dependency

Learners' Dependency

The mean and standard deviation of the item in Table 2, is 2.17 and 1.69 respectively. Around 22 percent respondents admit that they prefer more online friends. Similarly,

around 35 students, admit in item 1 in fig.2, that they study over smartphone or Tablet on bed, before sleep. Around 33 percent learners in item 2 in Fig.2, keep their smartphone/Tablet near or below their pillow during night. From the responses on three separate items, the researcher feels that, students to some extent remain connected with their devices in their routine life.

Table 2: Learners Dependency Items Ratings Percentage, Mean and Std. Deviation.

Item Response	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Std. Deviation
I give preferences to my Smartphone/ Tablet buddies than my physical friends or colleagues.	20.00	1.67	15.00	13.33	38.33	2.17	1.699

Effect on Study

The means of items 1, 2 and 3, shown in Table 3 are 3.28, 3.05 and 2.67 respectively and their standard deviations are 1.6, 1.8 and 1.8, respectively. Moreover, around 48 percent students feel that excessive use of mobile devices diminishes one's ability to concentrate. Also, around 45 percent feel that smartphone/ tablet causes distraction in the learning. Furthermore, approximately for 35 percent students' concentrating become difficult in the classroom and around 28 percent, Fig.3, miss their assignment or daily study routine due to smartphone/ tablet use. From the responses on various items related to study, one can easily understand that smartphone/ tablet do effect students' studies.

Table 3: Effect on Study Items Ratings Percentage, Mean and Std. Deviation.

Item Response	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Std. Deviation
1. Excessive use of Smartphone/ Tablet diminishes one's ability to concentrate and think deeply or creatively.	30.00	18.33	28.33	8.33	3.33	3.28	1.617
2. Smartphone/ Tablet causes distraction in the learning.	33.33	11.67	20.00	10.00	11.67	3.05	1.808
3. It becomes difficult to concentrate in class or while doing assignment due to the use of Smartphone/ Tablet.	26.67	8.33	13.33	21.67	16.67	2.67	1.782

Health Effect

Items in Table 4 and Fig. 4 are related to the health of the learners. The means of item 1, 2 and 3 in Table 4 are 3.18, 2.50 and 2.45 respectively and their standard deviation is same, around 1.8. Moreover, around 53 percent respondents feel excessive smartphone/ tablet use can hamper in one's sound sleep and around 33 percent feel tired and unable to take sound sleep due to its use. Also, around 36 percent feel pain in neck, back or wrist while using smartphone/ tablet and around 26 percent (Fig.4) experience eye related problems. From the responses, shown in Table 4 and Fig.4, the researcher found significant health effect carried by mobile technology.

Table 4: Health Effect Items Ratings Percentage, Mean and Std. Deviation.

Item Response	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)	Mean	Std. Deviation
1. Excessive Smartphone/ Tablet use may hamper in one's sound sleep.	33.33	20.00	13.33	13.33	5.00	3.18	1.799
2. Feeling tired and unable to take sound sleep due to Smartphone/ Tablet use.	23.33	10.00	13.33	13.33	26.67	2.50	1.799
3. Feeling pain in neck, back or wrist while using Smartphone/Tablet.	21.67	15.00	8.33	10.00	31.67	2.45	1.827

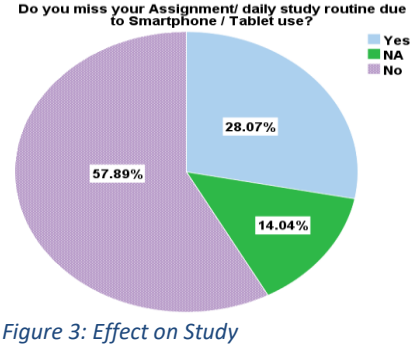

Figure 3: Effect on Study

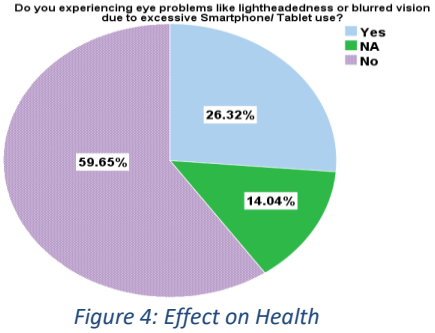

Figure 4: Effect on Health

Conclusion

At the outset, the author allocated items to four dimensions to get better understanding of a student's perspective. Furthermore, the first two aspects namely, general effect and learners' dependency combine to accomplish the first objective of the study. Similarly, second objective was achieved by the next two aspects. On general effect, the study found that, mobile technology such as smartphone/ tablets do effect learners in general and also, to some extent learners remain connected with their devices. Authors, also infer

that, smartphone/tablet does affect students' health and studies. However, the participants of the study perceive no bad effect of the use of mobile/ tablets but it needs further in-depth exploration.

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Assessment of Pre-service History Teachers' Content and Pedagogical Knowledge in the University of Ilorin, Ilorin Nigeria

SAIDU, Abubakar

Abstract

This study assessed pre-service history teachers' content and pedagogical knowledge in the University of Ilorin, Ilorin Nigeria. In this study, descriptive research was used. The population for this study comprised all history pre-service teachers of University of Ilorin, Ilorin, Nigeria. Eighty-six pre-service teachers were assessed via observation during the teaching practice exercise. The researcher self-designed questionnaire with a reliability coefficient of 0.73 was used to obtain data on the content knowledge while the teaching practice observational sheet with a reliability coefficient of 0.86 was adopted to obtain data on the pedagogical knowledge. Data collected were analysed using descriptive statistics of percentage and mean to answer the research question. Findings from this study revealed that both the content and pedagogical knowledge of History pre-service teachers of University of Ilorin Nigeria were adequate. It was therefore recommended among others that pre-service teachers should positively upgrade their personalities and logically present instructional objectives.

Keyword: *Assessment, History, Pre-service Teachers, Content and Pedagogical Knowledge*

Introduction

A review of history teaching in Nigeria has left us with the manifestation that the subject is fast going into extinction and in itself becoming a subject of the past, as it is often referred to. As Fischer (2011) submitted that history is the memory of human group experience. History is aimed to be taught to the student with the skills and dispositions to enable him/her fit well into society. This connotes the development of patriotic tendencies, critical and analytical thinking skills, and deep national awareness through knowledge of the past (Adelore, 2002). Ultimately, history as a subject is taught to give the student an understanding of the present through knowledge and appreciation of the past, to equip him/her with desirable lifelong traits and to cushion him/her to contribute meaningfully to the progress and survival of society (Federal Republic of Nigeria, 2013). The history curriculum is aimed at equipping students with the skill to redirect the study and interpretation of Nigerian and African history from an insider African perspective. For instance, Ahmed (2014) observed that for some time, History teachers have adopted

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the classical methods of teaching with little or no innovation. The quality of teacher preparation programmes and the production of quality teachers for public schools has always been, and continues to be the concern of many universities which offer teacher preparation programmes around the world (Durgunoglu & Hughes, 2010; Eckert, 2014). This dictates that high-quality teachers will have to possess pedagogical content knowledge, subject area content knowledge in addition to other skills (Darling-Hammond, 2006a).There are myriad of problems and challenges which teachers face in the early stage of their career and one of them is inadequacies in their content and pedagogical knowledge (Ahmed & Samir, 2016).

Pre-service teacher education is a specific context where the pre-service teacher's knowledge grows as a result of learning in courses, workshops and other pre-service experiences. Given that every teacher has responsibilities to gather information to determine what subject content to teach, determine the strategies and methods for teaching, impart knowledge, evaluate teaching and learning and finally provide feedback, it is found that teachers merely teach "what" they know in the ways they know "how" to teach**(**Agustin. & Liliasar, 2017). Thus, the significance of having high level of content knowledge for effective teaching to take place cannot be over-emphasized. Teacher quality is generally believed to be basically dependent on the nature of the training that teachers receive and there is no doubt that teachers differ in their depth of knowledge of the "what" to teach and the "how" to teach basically because of disparities in their own pre-service training **(**Agustin & Liliasar, 2017**).**

Darling-Hammond (2006a& 2006b) believed that teachers need to possess a combination of knowledge of subject matter, pedagogical content knowledge in addition to other qualities. ***In this context, content knowledge refers to the subject matter knowledge that pre-teachers need to be adequately prepared for instructional tasks and delivery.*** Darling-Hammond and Brans ford (2005) reported that content knowledge alone does not adequately prepare teachers for the challenges they will face in today's classroom. Hudson's (2009) study indicated the importance of pedagogical knowledge and the need for "linkages between middle school theories and middle school teaching practices". This means that pre-service teachers must be offered opportunities to real-life experiences to connect theory to practice for teaching and learning to take place. The shift from teaching to learning requires evaluating the needed knowledge for the preparation of effective teacher education.

With the paradigm shift from teaching to learning, it is imperative to evaluate what knowledge is needed to be an effective teacher (Kolis and Danlap, 2004). The pedagogical preparation is one of the most important aspects of teachers' preparation to contribute to producing quality teachers (Goldhaber & Anthony, 2003). ***Pedagogical knowledge refers to the teaching methodology and the skills needed by the pre-service teachers to make subject matter accessible to students***. Literature on PCK has identified two core facets of that knowledge: knowledge of students' subject-specific conceptions

and misconceptions as well as knowledge of subject-specific teaching strategies and representations (Feiman-Nemser, 2001; Rohaan, Taconis, &Jochems, 2007). Despite the clear theoretical distinction between content knowledge and pedagogical status, findings on their empirical separability are mixed. Other studies found that content knowledge and pedagogical content knowledge represent two correlated but separable and unique dimensions (Hobson, Ashby, Malderez, & Tomlinson,2009).There is some consensus and some preliminary evidence for the notion that content knowledge might be a prerequisite for pedagogical development(Doris, Angela, Kam, & Sylvia, 2013).In the light of this, this study assessed pre-service history teachers' content and pedagogical knowledge in the University of Ilorin, Ilorin Nigeria

Statement of the Problem

Teacher Education has been noted to embed two main tensions which adversely affect pre-service teachers during their teacher-training programme/practice teaching exercise. The first of these tensions is ascribed to pre-service teachers weak understanding of the subject matter (content knowledge) while the second tension is attributed to the shortfall in their level of pedagogical proficiency. Given that teachers' content knowledge and pedagogical skills are crucially important to the effective teaching and smooth implementation of the senior secondary school history curriculum, the researcher observes that many of the pre-service history teachers do not show competency in content and pedagogical know-how when employed to schools for teaching exercise. Researchers like Acheampong and Furlong (2003) have also pointed out that graduates of teacher training colleges are ill-prepared in facilitating learning in basic schools whilst Obeng, Opare and Dzinyela (2003) stated that trainees were not strong enough in subject matter content. Though, Pinamang and Penrose (2017) observed high level of content knowledge but low level of pedagogical content knowledge among the pre-service teachers in geometric transformation. Meanwhile, the key factor to students' academic success in today's classroom solely relies on teachers' content and pedagogical knowledge. Therefore, the appropriateness of knowledge desirable for teaching history interests the researcher and hence the need to assess pre-service History teachers' content and pedagogical knowledge in University of Ilorin, Ilorin, Nigeria.

Objectives of the Study

The main purpose of this study was to assess pre-service History teachers' content and pedagogical knowledge in the University of Ilorin, Ilorin Nigeria. Specifically, this study looked into:

1. Examining the adequacy of the content knowledge of pre-service history teachers of University of Ilorin
2. Investigating the pedagogical knowledge of pre-service history teachers of University of Ilorin

Methodology

This study was a descriptive research type. The population for this study comprised all history pre-service teachers of University of Ilorin, Ilorin, Nigeria. Eighty-six (86) pre-service teachers who were assessed via observation during the teaching practice exercise were sample for this study using a simple random sampling technique. History Performance Test (HPT) which contained 30 multiple-choice items with a reliability coefficient of 0.73 via Cronbach Alpha method when pilot tested was used to obtain data on the content knowledge while the Teaching Practice Observational Guide (TPOG) which contained 10 items structured in a four-response-scale of Very Good, Good, Fair and Poor with a reliability coefficient of 0.86 was adopted to obtain data on the pedagogical knowledge of the pre-service teachers during the micro teaching exercise. Data collected were analysed using descriptive statistics of percentage and mean to address the objectives of the study.

Data Analysis and Result

Out of 86 (100%) pre-service History sampled teachers, 34 (39.5%) of the respondents were males while 52 (60.5%) of the respondents were females. Thus, the majority of the respondents were female pre-service teachers.

Addressing Research Objectives

Descriptive statistics of percentage and mean was used to answer research question while the hypotheses were tested using independent t-test and Analysis of Variance (ANOVA).

Objective One: A*dequacy of the content knowledge of pre-service History teachers of University of Ilorin*

Given that History Performance Test (HPT) administered on pre-service teachers contained 30 multiple-choice items which were scored dichotomously, pre-service History teachers whose score fell within 0 – 10; 11 – 20 and 21 – 30 were categorised as having Not Adequate, Adequate and Very Adequate content knowledge respectively. The summary statistics of pre-service content knowledge is presented in Table 1.

Table 1: Adequacy of Content Knowledge of Pre-Service History Teachers of University of Ilorin

Adequacy of Content Knowledge	**Range Score**	**Frequency**	**Percentage**
Very Adequate	21 – 30	23	26.7
Adequate	11 – 20	49	60.0
Not Adequate	0 – 10	14	16.3
Total		**86**	**100.0**

As shown in Table and Figure 1, out of 86 (100.0%) history pre-service teachers sampled for this study, the content knowledge of 23 (26.7%) of the History pre-service teachers was very adequate and 49 (60%) were having adequate content knowledge while the content knowledge of 14 (16.3%) of the History pre-service teachers was not adequate. *This shows that the majority of History pre-service teachers of University of Ilorin had adequate content knowledge.*

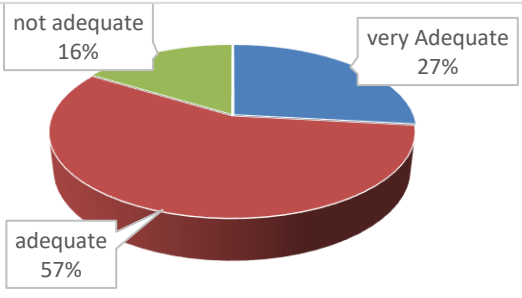

Figure 1: Adequacy of Content Knowledge of Pre-Service History Teachers

Objective Two: A*dequacy of the pedagogical knowledge of pre-service History teachers of University of Ilorin*

TPOG was adopted to obtain data on the pedagogical knowledge of the pre-service teachers during the micro teaching exercise. Given that TPOG contained ten (10) items structured in a four-response-type, items whose mean scores were closed to 4.0, 3.0, 2.0 and 1.0 were remarked very Good, Good, Fair and Poor respectively. The grand mean score was also obtained for overall rating of History pre-service teachers' pedagogical knowledge. The grand mean equal or above 2.50 was therefore remarked as Adequate pedagogical knowledge while below 2.50 was rated Not Adequate.

Table 2: Adequacy of Pedagogical Knowledge of Pre-service History Teachers of University of Ilorin

S/N	Pedagogical Knowledge: Criteria	Mean	S. D	Remark
1	Lesson notes: Relevant, adequate, logical and sequential	3.31	1.63	Good
2	Presentation: (a) Introduction of lesson (b) use of suitable and systematic method	3.69	1.57	Very Good
3	Knowledge or skills imparted adequate, accurate & relevant.	3.19	1.29	Good
4	Pupils' participation & involvement: motivating and evaluating the students.	3.22	1.36	Good
5	Voice & Language: Clear fluent and accurate.	2.98	1.72	Good
6	Use of B.B: clear, neat, orderly & appropriately used.	3.82	1.46	Very Good

7	Other teaching aids used: Well prepared, relevant and appropriately used.	2.35	1.38	Fair
8	Equitable distribution of time.	2.31	1.48	Fair
9	Personality (a) Discipline: class management & Temperament.	3.71	1.27	Very Good
10	Neatness, dignity & Enthusiasm	3.17	1.52	Good
	Over-all Rating	3.17	Adequate	

As revealed in table 2, the pedagogical knowledge of pre-service history teachers of University of Ilorin was adequate as they were found to be very good in the use of B.B which was clear, neat, orderly & appropriately used, personality assessed through discipline in terms of class management and temperament. and also very good in presentation using suitable and systematic teaching methods; and good at imparting adequate, accurate and relevant knowledge and skills in students, presentation of relevant, adequate, logical and sequential lesson notes' ensuring adequate pupils' participation and involvement, using clear fluent and accurate voice and language and exhibiting neatness, dignity & enthusiasm. However, history pre-service teachers were fair in the preparation and use of relevant teaching aids and demonstrated adequate and equitable distribution of time.

Having conducted an item-by-item analysis on the pedagogical knowledge of the pre-service history teachers, the researcher proceeded in describing the proportion of pre-service history teachers with respect to the adequacy of pedagogical knowledge. Given that the questionnaire items contained 10 items structured in a four-response-type, the minimum, maximum and the range scores were 10, 40 and 30 respectively. The range was therefore divided by three categories (30/3=10). Thus, pre-service history teachers whose score fell within10 - 20; 21 – 30 and 31 – 40 were categorised as pre-service teachers who had 'Not Adequate', 'Adequate' and 'Very Adequate' pedagogical knowledge respectively. The summary statistics of pre-service content knowledge is presented in Table 3.

Table 3: Adequacy of Pedagogical Knowledge of Pre-Service history Teachers of University of Ilorin

Adequacy of Pedagogical Knowledge	Range Score	Frequency	Percentage
Very Adequate	31 – 40	31	36.0
Adequate	21 – 30	46	53.5
Not Adequate	10 – 20	9	10.5
Total		**86**	**100.0**

As revealed in Table 3 and Figure 2, out of 86 (100.0%) history pre-service teachers sampled for this study, the pedagogical knowledge of 31 (36.0%) of the history pre-service teachers was 'very adequate' and 46 (53.5%) were having 'adequate' pedagogical knowledge while the pedagogical knowledge of 9 (10.5%) of the history pre-service teachers was 'not adequate'. *This shows that history pre-service teachers of University of Ilorin had adequate pedagogical knowledge.*

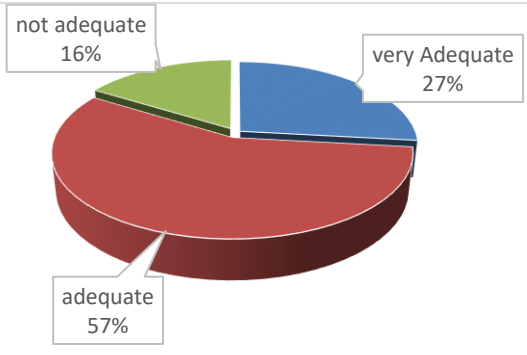

Figure 2: Adequacy of Pedagogical Knowledge of Pre-Service History Teachers

Findings and Discussion

Findings from this study revealed that the content knowledge of history pre-service teachers of University of Ilorin was adequate. This finding is in congruence with the findings of researchers like Munby, Russell, and Martin (2001) and Sternberg and Grigorenko (2003) whose studies indicated that teacher's knowledge develops through pre-service and in-service teachers' engagement with a variety of explicit and implicit learning opportunities while Kleickmann, Richter, Kunter, Elsner, Besser, Krauss and Baumert (2012) submitted that systematize the learning environments in which teachers have the opportunity to acquire and develop knowledge of subject matter, and we summarize research on the development of Content Knowledge. Similarly, Krauss, Brunner, et al. (2008) concluded that the latent structure of subject-matter knowledge might vary between different teacher populations. There is some consensus and some preliminary evidence for the notion that content knowledge might be a prerequisite for pedagogical knowledge development.

The second finding of this study showed that the pedagogical knowledge of pre-service history teachers of University of Ilorin was adequate as the history pre-service teachers were very good in the use of B.B.personality discipline in terms of class management and temperament and also very good in presentation using suitable and systematic teaching methods and good at imparting adequate, accurate and relevant knowledge and skills in students; presentation of relevant, adequate, logical and

sequential lesson notes; adequate pupils' participation and involvement; clear fluent and accurate voice and language; neatness, dignity and enthusiasm. However, History pre-service teachers were fair in the preparation and use of relevant teaching aids adequate and equitable distribution of time. Content knowledge represents teachers' understanding of the subject matter taught. This outcome substantiates Baumert et al., (2010); Hill, Rowan, and Ball, (2005) who submitted that both content and pedagogical knowledge have been shown to affect teachers' instructional practice as well as student learning in the domain of mathematics. Thus, pedagogical knowledge is the knowledge needed to make subject matter accessible to students.

Conclusion

With respect to the findings of this study, it could be concluded that the content and pedagogical knowledge of History pre-service teachers of University of Ilorin was adequate. Pre-service teachers were rated very good on various criteria such as use of blackboard,, personality, and temperament, presentation using suitable and systematic teaching methods and rated good at imparting adequate, accurate and relevant knowledge and skills in students; presenting relevant, adequate, logical and sequential lesson notes; obtaining adequate pupils' participation and involvement; using clear fluent and accurate voice and language; and showing neatness, dignity and enthusiasm.

Recommendations

In the light of the findings of this study, the following recommendations are proffered;

1. Pre-service teachers should positively upgrade their personalities and logically present instructional objectives.
2. Pre-service teachers should understand and realize that consistent and up-to-date writing of lesson plan is a way to foster their pedagogical knowledge in the logical and sequential presentation of their subject matters.
3. There should be adequate teaching methodologies and orientation for the prospective pre-teachers before graduation and certification.

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Tracing the evolution of Integrated Science Curriculum

Prerna Sharma[1] & Jasim Ahmad[2]

Abstract

With the focus of research shifting towards interdisciplinary studies from core disciplines, providing an exposure to learners during school education can help in laying the foundation for future studies. Integrated science curriculum can be one of the approaches towards providing an understanding of science in wholeness and development of more holistic solutions to scientific problems. Various research findings have shown that primary students start losing interest in science during primary to secondary school transition. An effective way to retain the interest can be implementation of an integrated curriculum which helps the student to realise the interconnections between disciplines and also with their everyday life experiences. This paper aims at studying the historical evolution of integrated science curriculum in the past. It includes tracing the origin of integrated curriculum and how it led to the emergence of integrated science as a concept in the field of science education. It also throws light on how an integrated science approach has been put into practice through various models during its evolution; from multidisciplinary model to the most recently followed the problem-based model. Curriculum integration can also be seen through the lens of the level and intensity of integration on which it is based, as it allows for the development of relevant curriculum involving various perspectives. Integrated science curriculum has implications for various stakeholders which render it as a justified choice for curriculum developers.

Key Words: Integrated Science, Science education, Curriculum integration, Progressive education movement.

Introduction

Science is one of several ways of knowing, and as a discipline provides us the window for significant explanations of the material world, dismissing all the boundaries and stating its universality. The requirement of science education is not limited to its intrinsic coherence and unity as a discipline, but also maintaining its meaningfulness throughout the personal learning process of the students. For coping with an increasingly technological world, there is a need to prepare individuals who can visualize science as a mode to improve their lives thereby fulfilling the broad aim of science.

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Integrated Curriculum

The word integration is derived from the Latin word 'integrare,' which means to restore to an unspoiled whole. Integration of curriculum is not a concept that has been dealt with, only in the recent past. Rather its roots can be traced back to the late 1800s. The decompartmentalization in an integrated curriculum is grounded in its requirement of drawing from the compartments of traditional subjects without labeling them as such. Besides, in order to make it a more comprehensive approach to learning incorporating the societal view, components like problem-solving, real-world application, and social consciousness are added to the learning process, rendering it more appropriate to the contemporary world. Integrated curriculum is the approach to teaching and learning, where the lines between disciplines are blurred and there is an integration of content with the experience of the learner, teacher and societal issues. To understand the nature of any approach towards teaching and learning, the study of its historical evolution becomes imperative. The exploration of the emergence of an approach in the historical perspective also helps in building an understanding of its contribution to education in the past and its scope in the future. It helps in developing an understanding of how it fits into our current education system, its role in education over time, and its role in society.

The purpose of this theoretical review is to trace the history of curriculum integration, discuss its evolution and the possible implications of curriculum integration on the various stakeholders. For this review, the search was carried out with the help of google scholar, ERIC database, and research gate. Only publications in English were considered for this review. Terms such as integrated curriculum, integrated education, progressive education movement, integrated science were used to carry out search. The searches which catered to the focus of the review were chosen. The review is organised around three main questions, a) How integrated curriculum emerged as an approach to teaching, b) How this approach has evolved and, c) How integrated science can be seen in the context of Indian school science education.

Historical perspective of integrated curriculum

Origin of integrated curriculum: Late 19th century

Though curriculum integration is a topic that has been the focus of educators and curriculum developers in the recent past, its roots can be traced back to the late 19th century in the work of Herbart and Dewey school. During the 1890s, the idea of subject correlation was brought about by Herbartians (Kliebard, 1995). They began to question the approach behind the compartmentalized traditional subject-centered curriculum and discussed considering the possibilities of harmonizing the different subjects to benefit the students. (Kliebard, 1992). Herbartian's work gained Dewey's attention but he did not

agree with the idea of student benefit by correlation of subject matter. Rather Dewey was inspired for altogether a new curriculum design (Wraga, 1997).

Chicago Experimental School (1896-1904) which is commonly known as Dewey's Laboratory School was set up by Dewey. It was based on the philosophy that learning occurs within the community setting and a child's interests are not limited to the compartments of any specific subjects but rather it transcends the boundary of traditional disciplines. The classroom acts as a community where activities around a broad theme help in developing skills. The social and intellectual problem-solving skills were developed through subject matter as a resource. (Martinello and Cook, 1994). "Schools are habituated to a sharp separation of social subject matter and that which is labeled scientific" (Edwards, 2017). Dewey's conception of integration was on two levels, personal integration where the subject matter comes from student personal experiences, and social integration in which subject matter allows the students to act in the community. Based on this, fifty years later Ralph W. Tyler (1949) formalized the concept of horizontal and vertical integration aiming at the continuation of learning experiences.

The era of progressive education movement- Early 20th century

In 1926, an integrated curriculum was taken up by the Lincoln School which took into account the children's development. It involved the development of an interdisciplinary program that emphasized active exploration and real-life situations. Each class project was designed to stimulate many activities and provide for individual differences (Ulbricht, 1998). This was further taken forward by the progressive education movement of the 1930s which advocated an integrated curriculum and proposed the notion of 'core curriculum'. The Eight-Year Study (1930) was an experimental project conducted by progressive education association which involved the redesigning of the curriculum (Aiken, 1942). It indicated that the academic performance of students who were exposed to progressive curriculum arrangements, such as curriculum integration, was better as compared to students with an exposure to traditional education classes. It is also argued that the idea of curriculum integration has been invented long before the 1980s and it stands over the work of many theorists of the late 19th and early 20th century (Beane, 1996). For about 60 years, the educational system of the USA was highly influenced by the progressives until the first Russian Sputnik was launched in 1957 (Kliebard, 1995). The science and mathematics education in school faced several questions regarding their quality.

The emergence of integrated science

Beginning from the launch of Sputnik, the school curriculum reform movement started to emerge as a result of multiple forces like the dissatisfaction faced after the war with the approach followed by schools for learning and the overall low quality of school education, the heightened gap between the science taught in school and progress made in

field science occurring in labs and the advancing research about how various children undertake learning. The efforts for an overhaul in the school curricula first started in the science curriculum in the Physical Science Study Committee (PSSC) undertaken by the Massachusetts Institute of Technology. These efforts in the curriculum reform movement were not bound to the United States. Parallel developments were occurring in other countries as well like the British Nuffield projects; other places also operated local adaptations or adoptions. With the Nuffield Junior Science Project (1964-1966), the curriculum reforms in primary science in Britain followed a little later than in the United States. Most of the programs which appeared from reforms have integrated science curriculum approach in common at the elementary level and separate disciplines approach at the secondary level (Sabar, 1979). Pring, a British researcher investigated the purpose of curriculum integration in the late ’70s and stated these as “To provide a more flexible arrangement (of subject matter),' and, "because of some deep-seated belief about the unity of knowledge" (Pring, 1976). He further stated that 'integration' should be conceptualized as "the idea of unity between forms of knowledge and their respective disciplines"(Pring, 1973). This conceptualisation was critiqued for being narrow in its approach and it seems very broad for practicality.

During the late twentieth century, curriculum integration was referred to as multidisciplinary, transdisciplinary and interdisciplinary curriculum designs which are discussed in the later sections. Integrated approach was used by early childhood educators as they believed that students cannot attain higher learning levels with a separate subject approach (Klein, 2002). More recently, the interdisciplinary approach has gained more importance as it serves various needs (Klein, 2002).

The field of integrated curriculum has witnessed various definitions of ‘integrated education’ over time. UNESCO's Integrated Science programme launched by the Varna Conference defined Integrated Science as education that includes those approaches which avoid undue stress on the distinctions among various scientific domains and the fundamental unity of scientific thought is expressed in the presentations of its concepts and principles (Richmond, 1971). "An integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environment" (Humphreys, Post, and Ellis 1981). Davison, Miller, and Metheny (1995) were able to pinpoint one of the integral problems of integration is that it holds a different meaning for different educators. Hurley (2001) concluded from a comprehensive study that a consensual of integration could not be found. Czerniak (2007) further clarified the problem that a common agreed definition is absent for integration at the fundamental level that could be used as a foundation for designing, executing, and interpreting the results of the research. Integrated study can be fundamentally defined as one which allows a broad exploration of knowledge specific to a particular domain with a lens of a variety of disciplines. The teaching-learning process is perceived in a holistic manner

giving a birds eye view and at the same time making it a more meaningful exercise by the inclusion of reflection on the real world issues. The meaning-making is not just limited to a specific context but also wider contexts. The concept of integrated curriculum can be summarised to mean that the curriculum is not just a series of jumbled subjects but rather subjects intertwined, interactive, and collaborating with one another. The accent shifts from the classroom and content-oriented learning to more of research, inquiry, and project-oriented learning. A conscious effort is made to establish relationships among different concepts and subject matter. Units related to a theme are used as principles for the arrangement of courses. The timetable needs to be more elastic and even the student grouping becomes adaptable based on interest, context and relevance. Integrated curriculum is a planned learning experience that provides learners with a holistic view of the common knowledge by exploring the existing models and systems. It also motivates and develops potential in learners to recognize new possible relationships and thus provide the opportunity to build new models and systems. This educational approach aims at preparing students for constant learning and building lifelong learners. Students studying through an integrated approach perform better academically in comparison to the ones studying through the traditional approach (Yoon et al, 2014). The effect of integrated curriculum is not limited to academic success but it also affects the attitude and motivation of the learner. As students engage in learning through an integrated approach, there is the inclusion of real-life problems. Students find these problems worth solving which increases their motivation to learn (Barab and Landa, 1997). Integrated approach is prevalent internationally and its benefits are reflected in the PISA scales. The countries that ace in PISA scales have integration as an approach in their educational policies (Drake and savage, 2016).

Evolution of models of curriculum integration

The evolution of curriculum integration has occurred over the past decade through several models that have tried to put this approach into practice. The multidisciplinary model can be seen as a succession from the Herbartian curriculum focussing on ‘correlation’. It encompasses the horizontal integration (Tyler, 1949). It operates by eliminating the overlaps which occur while making the connection for a subject matter present in more than a single subject. Subject areas are organized around a central theme. H.H Jacobs (1989) proposed a multidisciplinary model that was based on the needs of gifted students. Jacobs argued that this model provides a stimulating experience to the learner by providing learning which is less fragmented and more relevant.

Vars (1993) stated that correlation has “obvious benefits in reinforcing learning and showing students how various subjects relate". Schubert's (1995) argues that Jacobs focussed on the subject matter but the significance of child and community was disregarded. The model can be regarded as 'one-legged stool' which was imbalanced due

to improper proportion of the three factors. Another weakness found was the domination of one subject over another (Beane 1997) which was termed as a polarity problem. Additionally, the idea of elimination of overlaps among disciplines may minimize the chances for the emergence of richer meanings that arise by viewing a single concept from 2 different disciplinary perspectives.

Beane's integrative model is based on the integration of subject matter with the everyday life of students. It was a more student-centric model and defined his model of integrative curriculum as a curriculum design theory which is focused on improving the opportunities for the integration on the social and personal domain by organizing the curriculum around important problems and issues that are recognized by educators and young people without emphasizing subject boundaries (Beane, 1997). The integration was based on three aspects, one is the subject matter that was integrated horizontally and vertically, and the other two are social and personal domains of an individual. The aim of personal and social integration is not limited to students' knowledge and skills but rather to build active citizenship for democracy. Schubert (1995) found a balance between the child, subject, and society in the integrative model. But, the integrative model is disregarded by many educators on the grounds that it does not determine, "curriculum scope and sequence in advance" Vars (1991).

A collaborative effort was seen in the interdisciplinary model, wherein a team of teachers collaborated to deliver integrated curriculum to an assigned number of students. The curriculum is transacted in the block time assigned for traditional subjects.
One of the recent is the problem-based model which is grounded in the constructivist approach. It utilizes the technological approach to education and places technology in the center of the curriculum. The subject matter of various problems complements each other to solve the problem. The aim is to improve the student's ability to apply scientific and mathematical concepts to the real-world context, to enhance and strengthen communications among science, mathematics, and technology teachers; and to explore the technology based activities for their effectiveness.
In the Multidisciplinary approaches, there is a parallel or unit wise alignment of subjects or disciplines. However, the occurrence of integrative experience for the learner does not always happen. A solution is not achieved even when the teaching process is executed through a team, as the perspective presented by the teachers is not integrated rather it is separated. In contrast, interdisciplinary models are focussed on the restructuring of the curriculum in such a manner that they aim at providing theme-based, question-based, or problem based integrative experiences (Klein, 2005).

Integration of science with technology

We are living in an era of science and technology. Our daily life is featured with the products of technology associated with their sociological and environmental implications. Before the industrial revolution, which began in Western Europe, science and technology were virtually distinct domains.

The National Education Technology Plan 2010 (NETP) developed by the United States Department of Education's Office of Educational Technology emphasizes on the technology integration at all the educational levels. American Association for the Advancement of Science (AAAS,1993) has recommended that in order to promote students participation in those learning experiences which provide an opportunity to students for the adoption of scientists like dispositions and attitude, it is important to incorporate the use of technology(McNeill and Pimentel, 2010). As technology is becoming more accessible, there is an increase in the number of science teachers that utilize technology for illustrating the scientific concepts, improving problem-solving and data analysis and promotion of student learning (Guzey and Roehrig, 2009). While discussing the role of ICT in science teaching, the primary role that is visible is to support the pedagogy through simulations, data logging tools and assisting practical investigations. Students are able to undertake investigations related to phenomena that were previously not possible in the classroom. For example, exploring reactions that were too fast or too slow for observation or reactions involving toxic chemicals. Simulations can be regarded as an efficient tool for substitution of laboratory-based investigations that aren't feasible in the classroom (McFarlane & Sakellariou, 2002). The use of data loggers in science teaching is an efficient way to collect, record, and analyze data related to any scientific investigation. The use of ICT in learning science motivates the student as they have more control over their learning pace and it caters to the specific needs of the students (Betts, 2003). There are various obstacles while we tend to integrate ICT with science education like resources, ICT skills and training of science teachers, orientation and beliefs of teachers towards ICT integration, institutional factors etc. If we aim to enhance the quality of science teaching and learning through the integration of ICT in science lessons, these barriers are required to be overcome. However, there is an argument that only access to technology is not enough for integration and students' learning cannot be guaranteed through technology alone. The shift in the conceptualization of science education is also evident in the integration of STEM in school science (Dare, Ellis and Roehrig, 2018).

Integrated Science in Indian School Science Education

The Indian school science education has gone through several changes in terms of content and approach in the past 50 years. Kothari commission (1964-66) introduced the 10+2+3 pattern of education and national policy on education in 1968, made science and mathematics education compulsory as a part of general education for the first ten years of

schooling. But before the implementation of the national curriculum framework of 1975, the disciplinary approach towards science was in vogue in school science education.

The curriculum framework (1975) gave recommendations with direct implications on science education. At the primary level, the teaching of 'environmental science' was introduced which integrated science and social science as a single subject. At the upper primary level, an integrated approach was recommended for the teaching of science through a systematic unit approach. It stated that it brings the disciplines closer and hence deemed it as a more logical approach. Integration between applications of mathematics and science throughout the curriculum was also suggested in order to establish a correlation with life and thus feel motivated to study. The framework suggests that when experiences are integrated and consistent, they are key to learning.

'National Curriculum for Elementary and Secondary Education – A Frame-Work' (1988) based on the national policy on education,1986 further elaborated on science education, and the idea of science as a single subject was conceived. The idea of science and social science integrated as one for the primary stage was put forward in this framework. It emphasizes that programs in science education should help the learner to discover the relationship of science with health, agriculture, industry, and other domains of everyday life. This calls for an integration of these domains with topics and units of science. It recommends learning through the physical and natural environment of the learner, thus integrating the child's experience of interaction with the environment with science education. It also prescribes an integration of the interrelationship between science, technology and society which in turn leads to a scientifically literate and sensitive citizen.

National curriculum framework for school education, 2000 replaced the teaching of '*Science and Technology*' in place of '*Science*' in order to introduce scientific and technological literacy to the learners of upper primary and secondary stages. In consonance with the recommendations of the preceding framework, it also recommended the integration of knowledge of basic scientific and technological principles with fields like agriculture, weather, energy, health and nutrition, and other areas of human concern. It suggests that science should not limit itself to the boundaries of a discipline but rather it must extend its arena "To issues such as gender, culture, language, poverty, future occupation and environment." A blending of these issues with science will provide a more holistic and unified outlook to the learner. The level of integration was taken a step further in this framework by building science education on the amalgamation of science, technology, society and the environment.

The idea of integrated curriculum was also advocated by National Curriculum Framework 2005. It recommended that the boundaries of the disciplines need to be

loosened rather than straight-jacketed approach, thereby allowing integrated and joyous learning. It builds on the premises that knowledge transaction to the child was prescribed in the form of integrated learning experiences of the environment. The integration of science and social science as 'environmental studies' included health as its significant component. At the secondary stage, it stresses that science should be learned as a composite discipline but, with technologically advanced tools and analysis on the issues surrounding environment and health. For fulfilling this vision, organized and planned efforts are required in teacher preparation. The pre-service teacher education courses at the elementary and secondary stages need integration of components like health education, physical education, and yoga.

The National focus group on the teaching of science further detailed on science education. It describes that science education aims at developing awareness among the learners through the integration of science, technology, and society with the issues of environment and health. For the primary level, it emphasizes on strengthening of integration of science and social science as environmental studies and incorporating health as a component. The primary science should also integrate concerns and inculcation of values for the environment, practices related to health, hygiene, and social interaction. At the upper primary and secondary stage, the study of science as a composite subject is prescribed instead of following the disciplinary approach. The position paper suggested integration of language education and thus encourages the development of language through and for science learning. Also, keeping in view the diversity in our country, the integration of the context of the learner is also recommended. It has to be done through "specific contextualized projects" for catering to the diversity of the learner. Also, at the local level, scope in the syllabi and textbooks for contextualization is emphasized. The recommended pedagogy includes activities, stories, poems, interactive experiences with the real world, and the integration of ICT.

The National Education Policy 2020: A Roadmap for the Future

The scientific and technological advancements around us makes it imperative for our education system to provide multidisciplinary learning for our learners. National Education Policy (NEP) 2020 is the first educational policy of the 21st century after a period of around 34 years. It aims at addressing the needs of our nation in these developing times in terms of science and technology. The policy emphasizes on goal 4 of the sustainable development goals of 2030, which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". The National Education Policy 2020, stands on the foundation of principles like flexibility for learners, no fixed separation between arts and sciences, respect for local context, multidisciplinary and holistic education. It states that "Learning should be Holistic, Integrated, Inclusive, Enjoyable, and Engaging". It aims at preparing lifelong learners for a multidisciplinary

world. The policy aims at developing foundational capabilities of numeracy and literacy in their learners, and the higher-order cognitive capabilities such as critical thinking and problem-solving. It suggests that education should be more about learning to be creative and multidisciplinary. These principles and aims are in alignment with the concept of an integrated curriculum which encompasses multidisciplinarity. Through this approach to teaching and learning, there is scope for learners to construct knowledge which is seen through diverse lenses borrowed from multiple disciplines while they deal with any issue, theme or topic. This approach also provides opportunities to gifted children as they can think creatively due to such diverse and holistic perspectives. The policy suggests that the middle stage students should explore the relationships among different subjects. Integrated curriculum seems to be a more suitable choice here, as it blurs the boundaries of discipline and provides opportunities to the learner to take a step back and look at the larger picture. In terms of science teaching and learning, integrated science curriculum has the potential to construct knowledge about a scientific concept while dealing with a real-life problem from society and environment. This knowledge will be irrespective of the discipline it is hailing from, and would be used in finding solutions to issues and problems faced in everyday life. Integrated curriculum provides opportunity to deal with real-life problems; it helps the individual to be in the process of constant learning and encourages them to be lifelong learners. The role of technology integration with education is also highly emphasized. The integration of technology will help in improving the teaching-learning process and the teacher education programme. For such an education system which is more experiential, holistic and integrated in nature, integrated curriculum is an appropriate choice which has the potential to develop learners with multidisciplinary skills and abilities, and a holistic perspective.

Science education in India has evolved over the years and has tried to keep up with the changes in the needs of the society, and the global trends of science education. However, this has not been reflected in science teaching in schools especially in terms of integrated science education. This ground level reality can be attributed to dilution of inputs at every stage of implementation. If we aim to identify the level of integration in reference to Blum's model for the level of integration of science (Blum, 1973) then we need to look at the integration in our science curriculum. In spite of following an integrated approach towards curriculum development, the current curriculum is stagnant at 'coordination', where the curriculum is woven together, but the distinction of physics, chemistry and biology is there. As per the global trends of science teaching, in order to pursue the problem-based approach in integrated science teaching, the integration of science in the curriculum is required to reach to the level of 'amalgamation' where problems from the environment of the learner at the centre and ideas from separate sciences is drawn as per need to cope up with the problem. This approach utilizes the development of the curriculum from the 'other end'. At the same time, changes in the

teacher education programs pertaining to science education are necessary to equip science teachers with the skills and appropriate pedagogy for integrated science teaching at various levels of school education.

Implications of teaching of integrated science for various stakeholders

Integrated science curriculum breaks the categorization of discipline. It paves ways for correlation of multiple concepts hailing from discrete disciplines. There are specific outcomes for each stakeholder involved in the teaching learning process through integrated curriculum.

The implications for all stakeholders as discussed in the following paragraphs:

Learners: Integrated science provides a broad view for a student which is a way ahead from memorizing the concepts with missing links. It allows the learner to develop multiple perspectives to look at a concept which helps in creation of a global picture which includes the domains of discipline, student's knowledge and experiences, and societal concerns. The holistic experience brings societal concerns in the purview as well which paves way for finding their solutions. It integrates the personal and societal domains with the disciplinary domain.

Involving students in real-world science activities will begin developing the skills and processes needed to be truly science literate. The real-life problems involve different contexts and therefore it promotes transfer of application of knowledge and ideas. Thus, the transfer has implications for creative endeavors. The transfer of ideas or applications of ideas from one area to another, it involves reconceptualization leading to the scope of development of creative thinking. The possibility of viewing an idea or concept from various perspectives or lenses provided by different disciplines can further help in the development of a new insight that is specific to a problem rather than being specific to any discipline.

Teachers: While implementing the integrated science curriculum, the teacher must try to build connections across the subjects in order to provide a comprehensive understanding to the learner. It requires a collaborative work within the community of teachers, academicians, and educators working towards the goal of integrated science learning. The integration should overlook the disciplinary boundaries and aim at making the learning experience holistic and integrated for the learner. The learning experience should incorporate knowledge, activities, processes, and skills that prepare the learners to be active citizens as well as a critical and scientific individual. The context, environment, health, nutrition and societal concerns can be few of the areas where integration is readily possible to allow the student to perceive holistically. The problems to which the learners are exposed to should be of their interest and relevance, and teachers need to encourage

learners to deal with them in a holistic and integrated manner rather than isolating it in a particular disciplinary domain.

Curriculum Planners and developers: The curriculum developers need to avoid undermining the unity of science as a discipline and focus on developing content which transcends the compartments of science subjects. The content should also not be limited to science matter but rather relate with everyday life of the students as well as with societal concerns. The content needs to aim at equipping the learner with skills and processes required to view and solve problems in a larger perspective. It would require adequate planning about the contents, theme around which the content is to be organised, time and schedule of periods, and the collaboration of teachers. They need to develop content that requires collaboration of teachers belonging to different specializations in order to provide an integrated teaching learning experience blurring disciplinary boundaries. The curriculum strands should be broad enough to incorporate social domains like citizenship, democracy, environment, diversity.

Policy makers and Teacher Educators: The implementation of integrated approach requires extensive professional development of teachers. The policymakers should focus on building comprehensive pre-service teacher education programs. For ensuring integration, there is a need to build connecting bridges between teacher education courses and teachers' subsequent classroom teaching practices. The teacher education courses are required to develop skills required for collaboration among different disciplinary approaches. The focus of these courses should be on development of appropriate PCK (Pedagogical Content Knowledge) rather than limiting it to strong disciplinary knowledge. It must involve the perceptions of integration on the part of teacher educators as well as teachers. These focal points are required to be incorporated to the in-service teacher training programs too. Teachers' content knowledge can also be improved by allowing them completion of science coursework in various scientific domains. This might also better prepare teachers to execute the integrated approach to teaching sciences and develop a more holistic teaching-learning experience.

Social implications: Integrated science education provides ample scope for involving aspects like health, nutrition, diversity and environment. Such inclusions help in creation of socially aware and responsible learners. It helps in inculcation of sensitivity towards issues dealing with these aspects like environmental pollution, water borne diseases etc. Learners having baseline knowledge about health and nutrition helps in creation of a society with healthier individuals. The incorporation of aspects like diversity and social responsibility results in socially responsible citizens and better citizenship. These implications in the long run makes a better society for living.

Conclusion

The idea of integrated science was embedded in the unity of scientific knowledge, reflecting the real world explanations. The 20th century has witnessed revolutionary reforms in the field of science education brought about by the technological advancements as well as the changing professional and societal realities. There are changes in the cultures and practices of science. We are living in times with skills and knowledge at the focus. With the evolution of the conceptualization of integrated science curriculum, we have modernized from the discipline based curricula that was characterized by a collection of facts, laws and theories pertaining to respective disciplines. This modernization is directing science towards humanization and socialization, where the centre of focus is learning with a socio-civic context. The futuristic problems arising out of the overlaps between science and society have their answers in modernization of science curriculum. This modernization aims to build science that can be experienced by the learner, has associations with human welfare and builds knowledge with applications to civic society. The development of areas like food biotechnology, health and nutrition, science and society, agricultural sciences etc emphasizes this idea. The modernisation of curriculum is evident through the inclusion of themes directly related to human welfare and the society. The practices and culture of science is moving beyond the facts, theories and principles restricted by disciplinary boundaries. The modernisation of science curriculum is in terms of collaboration between the disciplines working towards the benefit of society and humanity. The interdisciplinary, transdisciplinary and multidisciplinary approach of integrated curriculum enhances the adaptive capability of the learners and makes them owners of knowledge that is applicable in the lived reality. To put this approach into practice in order to aim for more relevant curriculum, transformations are required on the part of teachers, teacher educators, curriculum developers and policy makers. These changes on the part of each stakeholder can only assure the concretization of the required upliftment in the field of science education and in the lives of our learners.

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Bridging the Learning-Assessment Divide: A Commentary on NCERT Class V EVS Textbook

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Abstract

'Textbook culture' and an overarching emphasis on 'evaluation through examinations' are two major characteristics of the Indian education system even today. Unfortunately this symbolizes a predominately behaviouristic connotation of learning where the learners are treated as nomothetic and discrete entities outside of their context. Contemporary theorists in psychology and in education contend this view of learners and learning and argue that learning takes place in a social context and 'meaning-making' is at the very core of the process of learning. In this backdrop, the class V Environmental Studies textbooks prepared by National Council of Educational Research and Training was analysed. Three main strands of analysis situated in the conceptual frame of socio-constructivism and critical theory that emerged were: challenging the hegemonies of knowledge; promoting conceptual understanding and critical thinking; constructing the 'zone of proximal development' through scaffolding. By taking examples from the textbook each of these strands is explicated. It can be concluded that the textbooks make a huge leap in bridging the learning-assessment divide on many fronts. However, the textbooks cannot be treated as a separate entity in the educational discourse and hence the importance of systemic reforms in areas of teacher development and examinations are suggested along with the need for teacher autonomy and agency.

Key words: Socio-constructivism, assessment for learning, social context of learning, hegemony of knowledge

Introduction

Textbooks are perceived be a potent factor to govern/steer the changes in the teaching-learning processes in the school classroom especially in the Indian context. The culture of heavy reliance on the textbooks, established during the colonial regime, hasn't undergone much change even in the contemporary times as pointed out in several policy documents (NCERT, 2005; NCERT 2006a) and highlighted by several scholars in their empirical studies (Clark, 2001; Mili and Winch, 2019; Sarangapani, 2003; Vijaysimha, 2013). Kumar (1988) argues that in the Indian context, the colonial education system tied the teacher to the "prescribed textbook thus taking away her autonomy for organizing of the curriculum, the sequence of transaction and the modes of assessment" referring to this

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discourse as the 'textbook culture' (Kumar, 1988, p - 454). Tracing the origins of such a culture, Kumar (1988) notes that this primarily "arose out of the imposition of a bureaucratically controlled system of education by the Britishers" (ibid, p-455). Several scholars who have undertaken detailed ethnographic studies of classroom discourse in the current century (Clarke, 2001; Rao, Chang & Narain, 2003; Mili &Winch, 2019; Sarangapani, 2003; Vijaysimha, 2013) have found the textbook to be the main governing force in the classroom. Though both Mili and Winch (2019) and Vijaysimha (2013), while pointing to the findings of their research, state that the textbook wasn't a 'necessary condition' for effective teaching' (Mili and Winch, 2019, p- 197) and 'textbook was not the sole curricular resource' (Vijaysimha, 2013, p - 81);yet both the researchers point out to the heavy reliance of the teachers on the textbook in the classroom in their empirical work in Bihar and Karnataka respectively.

The dangers of a uniform and standardized prescribed textbook and use of the same as mechanisms of control and regulation of the work of teachers have been critiqued by several scholars of critical theory (Apple, 1993; Freire, 2005; Giroux, 1988) who elaborate on how this provisioning of pre-packaged materials defeats the fundamental emancipatory liberatory potential of education both for the learners and teachers. The work of these theorists enable us to understand the power structures of a society and further comprehend how social, economic and political forces shape the educational discourse to retain and perpetuate those power structures. A case in point in the Indian context is controversies over textbooks especially in the past three decades wherein "the control over textbooks by the state has not only distorted its academic purpose but also allowed it to be used as a means of political and ideological propaganda by the State" (NCERT, 2006a, p – 9).

Accompanying the discourse of utmost emphasis on the textbooks as the primary source of knowledge is the paramount importance of 'examinations[1]' in the Indian education system. The two are inextricably intertwined as Kumar (1988) establishes while tracing the historical origins of both - the 'policy of impersonal, centralized exams made a major contribution' to the 'textbook culture' (Kumar, 1988, p-45). Arguing how exams acted as a means of social control, Kumar (1988) highlights the major purpose of examinations as being a system of filtration and categorization in an educational system meant to perpetuate the status quo. Examinations have this overarching control that often times teaching is directed by what is to be assessed. Such is the reliance of the educational discourse on evaluation that it is difficult if not impossible to imagine an educational

[1]The three terms examinations, assessment and evaluation might seem to be used inter-changeably here as is often the case in prevalent educational discourse. The author's understanding of these terms is – assessment refers to feedback while evaluation has a connotation of judgment and examinations and tests are the tools for the former two. The original term used by the authors cited in the text have been retained in this paper.

system without a structured robust evaluation system in place. Evaluation remains one key area in which the most progressive of educational reforms have faltered.

The situation is compounded in the contemporary neo-liberal era wherein the global trend in the educational discourse is to focus on the measurement of a child's learning in order to synchronously measure the quality of education. Large scale rampant educational measurement drives undertaken by individual countries such as the Annual Status of Education Report (ASER) in India and The Programme for International Student Assessment (PISA) at the global level across countries to produce comparative educational achievement measured in terms of tangible outcomes bear a testimony to this trend. This shift from assessment of the individual student by the teacher to an evaluation of standard outcomes in a uniform manner has a distorted connotation of learning as its premise – that learning and assessment are acontextual, mutually exclusive of each other and that assessment is only feasible through rigid structured mechanisms.

A word about uniformity and standardization of evaluation processes and procedures is in order here especially in the context of the textbooks. In an effort to ensure uniformity and stick to standard measures, textbooks often follow pseudo-experimentation and put rhetorical questions in the textbooks wherein the child is asked to conduct an experiment and draw inference; yet in the very next paragraph the conclusions of the findings (which are presented in neat tables) are drawn out for her. Moreover, in an effort to do so and to achieve the norms of standardization, textbooks weed out the socio-cultural context of the learners. Use of 'language of the discipline' is often promoted at the expense of conceptual understanding of the child. Since it is difficult to assess individual responses that can be unique to the child as per her understanding; for the purposes of converting responses into tangible numeric values, Indian educational system has taken recourse to focus on memory based questions that stress on recall from the textbooks thereby encouraging a pattern of highly structured and standardized examinations (Alexander, 2001; Clarke, 2001; Kumar, 1988; Sarangapani, 2003).

Textbooks and assessment thus are intricately linked to each other in the Indian context often one being the basis for the other in the educational discourse. It is in this undue fixation with both of these that learning loses its' meaning in the classroom discourse for the individual child. Moreover, this kind of system is indicative of a behaviouristic understanding of learning that treats child as a discrete identity and atomises the learning process into objective tangible outcomes measured through standard tests. This perspective of learning has been challenged and critiqued by several theorists and psychologists. Cognitive psychologists contend that learning is a process of 'meaning-making' (Piaget, 1971) wherein the child co-constructs knowledge by interacting with the environment and through a process of dialogical interaction with adults and more knowledgeable peers (Vygotsky, 1986). Learning viewed in this perspective would enable building upon of the schemas of the learners by inducing 'cognitive conflict'

(Piaget, 1971) and furthering the capacities of the child through 'scaffolding' (Vygotsky, 1986). Assessment then does not remain a process to be undertaken at the very end of this continuum but is a dynamic process of feedback to the learners about their learning and to the teachers about the teaching-learning process as well. In the process of asking questions to assess the learner, teachers also assist the child.

Situating the NCERT EVS Textbooks

It is in this socio-constructivist understanding of learning that National Curriculum Framework 2005 positions itself. Calling for a paradigmatic shift in the epistemological and pedagogical basis of learning the NCF 2005 advocates situating learning in the socio-cultural context of the child. It proposes five guiding principles –"connecting knowledge to life outside the school, ensuring that learning is shifted away from rote methods, enriching the curriculum to provide for overall development of children rather than remain textbook centric, making examinations more flexible and integrated into classroom life and; nurturing an over-riding identity informed by caring concerns within the democratic polity of the country". (NCERT, 2005, p – 5). It is interesting to note that of the five guiding principles, three pertain to textbooks and examinations, such is the prominence of these in the Indian educational system. The position paper by the focus group on Curriculum, Syllabus and textbooks (NCERT, 2006a) critically looks at the reality in which textbooks become the embodiment of syllabus; a methodological guide and the evaluation system given that often times both the teacher and the students have the textbook as the 'only resource'. It is however argued how this leads to routine mundane activities that do not initiate reflection on the part of the teacher or the learner (NCERT, 2006a, p- 14).

In the logical sequence, the position paper was followed by the presentation of the syllabus. The syllabus for EVS categorically states that it is a suggestive rather than a prescriptive format (NCERT, 2006c, p 91). In a major departure from the earlier formats, the syllabus in the spirit of social constructivism begins with "key questions rather than key concepts, which can trigger the child's thinking in new directions and provide scaffolding to her learning process" (NCERT, 2006, p -91). Apart from the change in epistemological basis of learning, the EVS introduced another major change - that of integration (of sciences and social science). The syllabus thus, lists themes in a matrix form rather than topics for a child-centred and integrated approach.

Objectives of the present study

It is in the backdrop of the above context that the present EVS textbooks for class V was analysed. This analysis is neither meant to be content analysis nor is it meant to be an exhaustive exercise of textbook scrutiny. Nawani (2010) in a comprehensive review of studies on textbook analysis categorizes factors affecting the content and the form of a textbook into two types – first constituting "those variables which have a more or less

unilateral relationship with the textbook" (disciplinary demands of the subject, values enshrined in the Constitution and various policy documents, curricular and syllabi requirements along with the criteria about how the textbook needs to be written); the second being those that determine the content and the form "in an interactive way leading to a constructed realisation of both form and content" (variables that are located in the psycho-social world of the learner, the social context of learner and learning and the learning context of the classroom) (Nawani, 2010, p- 186). The present analysis of the class V EVS textbook is situated in the latter. The conceptual frames of social constructivism and critical theory form the guiding conceptual frames in which the review was undertaken. The broad objective of the review then was to ascertain how the textbook approached learning and whereit situated assessment in the teaching-learning processes[1].

Analytical Themes

The process of qualitative review of the textbook through the process of carefully studying it and the formulation of themes was an iterative one that led to formulation of three pertinent themes in the context of the objectives. The three themes that came up as a part of the analysis are - Challenging the hegemonies of knowledge; Promoting conceptual understanding and critical thinking; Constructing the 'zone of proximal development' through scaffolding.

Challenging the hegemonies of knowledge

This strand is rooted in the epistemological questions of 'whose knowledge counts', 'what knowledge is most worth'; questions around hegemony and control with several critical theorists have grappled, (Apple, 1990, 1993; Giroux, 1981; Gramsci, 1971; Freire, 1970). By questioning what constitutes as 'legitimate knowledge/ official knowledge' Apple (1993) points to the intensely political nature of knowledge and how that gets reflected in the curricular materials. The work of critical theorists provide a critical frame to view educational discourse as well as educational practices as sites of ideological, philosophical and pedagogical struggle.

Several efforts to break hegemonic hierarchies around epistemological discourse were evident in the textbook. These include - provisioning for activities/tasks for the child without providing the answers in recognition of children's innate potential to learn and

[1] The author was involved in the preparation of the EVS class V textbooks which placed her at an advantage of having gained deep insights into the processes of preparation of textbooks at a national level. This article stems at personal level from the need to articulate the dilemmas and deliberations around epistemological as well as pedagogical issues that were articulated by the textbook writing team as a part of the writing process 'post-facto' vis-à-vis the final outcome –the textbook. To pre-empt the analysis from presumptions and biases, the author studied the textbook cover to cover and tried to critically understand the processes of learning and assessment as they present themselves in the book.

their having 'alternative conceptions/intuitive understanding' (Driver, 1985); use of 'dialogics' for the process of meaning-making; diversifying the sources of knowledge; portrayal of 'marginalized' in powerful roles as models and challenging the serotypes about them. Of these, the first - capitalizing on the potential of children is discussed in the next section.

One of the most striking features of the textbook is the use of dialogics throughout the text. The book makes a conscious effort to talk with the children rather than talk to them. The quantity as well as the nature of the questions in the text are an ample proof of this type of communication. Narratives as well as activities/tasks/experiments are interspersed with questions that nudge the child to think, discuss and critically reflect. By not providing all the information including the 'results' of the experiments the book succeeds in challenging the notion of textbook as the 'sole source' of knowledge as well. In true Freirian spirit of dialogue, the textbook thus ceases to serve as an instrument of domination by ensuring that the dialogue is a horizontal relationship - a relation of "empathy" between two "poles" that are engaged in a joint search which Freire (1974/2005b, p. 40) depicts as –

A with B = communication

intercommunication

rather than as a vertical one -

A

Over

B = communique (Freire, 1974/2005a, p. 41)

In an attempt to break down the hegemonics of knowledge, the children are asked to - undertake experiments/ tasks and tap on to multiple sources for developing a conceptual and critical understanding. By including a diverse range of activities/tasks such as experiments on how food gets spoilt (p -37), tasting different kinds of food (p - 24), evaporation (p - 65), sprouting (p -43), the textbook gives an opportunity to the children to explore their environment and draw inferences. This kind of belief that children are essentially endowed with the capacities to make sense of their experiences and that children's thinking is qualitatively different from that of adults (Piaget & Inhelder, 1969) challenges the age old belief that children's thinking is lesser than that of adults. Apart from experimentation as a source of knowledge, the children are asked to survey and find out information from – grandparents and elderly (p. 54, 93,119, 173, 193) apart from exploring other sources such as - people who keep animals (p -20); farmers (p - 179),

people who have migrated (p – 173), visiting a lake (p – 55), an old building/ monument (p - 97), newspapers (p – 119, 127), bills and reports (p – 69, 70), globe and maps (p – 105, 189).

Portrayal of 'marginalized groups' is one the major way in which the textbook challenges hegemony. Girls/women are at the helm of the book in terms of their presence and representation in positions where they challenge stereotypes. It is however the social and economic class of these women that merit detailed analysis. There are four adult women in the book on whose central character the narrative of four chapters is built. These are – Sangeeta (a government school teacher who goes on a mountaineering camp, p - 76); Jasma (an eleven year old girl from Gujarat who describes her experience during the earthquake, p -131); Afsana (a thirteen year old girl living in slum who challenges stereotypes to play basketball and now has her own team, p - 154); Suryamani (an Adivasi girl who now has an organization that fights for the rights of people of her community, p - 182).

Case of Suryamani is discussed further in the light of representation of marginalized communities. Most of the times the textbooks either end up representing marginalized communities such as the adivasi community as 'backward' by looking down upon their customs or they present a glorified picture of how the entire humankind is one large family wherein everyone lives peacefully. The class V EVS textbook does neither. Instead of showcasing harmonious relationships in the society that are a direct contrast to the child's lived realities, the book attempts to present multiple realities and attempts to question the presumptions of children through questions. In the 'Suryamani' chapter the children are pointedly asked – Some people have moved so far away the forest, that they can't understand the lives of forest people. Some even call them 'jingli'. Why is it not correct to say this? (p –185). Through powerful role models such as Suryamani the book challenges the notions of prevalent power structures in the society rather than reinforcing them. The textbook however leaves a lot of scope in terms of representation of 'children/adults with special needs'.

Promoting Conceptual Understanding and Critical Thinking

The textbook is a major departure from the tradition of looking at assessment in terms of rote memorization and stressing on recall to facilitating conceptual understanding along with perspective building. Table 1 summarizes this paradigmatic shift in the discourse.

Table 1: Shift in the assessment perspective in the class V EVS Textbook

Shift from	To
Fact based questions	Experiential open-ended questions
Recapitulation of information	Processes of thinking
Standard uniform answers	Answers as per the child's context and

	understanding
Use of standardized language	Use of colloquial language
Emphasis on use of disciplinary terminology	Emphasis on deeper conceptual understanding
Questions at the end	Questions before, within and after the text

Pointed well thought of questions that intend to induce 'cognitive conflict' in the child or act as 'scaffolds' to assist children in their learning form the essence of the textbook. The questions precede, intersperse and follow the text throughout. There is a variety in the kind of questions asked - introductory/connecting questions (to enable the child to relate to the situation/context); exploratory questions (that prompt the child to think about their surroundings); questions that encourage children to make 'intuitive guesses'[1]; inferential questions; imagination based questions; application questions; questions for critical thinking; questions requiring transfer of knowledge; questions that ask for the child to question. Of these two types of questions are discussed in detail here.

Building on the premise that children are endowed with the ability to make sense of phenomenon around them which they do constantly, the textbook prods the children to make 'intuitive guesses'. Questions that require children to think where the food and water go in our body (p- 27), how was water lifted to great height in ancient times (p -89) exemplify this. Another kind of questions that are the strong suit of the textbook are those around perspective building. Examples of this types of questions that encourage critical thinking are – Why do some children have to work? (p –166), Why do people need to do certain kind of work? (p- 147), Should the games of boys and girls be different? What do you think? (p – 158), Think of the kinds of difficulties people have to face where a dam is being built. (p – 169).

It needs to be mentioned here that the textbook uses colloquial language and stresses upon use of the same by children. Several instances where the questions clearly specify the children to answer/write in their own words (p – 21, 50) as well as getting the children to write news reports (p – 137, 179) demonstrate the emphasis on constructing an understanding rather than mere repetition of information. Imagination is also used potently to enable the child to build empathy (imagining how migrants feel in a big city, p – 173); strengthen conceptual understanding (classroom becomes a spaceship, P – 103); understand people and events in history (imagining yourself in Golconda palace, p -95); and for reflection and action (preparing your team if you were a leader, p – 164).

[1]The term referred here is from Bruner (1969) who distinguishes 'intuitive thinking' (thinking that tends to involve maneuvers based seemingly on an implicit perception of the total problem, p – 60) from 'analytical thinking' and considers invoking intuitive guesses in children one of the major purposes of education.

It is quite evident from the above scrutiny of questions that the textbook focuses on building upon conceptual understanding of children while acknowledging that they come to school with a reservoir of knowledge and constructs.

Constructing'zone of proximal development' through scaffolding

The textbook is clearly rooted in the Vygotskyian sociocultural theory that positions conceptual learning as the basis of development wherein the concepts emerge through dynamic interaction of the child with adults and more knowledgeable peers; shaping and transforming each other in interconnected systems. There is a lot of scaffolding[1] both in terms of activities as well as questioning to enable the children to move from the 'actual developmental level' to 'potential developmental level' thus effectively creating a 'zone of proximal development'[2]. This scaffolding is in sync with the social constructivist perspective of learning proposed and articulated in the syllabus. Scaffolding through activities/tasks and questions is elaborated through one example of each.

As stated earlier, almost all the chapters in the textbook begin by providing a situation/instance rooted in a socio-cultural context followed by a set of questions that include enabling connections with the child and those pertaining to the child's understanding as well as the analysis of the given situation. The sequence of the questions proceed from developing a deeper understanding of the situation to arriving at processes needed for a critical reflection around one's own environment. To expound this argument is a set of five questions succeeding a narrative about the life of a 'migrant' family in Mumbai from the chapter 'No Place for Us' (NCERT, 2007, p- 166).

- "Jatrya felt alone, even in a crowd of people. Have you ever felt like this?
- Imagine how it feels to leave one's own place and go far away to live in a new place?
- Why do you think families like that of Jatrya's are coming to big cities?
- Have you ever seen any children (in your school or neighbourhood) who also go to work?
- What kind of work do they do? Why do they have to work?"

Herein the narration acts as a scaffold to get the children to understand the issue of migration and to look at development from a critical perspective after building an

[1] Wood, Bruner, and Ross (1976) propose that scaffolding act as a tool provided by the expert (more knowledgeable or capable individual such as the teacher or parent) to carry out a task that the children would not be able to complete independently. Scaffolding acts as a support and guidance for supporting the process of learning and its nature should vary as per the individual needs and requirements.

[2] Vygotsky defines zone of proximal development (ZPD) as: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1986, p - 86) The ZPD is a dynamic zone of construction where meaning is constructed with assistance (such as scaffolding).

empathic link with the characters in the situation. These questions and the ones that follow rest of Jatrya's narratives, build upon the child's own feelings about leaving one's own place and extrapolate the challenges for migrants based on that. The starting point then is the child who is constantly kept at the epicentre. Gradually the child is expected to be able to draw inferences from her own situation, extrapolate the inferences to the narratives given and subsequently critically analyse her surroundings; in the process arriving at a nuanced understanding of deeper constructs such as that of migration in the example given above.

Apart from presenting questions that act as scaffolds, the book also makes uses of activities/tasks to scaffold children. Experiment around flotation is an exemplary case to discuss this. The task specifies certain things for children (in groups of four) to put in water to find out whether they float or sink. The list includes – empty plastic bottle with its lid closed, bottle half-filled with water, bottle full of water; aluminum foil – open and spread out, pressed tightly into a ball, in a cup-like shape among various other items. One of the questions that follows is a fill in the blanks – "The aluminum foil _____ when it was spread out. When pressed tightly into a ball it _____. This may have happened because _____" (NCERT, 2007, p- 62). By designing the experiment for children and asking pointed questions, the children are offered assistance to arrive at a nuanced understanding of what floats and what sink along with fine-tuning their 'spontaneous concepts' about the same to 'scientific concepts'[1]. This credence to spontaneous concepts and the dynamism with scientific concepts can be found throughout the textbook. The two are not treated dichotomously but the relationship between the two is reciprocal and interrelated. In the above example of flotation, the children are asked to guess whether given examples of things would float or sink followed by the experiment in which they have to put given list of things in water and experiment. The questions that follow the experiment expect the child to make generalizations and abstractions about what sinks and floats. The concrete experiences of the child (spontaneous concepts) are meant to grow into abstractions about causes for floatation (scientific concepts) with each kind of knowledge supporting and transforming each other in a socio-constructivist manner. In the above example of migration also there is a constant back and forth between the two types of concepts.

Moreover, the dynamic nature of the 'zone of proximal development' is exemplified in this experiment as in several others since the textbook does not impose one standard parameter for all children in terms of their conceptual understanding which could pave the way for dynamic assessment. Dynamic assessment becomes the measure of child's on-going learning that assists the child as well to enable the child to move within the zone

[1]According to Lev Vygotsky (1986) 'spontaneous concepts' and 'scientific concepts' are two realms of learning imperative to a child's intellectual development. While the former flow naturally out of the child's every day, concrete lived experiences; the latter are organized systematically and possess a conscious and deliberate character typically associated with schooling.

from 'assisted performance' to 'unassisted and self-regulated performance' (Vygotksy, 1978). This dynamic assessment takes place in a meaningful context created in the textbook through narratives and stories rather than in a standard testing format.

Conclusion

It can be safely presumed from the above analysis that the textbooks make an attempt to bridge the conceptual divide between learning and assessment by not dichotomising the two processes.

The textbooks make a huge leap of faith in a paradigmatic epistemological shift pertaining to the nature and content of knowledge as well as the processes of learning and assessment. However, as pointed by several researchers (Mili, 2018, Vijyasimha, 2013, Winch, 2010) this shift needs to be foregrounded in the everyday realities of the classrooms as well as systemic issues in the Indian context since by itself the textbooks are unlikely to pave way for educational reforms by changing the pedagogical discourse in the classroom. To do would be a fallacy, as Vijyasimha (2013) cautions that even though the textbooks can exert 'epistemic authority' over the teacher yet this is 'undermined or subverted by the teacher in practice' (P -91). There is thus,a need for systemic reforms in the areas of teacher preparation and development accompanied by structural changes that provide more autonomy and agency to the teachers (Batra, 2005) coupled with the need for reforms in the evaluation processes and practices (NCERTb, 2006).

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Exploring Pre-service Teachers' Perceptions and Practices of Mathematics Lesson Planning at Primary Level

Zuha Aisha

Abstract

Lesson Planning is regarded as an engaging, insightful activity. It is an important skill to be acquired during teacher preparation that later forms a part of the teaching competencies. It is a planning for inculcating the learning environment in a classroom. This paper explores what are the perceptions of pre-service teachers towards the lesson planning activity on two aspects- one pertaining to making lesson plans, and the other their implementation in the classrooms. This paper also explores the various sources that the pre-service teachers utilise in their mathematics lesson planning and also the various difficulties they face in this planning exercise. The sample involved 23 pre-service teachers enrolled in bachelors in nursery education programme of a central university in New Delhi, India. Data was collected through a Likert type questionnaire consisting of 20 questions and semi-structured interviews. Descriptive analysis of the questionnaire and qualitative analysis of the interviews were done. The paper discusses the role of teacher educators in lesson planning exercise and implications about developing competencies of preservice teachers in lesson planning.

Keywords: lesson planning, pre-service teachers, primary level, primary mathematics lesson planning

Introduction

Teacher education programmes lay the foundation for instructional or lesson planning. Lesson plans have been defined in various ways by researchers and educators, such as, a blueprint of classroom activities, a document laying out what will happen in a particular time frame, etc. A plan can be seen as a blueprint that makes the implementation of an activity effective, smooth and economical. A lesson plan can also be regarded as a visualisation of how the teaching-learning environment will develop in the classroom. Careful planning of mathematics lessons helps develop the teacher's mathematical competence. (NCERT, 2012).

At primary level, various approaches for lesson planning can be applied such as theme based, activity based, and project/inquiry based, etc. Theme based teaching generally involves detailed pre-designed lesson plans. This approach holds limited scope to allow for child-initiated learning and is mainly teacher directed. Play based approach involves

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careful planning for activities that involve learning by doing and here the role of the teacher is of a facilitator, much structured activities are not used here. The activity based approach involves carefully planned, structured activities where there is exploration and experimentation with different learning material that involves discovery learning. An inquiry based, investigation or in-depth study of a topic or theme can be used in the form of a project or inquiry based approach. For mathematics lesson planning some other approaches such as Lieback's ELPS approach can also be utilised in which pre-service teachers plan their lessons and execute them. Lesson planning is done at various stages throughout the teacher preparation programme by pre-service teachers as part of their pedagogy course, simulated teaching, micro teaching, in workshop modes, etc. considering that it is an important and crucial step towards their preparation as a professional teacher.

Lesson plans holding an important place in providing an effective teaching learning environment in the classroom has been established by many researchers (Rusznyak & Walton, 2011; Taskin, 2017). Certain lesson planning guidelines can be used to scaffold the construction of pre-service teachers' PCK (Pedagogy Content Knowledge) and help them teach with confidence (Rusznyak & Walton, 2011). Developing the lesson planning skills of pre-service teachers' is considered a key factor in bringing out effective teachers (Taskin, 2017). Pre-service teachers find the initial lesson planning steps 'cumbersome', further, it is not by chance that good teaching happens, but to create effective lessons and enhance learning a thoughtful planning is needed (Johnson, 2000). Teachers are able to learn about teaching through lesson planning and through teaching they are able to learn about planning (Mutton, et al., 2011). Instructional planning is perceived as an important process in the professionalization of teachers. Analysis of qualitative material like lesson plans, videotaped lessons, written reflections, etc. can reveal teacher competencies (Ruys et.al, 2012). Lesson planning should have an important place in teacher education, considering it as a crucial area of prospective teachers' professional development (Dorovolomo et al., 2010).

Lesson planning for pre-service teachers is often regarded as the means to ensure effective classroom performance. The lesson planning activity also has the possibilities to develop professional competence among the pre-service teachers. Certain guidelines for lesson preparation for pre-service teachers can give them the space to articulate their content knowledge and meanwhile also has the scope to narrate with some detail their pedagogical reasoning (Rusznyak & Walton, 2011).

Quality lesson planning positively relates to quality of delivery, however, it does not necessarily mean it is automatically transitioned into successful implementation also, here teacher education provides support to student teachers to make informed transition from a lesson plan to its delivery (Dorovolomo et al., 2010).

Lesson Planning has a role in the development of the pre-service professional identity of mathematics teachers, it is through lesson planning activity that the prospective teachers develop certain skills related to professional identity of teachers, such as: beliefs and critical sense about lesson planning, working with peers, research skills, and reflection of the experiences. (Rodrigo & Trindad, 2015).

From the above discussion it can be observed that lesson planning is a creative and complex process that involves not only an understanding of content and pedagogical knowledge, but also the ability to use critical thinking skills, hence many pre-service teachers can deem it to be a difficult process. Lesson planning is one of the crucial skills that pre-service teachers learn during their teacher preparation programme. Teacher training programs help them to understand the importance of planning, as well as to plan their lessons effectively. Therefore, understanding pre-service teachers' perceptions about the need for planning can help the teacher educators understand the way they plan their lessons and provide insight into the ways in which teacher educators can prepare them to be effective teachers. This will enable researchers and teacher educators to help pre-service teachers plan their lessons and teach effectively.

The present research paper focuses on exploring pre-service teachers' perceptions regarding the need for lesson planning activity pertaining to two aspects of lesson planning activity: making lesson plans and implementing them in the classroom. The research questions guiding the study are: How do pre-service teachers perceive the lesson making exercise at primary level? What are the pre-service teachers' perceptions towards the need for lesson plans? Do the lesson plans act as a facilitation tool towards attaining learning objectives or just as a way to organise and manage the teaching learning environment? Do pre-service teachers face certain difficulties in making mathematics lesson plans? Are there certain difficulties faced by the pre-service teachers in the implementation of mathematics lesson plans? What are all the sources they use for preparing mathematics lessons? What role does the peer group and the supervisor play in their lesson planning exercise, if any?

Sampling and Data Collection

Pre-service teachers enrolled in the nursery teacher training programme during the year 2018-20 were selected as the sample of the study. The pre-service teachers in the final year 2019-2020, were taken after they had completed their 45 days internship in schools where they taught classes I & II comprising 15 lesson plans each of Mathematics, EVS and Language. They had experience with the classroom teaching in the first year of their training programme for the pre-primary classes. Thus each pre-service teacher had delivered 45 lesson plans during their school internship across various government, aided and private schools in the capital region. 23 pre-service teachers participated in the research. A Likert type questionnaire and semi-structured interview were used as the tools of the study. Questionnaire consisted of 10 questions related to generic lesson

planning and 10 questions specifically for mathematics lesson planning exercise. Semi-structured interviews enabled the researcher to further explore their views, perceptions and opinions and also to clarify certain responses from the questionnaire. The pre-service teachers were informed about the purpose of the research and that their identities would be kept confidential in the study.

Data Analysis

Findings

Descriptive analysis of the items on the questionnaire and analysis of the interviews is given in the following section:

Table 1.1 Need for Lesson Planning

S.No.	Item	Mean	SD
1.	There is importance of lesson planning at lower primary level	3.96	0.88
2.	Lesson Planning needs to be done by a teacher	3.83	0.78
3.	I would have better taught my lesson without putting it down in a lesson plan file	2.86	0.96
4.	Having a lesson plan keeps my class managed	2.69	1.32
5.	Having a lesson plan keeps me focused on the topic	4.04	0.77
Grand Mean		3.48	

Table 1.1 indicates the means of the responses under the need for the lesson planning category as perceived by the pre-service teachers. A grand mean of 3.48 reflects that the pre-service teachers recognise the need for lesson planning, but 8 out of 23 teachers (about 35%) felt that they would have better planned and taught the lesson without putting it down in a lesson plan file, 5 pre-service teachers out of 23 were undecided on this aspect of lesson planning, this was further probed in the interview session, most of these respondents opined that while teaching in the classroom and in the presence of an observer they become stuck between the real classroom situation and what they have listed out in their lesson plan file. One respondent was of the opinion that, “in practical life (in a classroom) lesson plan does not help and it's a time taking activity...”.

The highest mean reported here was on lesson planning keeping the classroom teaching focused on the topic. The lowest mean was reported on the item pertaining to classroom management and having a lesson plan, this was also probed in the interview, most of the pre-service teachers were of the view that though the lesson plan keeps them focused on the topic but the activities do not go as planned resulting into time mismanagement and discipline issues. One pre-service teacher responded that “lesson planning and classroom management are different skills”. According to another pre-service teacher, “Sometimes

what I planned was totally different from their (learners') interest so they don't concentrate…"

Table 1.2 Difficulties in making Lesson Plans

S.No.	Item	Mean	SD
1.	Lesson Planning is a tedious job	3.43	1.20
2.	Time is enough during internship for lesson planning	3.00	0.90
3.	Found relevant sources according to the level of the learners	3.82	1.17
4.	I could devise activities as per my learner's level	3.82	0.90
5.	I could devise follow up activities for evaluation purpose	3.69	0.87
Grand Mean		**3.55**	

Table 1.2 has items from the questionnaire that focused on some of the difficulties faced while lesson planning. A grand mean of 3.55 indicates that pre-service teachers face certain kinds of difficulties in lesson planning activity. Neutral response was reported on the aspect of the time they get to make lesson plans during their school internship, it was further probed in the interview session, where they reported that they are hard pressed for time because of everyday planning for every subject and making up teaching learning material besides also getting it approved by the concerned teacher educator. One preservice teacher said that, "I had to replan my lessons many times which caused me a lot of stress..." . 15 out of 23 preservice teachers had reported that they could devise follow up activities for the purpose of evaluation and 8 out of 23 reported that they could not come up with adequate evaluation activities.

Table 1.3 Difficulties specific to mathematics lesson planning

S.No.	Item	Mean	SD
1.	Relevant material for mathematics lesson plans was available	3.73	1.21
2.	Devising evaluation activities for the mathematics lesson plan is difficult	2.65	1.26
3.	Putting down objectives in operational verbs is difficult	2.91	1.34
4.	Needed to put in more efforts for mathematics lesson planning	3.47	0.79
5.	Could prepare teaching learning material for mathematics lessons	3.43	0.84
Grand Mean		**3.11**	

In Table 1.3 certain difficulties pertaining specifically to mathematics lesson planning activity were probed. A mean of 3.73 on item 1 indicates that pre-service teachers agree that they find relevant material for mathematics lesson plans but a mean of 3.47 on item 4

indicates that they feel that they needed to put in more effort for mathematics lesson plans. Thus, finding relevant material for mathematics lesson planning does not pose a difficulty in the mathematics lesson planning exercise. In the interview session pre-service teachers reported using a variety of resources: class textbooks, activity books for children prescribed by the school, youtube videos for classroom activities and lesson planning, specific websites for lesson planning and children activities and devising classroom activities on their own as well. However, devising evaluation activities or follow up activities does pose a difficulty. The mean values on item 2 and item 3 indicate that devising evaluation activities and putting down objectives in operational terms presents a certain level of difficulty to them. A total of 11 out of 23 teachers agreed that devising instructional objectives in operational terms is sometimes difficult for them. 14 teachers out of 23 agreed that they needed to put in more efforts in their mathematics lesson planning than other subjects.

Table 1.4 Difficulties in implementing mathematics lesson plans

S.No.	Item	Mean	SD
1.	I get enough time to implement mathematics lesson plan in my classes	3.73	1.14
2.	Implementing my mathematics lesson plans in the classroom posed certain difficulties	3.00	1.04
3.	My mathematics lesson proceeded as I had planned	3.69	0.82
4.	The mathematics activities were done within the class time	3.30	0.97
5.	I could keep the focus on the topic in the class	3.22	0.95
	Grand Mean	**3.38**	

A total of 13 out of 23 teachers agreed that they get enough time to implement the mathematics lesson plan in their classroom, however, 10 out of 23 indicated that implementing a mathematics lesson plan sometimes posed certain difficulties in the class. The reasons for mathematics lesson plans not working out were probed during the interview which could be clubbed under the broad categories of: classroom management issues, interests, attitude and previous knowledge of the learners, and different responses than expected answers during evaluation.

Here the mean on item 1 pertaining to getting enough time to implement the mathematics lesson was higher than the means of items 4 and 5 dealing with getting enough time to do the activities and keeping the focus on the topic; this was sort of a contradiction which was probed during the interview, most of the pre-service teachers responded to certain classroom management issues such as running out of time because of considerable time gone into giving instructions for doing the activity and taking it to the expected outcomes, in some cases the class strength was more to manage out while performing activities, so discipline issues were there. “Sometimes my activities didn't work at all..”,

was reported by one of the pre-service teachers. Interests, attitude and because of previous learning experiences the students could not give expected answers and sometimes they did not find the concept interesting. One pre-service teacher said that "there were many reasons, but my student always gave different answers from the topic".

To further understand the lesson planning process, during the semi-structured interview a total of 18 out of 23 teachers indicated that they always plan lessons on their own while 16 indicated that sometimes they plan lessons with the help of the peer group.

The role of supervisor was also asked from the pre-service teachers, most of the responses suggested that a supervisor acts as a guide to develop effective lesson planning skills and provide feedback on what is lacking in the lesson plans, so most of the teachers recognise the role of a supervisor as important in providing suggestions and discussions on the various aspects of the planning exercise, however one pre-service teacher said that "sometimes a supervisor bounds you to act in the way they want a lesson plan to be like, it makes the lesson teacher-like and not child centric".

Discussion of findings

From the findings, it is indicated that the pre-service teachers perceive lesson planning as an important exercise and realise that it is needed at the primary level (Table 1.1). However, making lesson plans is also perceived as a tedious job by them (Table 1.2), this is also in sync with the study of Johnson, 2010 in which he reported that pre-service teachers see the lesson planning activity as 'cumbersome'. Further, the aspect they find tedious is writing down the whole lesson plan in a prescribed format in a file that they have to duly maintain throughout their teaching internship. A close examination of the data also revealed that though they explore a variety of material yet many pre-service teachers find it difficult to prepare an appropriate follow up activity for evaluation purposes as per their students' learning or age levels (Table 1.2).

The subjects influence their preparation of lesson plans also. (Table 1.3 and Table 1.4). Here, the means on the mathematics lesson planning and implementing mathematics lesson plans in the classroom were lower than the means on the lesson planning exercise in general. So it could be concluded that the pre-service teachers face certain difficulties in mathematics lesson planning, such as writing down instructional objectives, preparation of teaching learning material in mathematics, and follow up evaluation activities. While implementing the activities in the classroom it is difficult to achieve the learning outcomes within the stipulated time (Table 1.4).

The other difficulties reported were, introducing the mathematics topic in the class considering the age level of the learners (10 out of 23) and devising specific objectives in behavioral terms in mathematics (10 out of 23).

Pre-service teachers at primary level use a number of resources for lesson planning, findings indicate the use of resources available on the internet is more than the textbooks.

There are certain external or environmental factors involved in the mathematics lesson plan not working out such as the class strength resulting in mismanagement and discipline issues, mismatch between the duration of the lesson plan and class time, previous knowledge of the learners, their interests and attitudes.

The student-teachers perceive that the role of supervisor or the teacher educator is an important one in their lesson planning exercise as they provide guidance as and when needed. Lesson planning is sometimes also done with the involvement of the peer group but mostly by individual students.

Conclusion

Classroom ethos involve the emergence of a learning environment in which the students can learn effectively, and this involves planning for materials, strategies and time management. Pre-service primary teachers recognise the need for lesson planning exercise or activity as part of their teacher preparation programme, however they face certain difficulties in preparing mathematics lesson plans and implementing them in the classroom. Classroom management and lesson planning both progress differently in their opinion, though the lesson plan maintains an effective teaching learning environment in the classroom, but classroom management is perceived as an external factor that hampers or aids the progress of this teaching learning process.

The role of the teacher educator in the lesson planning exercise is of a guide and supervisor who provides feedback on the classroom practices of the pre-service teachers involving their lesson plans. The implications for teacher educators here is that the pre-service teachers need to be equipped with a number of evaluation techniques for assessing the learning outcomes of the lesson. They must also be exposed to a variety of resources for preparing lesson plans, finding suitable teaching-learning material as part of their pedagogy subjects, especially mathematics. A supervisor or teacher educator can thus add towards enhancing the professional competencies such as effective lesson planning of the pre-service teachers.

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A Study of Dropout Students of the Kulhaiya Community, Araria District, Bihar

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Abstract

It is a challenging task for government to impart quality education to all children irrespective of caste, gender, region, religion. For this various policies and programmes launched by Central Government and respective state governments at different levels at different time span. Right to Education Act talks about the free and compulsory education to all children of six to fourteen years. The trends of school dropouts is a considerable issue in Araria district in Bihar. Whereas the literacy rate of country is 74.04 %(Census-2011). The literacy rate of State is 64.45 %(census-2011). The district has lower literacy than country and state average. The present study was designed to explore the factors and situation of the drop out students of Araria district. For collecting information and data, the researcher has selected 20 schools from the different Panchayat of Araria district by simple random sampling. Researcher identified 4 dropouts from each school. The total sample size was 80 drop-out students from 20 schools. For more information researcher individually contacted dropout student's parents. The researcher identified 25 parents' 25 school teachers and 10 school heads and administrators as the sample.

Significant findings of this study reveal that the financial constraints, unfavorable environment of schools, teachers attitudes towards education, lack of proper infrastructure, severe climatic conditions, Kosi river's floods, cultural and social factors, political factors, death and sickness of parents, illiterate parents lead to dropouts in schools.

Key words: Kulhaiya Community, Kosi River, Drop Outs.

Introduction

Education is the torch for human being. It enlightens and helps in making better decision in life. Education is self-empowerment. It keeps us aware of our society as well as surroundings. Education has many advantages for human life.

The Kulhaiya Community resides in the northern part of Bihar state and southern part of Nepal. The Population of kulhaiya is ten lakh in Araria District, Bihar.The literacy rate of Araria is 53.63% which is below than national literacy rate. The prime objective of this study was to discover the factors that influence dropout students of Kulhaiya Community of Araria District, Bihar.

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Objectives of the Study were to:

- Examine of the factors that influence on kulhaiya students drop out of Araria district.
- Explore the trend of dropout students at different levels : Primary level, Secondary level and Senior Secondary level-
- Analyze variations of kulhaiya dropout students from Non-Kulhaiya dropout students of the given District

Research Methodology

The required data was collected from the different sources. The statistical data was collected from the District Education Office and Block Resource Center of Araria, Bihar. The data was collected from the schools through school information format. Researcher used the mixed method research strategy to complete this study. While for the qualitative data researcher conducted interviews, focus group discussions, and personally met the dropout students.

The population of this study was all school dropouts and their parents, the class teachers/head teachers, administrators of the school, District Education Officers. Some of them were selected by purposive and convenient sampling methods to form the sample of the study.

Researcher used snowball sampling technique to select 80 dropouts. For the selection of key informants, the District Education Officers, and Head Administrators, Researcher used purposive sampling technique in the given district. The instruments used are interview schedule, questionnaire, focus group discussion and participant observation by researcher. During field visited,

Data Interpretation and Analysis

Table- 1 (Factors That Influence the Dropout)

Factors that influence the dropouts students	F(80)	%
Financial Constraints	13	16.25
Severe Climatic Conditions/Kosi River Flood/Loos	07	08.75
Unfavorable Environment Of Schools	14	17.50
Insufficient Infrastructure Of Schools	11	13.75
Attitude of teachers /Teacher Related Problems	28	35.00

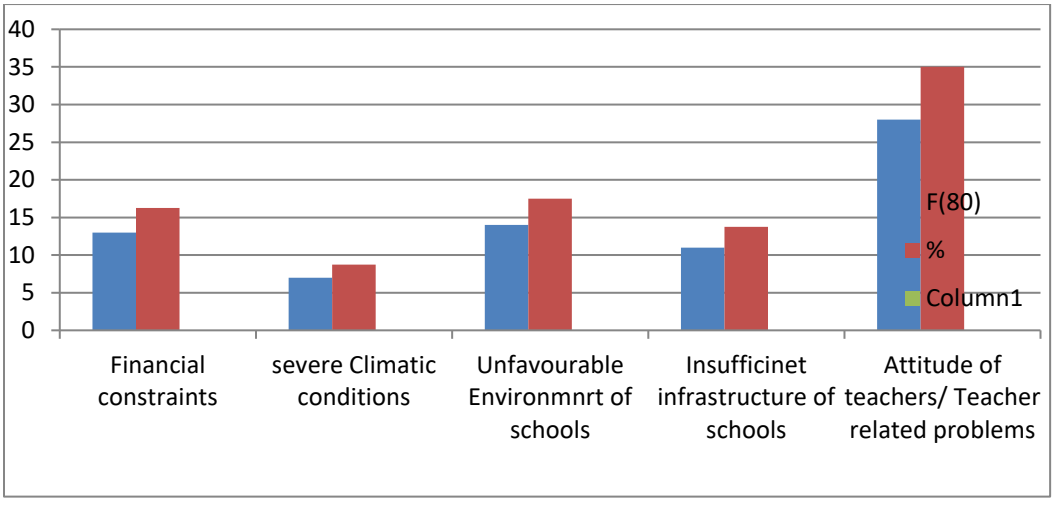

Figure 1: (Major Factors that Influenced Dropout Students)

The above figure-1 reveals major reasons that are reason behind the dropout of Kulhaiya Students. There are several factors worked behind dropouts. The chief reason behind was teacher related problem. 35% students left the school due to teacher's related problems. 17.5 % students did not attend schools due to unfavorable environment of the school and classroom. The third reason which the figure -1 reveals is 16.25 % students could not continue their study because of financial constraints, whereas 13.75 % dropouts expressed that school had insufficient infrastructure and classrooms. 08.75 % respondents responded that the severe climatic conditions were not favorable to them. Devastating floods and scorching temperature prevented the children from attending the schools. 6.25% of the students were against the formal education and school education. They wanted to continue their paternal professions. 2.5 % students dropped out of the schools because of bulling by their peer groups. These were the prime factors which directly and indirectly effects on dropout issues.

Table-2 Trend Analysis of Enrollment and Dropout at Elementary Level Vs. Secondary Level

Different Level Of Students	**Total Enrollment**	**Total Dropouts (%)**	**Total Dropout in (%)**
At Elementary level	6030	2403	39.85
At secondary level	933	221	23.68

Source: field survey, October 2019 0f (20 schools)

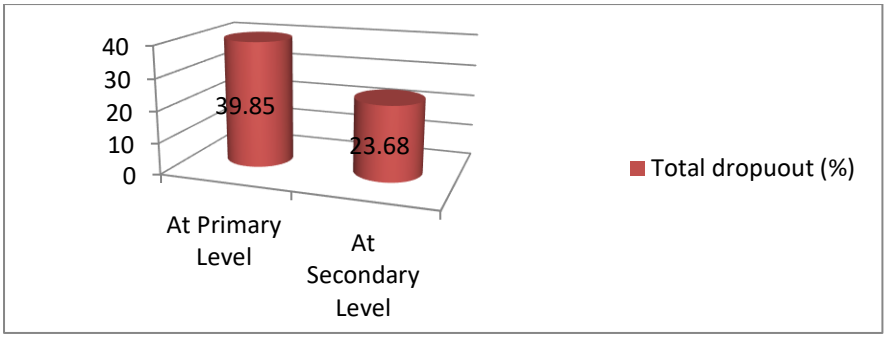

Figure2: Dropouts at Different Level in the School Education

Figure-2 shows the percentage of dropout of students at different level. The figure-2 reveals that the total dropout at Elementary level was 39.85%, whereas at the secondary level it was 23.68.

Table-3 (Comparison of Kulhaiya Dropout Students vs. Non-Kulhaiya Dropouts)

Different Level	Total Admission	Number of Total Dropout	Number of total Kulhaiya Dropouts	Total Dropout Students (%)	Kulhaiya Dropout Students (%)
At Primary level	6030	2403	1450	39.85	60.34
At Secondary Level	933	221	98	23.68	44.34

Source: field survey, October 2019.

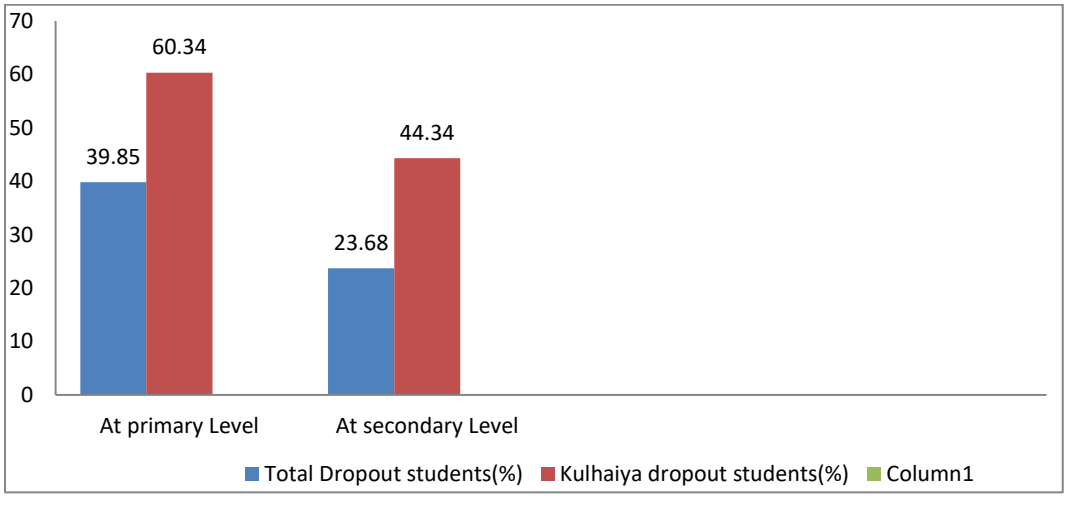

Figure-3 Compare Kulhaiya Dropout Students with Other Community Students

Figure-3 shows the comparison of kulhaiya Community dropouts with Non-Kulhaiya dropouts. This was huge variations between them. Figure-3 indicates that the total dropout at Primary level is 39.85 % whereas the percentage of drop out of Kulhaiya student is 60.34%. It is clear from table-3 that out of 2403 school dropouts the total number of Kulhaiya dropouts is 1450. It indicates that the Kulhaiya students trend in dropping out is far much than Non-Kulhaiya dropout students. The gap between Kulhaiya dropouts and Non-Kulhaiya Dropout is 20.49%. As far as at secondary level is concerned, the Table-3 clearly reveals that out of 221 droppers the total Number of Kulhaiya droppers are 98. Total dropouts at secondary level is 23.68 %(Figure-3), whereas total Number of dropouts of Kulhaiya is 44.34%. The gap between Kulhaiya Dropouts and Non-Kulhaiya dropouts is 20.66%. It is clear that the gap between kulhaiya dropout and Non-Kulhaiya dropout has huge variations. This study indicates that the trend of dropout issues among Kulhaiya students is more than Non-Kulhaiya students.

Analysis and Discussion

There are various factors responsible for children dropping out which has direct and indirect with school and its environment. Respondents expressed different school related factors, teachers related factors, family related problem, financial constraints during my field visits.

On the basis of data analysis in detail, researcher has identified the factors that have influence on dropouts students as well as the variations in dropouts between Kulhaiya students and Non-Kulhaiya students. There are many factors that compel students to leave the schools. Most factors are common but some factors are local.

Financial Constraints: Araria is one of the most economically backward districts of Bihar. Most people have low income. They cannot afford the money for education of their children. The researcher observed that the family size is big, so for them it not possible to bear expenses of money for their education. People have been still fighting for their basic needs. They have no more job opportunity and source of income. Most of them were farm laborer so they wanted to engage their children in farm activities rather than sending them to school. It is clear from figure-1 that 16.25% students had left the school due to financial constraints. They wanted to study but due to paucity of money they could not continue their studies. They had to assist in father's work in farm or in factory. Many wanted to migrate to some different place to find work so that they could contribute some money for their livelihood.

Severe Climatic Conditions and Kosi River Flood: The Araria district is flanked by Kosi River and many small rivers which bring devastating flood every year which destroy normal life of the local people. As far as schools are concerned, most schools of this area sink by Kosi river water and heavy rains. Most time people have to shift some other places due to flood. Kosi flood affected schools remain close for uncertain period

which effects student's willingness to go to school again. In the rainy season, for more than three to four months schools remain closed. Figure-1 shows that 08.75% students drop out of their school due to severe climatic conditions or Kosi flood.

Unfavorable Environment of Schools: Many schools are in apathetic conditions in term of infrastructure, lack of library, playground and teaching and learning resources. Most school in this locality were deprived of basic facilities, which discourage students to attend school. The Bihar and Central government fails to assist to schools satisfactory budgets which lead to poor learning environment. The outcome of poor financing in school sector is the increase of dropout from the school especially from economically backward class. School environment plays a pivotal role in learning and teaching process. The conditions of schools were not favorable for students and also for teaching and learning activities. 17.5% (figure-1) of the respondents claimed that environment of schools and classroom is not favorable for their study. This is also one big factors that result in dropout. Many studies indicate that attractive and conducive environment attract students towards school.

Insufficient Infrastructure of Schools: During extensive field observation, it was noticed that the school buildings and their campus was not in good condition. Figure-1 reveals that 13.75% respondents discontinued their study because of improper infrastructure of schools. The playground, library, computer lab, separate toilets were unavailable in the most of the school schools. During field visit, researcher also found the poor conditions of the school. Most school have only single storeyed buildings with some rooms. There was no separate room for different classes. The location of school was also far from homes. For junior students it is very difficult to attend schools daily. There were no accessible options for transportation. There was no bus available on school timing.

Teachers Negative Attitude/Teacher Related Problems: Teachers play multiple roles in shaping students' career and act as powerful role models for their students. It is clear from figure-1 that the teachers related problems are the key factors influencing the dropout. Teachers are the main component of school. Figure-1 and Table-1 reveals that 35% students discontinued their study due to attitude of teachers. Students told that teachers remain absent from school for long period. Further, they responded that the teachers don't teach them honestly and sincerely. Students and their parents expressed that teachers didn't take interest in teaching activities. They told that to send children to school is fruitless and time -wasting. The study reveals that teachers are habitual late comers, teacher's absenteeism and also talked about presence of negative attitude towards education. In short, the teachers related variables caused dropout directly and indirectly in the school education in Araria district.

Compare of School Dropouts at Elementary Level vs. Secondary Level: The researcher wanted to know the trend of school dropouts at different level of the Araria

district. The study reveals that the drop out at Primary level is at top. 39.85% (figure-2) students discontinued their study without completing their 8th class. They couldn't complete their elementary education. It is the highest dropout rate amongst the district of Bihar. At the senior secondary level the study shows that 23.68% school students left their school without completing their 10th Board or matriculation examination. At these two stages, more dropouts have been seen at Primary level where the dropout rate is 39.85% than 23.68% at secondary level

- **Analysis and Compare of Kulhaiya Student's Dropouts vs. Non-Kulhaiya Dropouts**.

This study reveals that there is difference between Kulhaiya dropout children and Non-Kulhaiya dropout children. It is found that the dropout rate is more among Kulhaiya children than the Non-Kulhaiya children. It is clear through figure-3 that at the primary level the total dropout rate is 39.85% whereas Kulhaiya dropout rate is 60.34%. At the Secondary level the total dropout rate is 23.68% whereas the dropout rate among Kulhaiya students is 44.34%. It is quite clear from figure-3 that the dropout issues are more among Kulhaiya children than the Non-Kulhaiya students in this given district. The figure reveals clearly that the gap between Kulhaiya dropout and Non-Kulhaiya dropout is very large.

Conclusion

The problem of dropout had seen in the education system in all stages not only in Araria District but in the whole world. There were seven causes because of which the students dropped out and these were financial problems or poverty, severe climatic conditions/Kosi river flood, unfavorable environment of schools, insufficient infrastructure of school, teacher related problem, Bullying related issue, and cultural barriers. 35% students had left the school due to their teachers. Teacher's absenteeism, their negative attitude towards students learning ability, lack of talented and content rich teachers, absence from classes, habitual late comer were the factors that had created disinterest for studies among the students. This created negative opinion among parents, so parents did not send their children to school regularly. They thought that it is wasting time and energy. Even students liked to stay at home or help parent's work. The second big factor for dropping out of the students from the school is unfavorable environment of school. 17.50 %(Figure-1) students had left their school due to poor learning environment of schools. Many schools have no sufficient classroom, no teaching material, no facilities in library, no computer teaching based tools, traditional teaching methods. All these things compelled the students to drop out from the school. Third major cause had been seen the poverty. 16 %(Figure-1) students had left their school due to their financial issues. Their parents had no sufficient income and they could not afford expenses for education. There was also bullying and fear among dropouts. They did not

like to attend school due to embarrassment and insult. Peer groups and senior fellow teased them when they scored low marks in their examinations and tests. They felt low and discouraged if they couldn't do satisfactory performance in the school activities. Cultural impact also had been seen on attainment of education. Many parents didn't favor formal school education. They wanted to involve their children in earning money. They wanted to continue their hierarchal profession. They expressed that school education and certificate or degree is not necessary for their work. So many students left their school without completing their secondary level and started to work with their parents. This study also identified that there is no favorable and supportive society for school education and higher school education.

The study found that the trend of dropout of different level, Elementary Level and Secondary level. Most devastating situation had been examined. At the primary level 39.85 %(Figure-2) dropout cases has been found, which is so miserable. It is the highest dropout rate of the Seemnachal area (East part of Bihar) of Bihar. At the Senior Secondary level, the dropout rate is 23.68 %(figure-2),At the secondary level, the condition is better than at Elementary This study separately dealt the variations between Kulhaiya dropout students and Non-Kulhaiya dropout students. Study shows that dropout rate among Kulhaiya students is high at all two levels, at primary level and secondary level. At primary level dropout rate of kulhaiya is 60.34% comparatively Non-Kulhaiya dropout rate is 39.85 %(Figure-2).The difference between this dropout at the primary level and secondary level is 20.49%. At other side at secondary level the dropout rate of Kulhaiya is 44.34% whereas the Non-Kulhaiya dropout is 23.68%.The gap at secondary level is 20.66%. It is quite clear that at all stages, dropout rate is higher than total dropout.

Suggestions

For solving the problems and challenges of dropouts, government should take strong steps and remedial measures with ground-level needs to be adopted. It needs concrete measures can be taken up. The key factors behind dropout is teacher related cause. A serious complaint was received by students and parents regarding irregular classes in the school. In this matter the principal and administrative head should take stern steps. Inspecting officer should inspect and supervise the school regularly and draft some teacher training programme and workshop from time to time so that teachers can alter their attitude towards their professional responsibilities. Teachers may get more facilities, incentives and teaching material so that they can use it during teaching and learning process. It will boost and create interest in teaching.

The infrastructure facilities should be improved in the school. School buildings and surroundings should be made more attractive in order to reduce the problem of dropout. Around the school premises flower and fruit bearing trees should be planted. Library should be modernized with books and magazines. It is should be make more accessible

and approachable for the students should be motivated to access and consult library for making reading habits. Each school must be made available of lavatory, beautiful ambiance of School, drinking water facilities. Separate toilet facilities should be made available in the co-educational institutions. Schools should provide multiple subjects so that students can select subjects according to their passion and traits. This is required so that students do not fail due to wrong and imposed subject combination. Multiple failures contribute to stagnation, which consequently leads to dropout. Facility for selecting right combination of subjects should be introduced. Poor economic condition also was one factor for dropping out of students. Many dropped out as they could not afford tuition fee and other expenditure. Hence, provision for providing proper residential hostel facilities should be provided in remote area. Government should provide scholarship and financial support to the needy and financial hardship students. In other words financial assistance may be extended to these needy students. The transport facilities of the whole interior area of the district are not satisfactory. Students cannot attend classes regularly mainly during rainy season. During raining season the condition of roads were so devastating. The roads were loaded with Kosi River water and heavy rain. There is no bridge on rivers so students could not cross the rivers thereby resulting to stoppage of attending schools. Transport facilities should be improved and make more accessible by the government of this area. Our prevailing formal education system with a uniformed, teacher-centered method, book-centered learning, rigid curriculum, examination system should be altered.

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