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RESEARCH REVIEW ARTICLE

Research in English Language Education in India

RESEARCH PAPERS

Implementation of Guidance and Counselling in Schools by the
NCERT's Trained Teacher Counsellors: A Follow-up Study

Concept Attainment in Mathematics and Its Predictors

Cooperative Learning: An Effective Teaching Learning Strategy for
Mathematics

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
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EDITORIAL

This issue of *Indian Educational Review* carries one research review article on the theme of English language education, three research papers and two summaries of ERIC research projects.

Beginning with January 2018, each issue of the *Indian Educational Review* has started bringing out surveys of research of Indian studies conducted during 2000 to 2015 on a specific theme concerning school education and teacher education. The January and July issues of 2018 carried out the research surveys on the themes of environmental education and education of children with disabilities, respectively. The January 2019 issue carried the research survey on the theme of social science education. The present issue contains survey on '*Research in English Language Education in India*' by R. Meganathan. It covers various issues such as language policy and the role and place of English language in education, multilingualism in school education, language curriculum design, materials in English language teaching, methods and processes of teaching of English and how English language classroom operates in the diverse Indian contexts. The importance of mother tongue as medium of instruction, need for adopting communication oriented processes, development of appropriate materials, and continuous professional development of teachers have also been highlighted in the review.

Three research papers have also been included in this issue. The first paper by Shraddha Dhiwal titled the '*Implementation of Guidance and Counselling in the Schools by the NCERT's Trained Teacher Counsellors: A Follow-up Study*' evaluated the extent to which teacher counsellors prepared by the NCERT have been implementing guidance and counselling services in the schools. The second paper titled '*Concept Attainment in Mathematics and Its Predictors*' by Sunil Kumar Upadhyay attempted to find out the contribution of logical reasoning, mathematical creativity, socio-economic status and concept attainment model on the attainment of mathematical concepts. Roohi Fathima in her paper '*Cooperative Learning: An Effective Teaching Learning Strategy for Mathematics*' reported that cooperative learning enhanced the understanding of students in mathematics.

The issue also contains summaries of two recently completed ERIC projects. These are—'*Study of Existing Pedagogical Practices, Issues and Challenges of Inclusive Education in Chandigarh*' by Harpreet Kaur and Sneh Bansal, and '*Work Education and Entrepreneurial Intention among the Students of Higher Secondary Schools in Imphal West District, Manipur*' by Khundrakpam Devananda Singh.

Academic Editor

INDIAN EDUCATIONAL REVIEW

The *Indian Educational Review* is a bi-annual journal, brought out by the National Council of Educational Research and Training (NCERT), New Delhi. The journal publishes articles and researches on educational policies and practices and values material that is useful to practitioners in the contemporary times. The journal also provides a forum for teachers to share their experiences and concerns about schooling processes, curriculum, textbooks, teaching-learning and assessment practices.

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Research in English Language Education in India

R. MEGANATHAN*

ABSTRACT

English language education in India is vast and complex. Research, both in school and higher education during the current and past decades reflects the felt realities and the idealism and warrants addressing the needs of the new millennium. This review of research traces language policy and the role and place of English language in education, multilingualism in school education, language curriculum design, materials in the English language teaching, methods and processes of teaching of English and how English language classroom operates in the diverse Indian contexts. Research on different literacy development and language skills, English language teaching at the university level and English for specific purposes, particularly English for engineering education, use of ICT in English language teaching, professional development of language teachers and teaching young learners, are also reviewed with a view to understand how research has progressed during the last decade. The tension between the demand for English language education, both as a language and as a medium, and the ideal of mother tongue based multilingualism; the three models of curriculum development in the States — adoption of National Curriculum Framework (NCF) fully, adoption of NCF with modification and development of a new curriculum based on the ideas of NCF and their implications on the English language curriculum are well illustrated in the studies reviewed. There is a call for a shift to communication oriented processes like communicative approaches and task based language teaching particularly at graduation level for meeting the demands of higher education and job market. Research also brings out the constraints in the English language education in terms of the English language

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environment in school, teachers and materials leading to varied disparities in the delivery of English language in the classroom. In sum, research findings warrant for action for a harmonious and cognitively sound language policy. A policy that calls for an engaging curriculum and materials which promote learner's contact with English language and learner-learner interaction in the classroom is what research findings recommend. This should be achieved with the instrumental support of continuing professional development of teachers and learner friendly assessment.

सारांश

भारत में अंग्रेजी भाषा की शिक्षा व्यापक और जटिल है। वर्तमान और पिछले दशकों के दौरान विद्यालयी और उच्च शिक्षा के क्षेत्रों में किया गया अनुसंधान इसकी वास्तविकताओं और आदर्शवाद और नई सहस्राब्दी में अंग्रेजी भाषा शिक्षण की आवश्यकताओं को दर्शाता है। इस शोध समीक्षा में भाषा नीति और शिक्षा में अंग्रेजी भाषा की भूमिका और स्थान, स्कूल शिक्षा में बहुभाषावाद, भाषा पाठ्यक्रम डिजाइन, अंग्रेजी भाषा शिक्षण के लिए सामग्री, अंग्रेजी के शिक्षण के तरीके और प्रक्रियाएँ और अंग्रेजी भाषा कक्षा विविध भारतीय संदर्भों में कैसे संचालित होती है, पर ध्यान दिया गया है। साक्षरता विकास और भाषा कौशल, विश्वविद्यालय स्तर पर अंग्रेजी भाषा शिक्षण और विशिष्ट उद्देश्यों के लिए अंग्रेजी, विशेष रूप से इंजीनियरिंग शिक्षा के लिए अंग्रेजी, अंग्रेजी भाषा शिक्षण में आईसीटी का उपयोग, भाषा शिक्षकों के व्यावसायिक विकास और युवा शिक्षार्थियों को पढ़ाने से सम्बंधित शोध की समीक्षा की गई है। अंग्रेजी भाषा शिक्षा की मांग—भाषा एवं सीखने के माध्यम के रूप में, मातृभाषा आधारित बहुभाषावाद, राज्यों में पाठ्यक्रम विकास के तीन मॉडल — राष्ट्रीय पाठ्यचर्या की रूपरेखा (एनसीएफ) को पूरी तरह से अपनाना, संशोधन के साथ एनसीएफ को अपनाना और एनसीएफ के विचारों पर आधारित एक नया पाठ्यक्रम विकसित करना; और अंग्रेजी भाषा के पाठ्यक्रम पर उनके निहितार्थों के बारे में इस समीक्षा में चर्चा की गई है। शोधों में उच्च शिक्षा और नौकरी की मांगों को पूरा करने के लिए विशेष रूप से स्नातक स्तर पर संचार दृष्टिकोण और कार्य आधारित भाषा शिक्षण जैसी संचार उन्मुख प्रक्रियाओं में बदलाव की आवश्यकता पर बल दिया गया है। शोधों में अंग्रेजी भाषा शिक्षा में होने वाली कठिनाइयों को भी दर्शाया गया है, जैसे— विद्यालयों में अंग्रेजी भाषा में शिक्षा देने के लिए उपयुक्त वातावरण, शिक्षकों तथा सामग्री का अभाव इत्यादि। संक्षेप में, शोधों में एक सामंजस्यपूर्ण और संज्ञानात्मक भाषा नीति की आवश्यकता पर बल दिया गया है। शोधों में एक ऐसे मनोहम पाठ्यक्रम एवं सामग्री विकसित करने पर बल दिया गया है जो कक्षा में शिक्षार्थियों के बीच अन्तःक्रिया विकसित कर सके। यह शिक्षकों के सतत व्यवसायिक प्रशिक्षण एवं शिक्षार्थी के अनुकूल मूल्यांकन द्वारा प्राप्त किया जा सकता है।

Introduction

English language education in India is an impressively large and highly complex phenomenon endowed with major strengths along with equally large failures and limitations (Tickoo, 1996 and 2004). This complex situation can be traced in research themes, findings and policy statements during the last five decades as scholars have attempted to find empirical evidences in the way English has shaped itself as a second language. The change in the status (role and place) of English language from a colonial legacy to the prominence that it has gained today, is another development, which has attracted researchers over the last three decades, besides language policy and medium of instruction. Researchers have also concentrated on the effectiveness of various methods and approaches to second language teaching-learning and language learning/acquisition, attempting to understand its different dimensions. Research on Continuous Professional Development (CPD) of teachers, use of ICT in English language teaching, teaching English to young learners, teacher research, classroom research and English for professional and specific purposes are the emerging areas of research, which this review discusses.

Earlier surveys of research in education in India (Buch, 1974 and 1979; NCERT, 1977; 1991; 1997 and 2007) revealed the trends for further research and action. Of the six research surveys conducted so far, the fourth (NCERT, 1991) and sixth (Devaki, 2006) surveys contained a separate section for language education and language learning research. Other surveys saw the language education research subsumed in curriculum, materials and methodology research. All the surveys in their analysis brought to the notice that language education in general and English language education in particular, could not meet the education system demands related to expansion, provisions and quality dimensions and learner related (individualised learning) issues. The demand for English language and English medium has been well traced in the researches three decades ago. Language policy, development of materials and individual skills have also been explored. Most of the observations of this review are in consonance with the inferences of the previous surveys and have implications for policy and curriculum planning and implementation.

This review analyses the studies which have been drawn from doctoral dissertations, research papers, research reports, articles, books, chapters and monographs written during 2004 to 2015.

Research on language policy and the role and place of English language in education, multilingualism in school education, materials in English language teaching, methods and processes of teaching of English and how English language classroom operates in the diverse Indian contexts are reviewed. Research on different literacy development and language skills, English language teaching at the university level and English for specific purposes, particularly English for engineering education, use of ICT in English language teaching and teaching young learners has also been reviewed.

Language Policy and Role of English Language in the Education

The National Commission on Education (1964–66) described English as ‘a library language’ and a language of higher education. This library language, over the period of six decades, has become the language of popular demand in school education and the language of higher education. The National Policy on Education (NPE) 1986 emphasises the principles of mother tongue based multilingualism whereas the four National Curriculum Frameworks for school education brought out in the years 1975, 1988, 2000 and 2005 lay emphasis on contextualisation of English language teaching suited to India’s diverse multilingual characteristics. The changing role of English in the socio-political spheres is reflected in the curriculum planning and implementation. Introduction of English language in school, which was earlier planned as a third language to be introduced in Classes V or VI and even in Class VIII (NCERT, 1975, 1988), is now being done from Class I in almost all the States (NCERT, 2006a; Meganathan, 2011). It has become the ‘common’ second language across the country. The National Curriculum Framework 2005 (NCERT, 2005) observed in its position paper on Teaching of English in the new socio-political situation that ‘the Introduction of English is no longer an academic question, it is a political response to people’s demand’ (NCERT, 2006a).

The Story of English in India (Krishnaswamy and Krishnaswamy, 2006) traverses the journey of English language and its multi-dimensions in India. Growth and development of English in India, with a view to redefining the aims and goals of teaching of English in post-independent India and the various phases of development and expansion of English in India reflects how English language has been seen as an inevitable part of Indians, though not a language of masses. These phases include the use of English as an

instrument for commerce and transportation, growth of English in education, the dissemination phase of English gaining the status of second language, the identity phase of conflict between the emotional *angrezi hatao* (remove English) brigade and rational English for the development group and the globalisation period of 1990s.

The English Next India (Graddol, 2010) brings out how a country with its liberalised economy, addresses the demand for English language education and English as a medium of learning. The huge demand, real or overstated, could not be catered to, with its diverse contexts and categories in terms of resources for schooling and school systems. How English language education needs to be planned for complementing and supplementing the Indian languages in a multilingual country and meeting the social demand for upward mobility is seen as a major challenge given the diversity in curriculum planning and schooling. Typology of schooling and the quality of English language teaching could be seen from the determinants of English language environment in schools, the English language teacher and their proficiency and pedagogical processes of the classroom (Kurien, 1997; Nag-Arulmani, 2000, 2005; NCERT 2006b). This creates hierarchies in the way the schools 'deliver' English language education.

Selvam and Geetha (2009) trace 'class perspective' in the context of Tamil Nadu. Schools are of three types — A, B and C, divided in terms of location and resources, which determine the quality of English language teaching-learning. The 'A' type of schools are located in big cities and are attended by upper middle class children. English language proficiency of both teachers and learners here are higher than all the other categories of schools. The second 'B' type of schools are also found in big cities and in smaller towns and cater to the middle class people who cannot afford high fees. Here the learners are not as easy and confident with the English language as their peers in type 'A' schools. The last type 'C' schools are the ones located generally in small and mofussil towns, catering to rural households that want their young ones to know English. 'Neither the teachers nor the students in these schools move in an English speaking world in the way that their counterparts in the cities do. But there is a greater anxiety about learning English in these institutions' (Selvam and Geetha, 2009).

Another dimension is the caste hierarchy in the access to English language and fluency of learners in English language,

which Ramanathan (1999, 2005) finds through the institutional education practices. Students belonging to the lower strata of society (Scheduled Caste and Schedule Tribes and Other Backward Classes) have been socialised in Gujarati medium schools in Classes K-12, who have to contend with English at the tertiary level. Illaiah (2013) emphasises the English language for Scheduled Castes as a right: “Within 200 years of its introduction in India, it (English) has become the language of easily about 100 million people. Its expansion in future will be several folds faster than earlier. It has become a language of day-to-day use for several million upper middle classes and rich. The poor and the productive masses have a right to learn the language of administration and global communication.”

The demand for language is revealed in attitudes and loyalties. In a domain analysis and attitudes towards English language, Hohenthal (1998; 2003) found that English is the language of formal communication and it is becoming a language for information and communication for certain sections of the Indian society. Though there is a strong tendency to see one’s regional language as an instrument for regional identity and associate national identity with Hindi language. On the other hand, English is considered to be the language essential for knowledge, scientific advancement and development. In his understanding of English language education and the question of Indian nationalism, Dash (2009) argues that the vernacular in India is as much a site for the production of power and privilege as English. Nationalist characterisation of the vernacular is as problematic as the democratic other of English in the contexts of caste and class and the complexity of both the vernacular and English in cultivating elitism in India. Learners at the secondary stage express their preferences to English as a language and as a medium for instrumental reasons. The impact of English as an international language is felt in the day-to-day use of English in academic and social settings (Koul, 2001; Hussain, 2012).

Social attitudes towards English language in the context of Bihar indicates that the demand (both overstated and real one) for the language is very positive, for it is assumed to be instrumental for personal progress and national economic development, for workforce, social life, identity and social status and for higher education (British Council, 2016).

Economic value of English language and the returns to English language as a skill for employability and a life skill have been felt during the last two decades. More experienced and educated workers receive higher returns from English-language skills. 'The complementarity (i.e., mutual benefits) between English skills and education appears to have strengthened over time' (Azam, Chin and Pradesh, 2010). The more educated among young workers earn a premium for English language skills, whereas older workers across all education groups earn a premium with or without English.

Introduction of English as a language, though left to the school systems in the states, is felt to be posing threat to the tribal, minor and minority languages (Mohanty, 2006; 2008; 2010a and 2010b). Learning through one's language as a linguistic right and harmonious language learning has been stressed for sound pedagogical practices (Mallikarjun, 2004). Implications of introduction of English without facilities are felt on the acquisition of languages (Mukund, 2009). However, the preference to the language could not be made to wait till a qualitatively sound practice is introduced. While taking stock of the present situation of English language teaching in the country, Meganathan (2013) found the problems and constraints which the English language teaching-learning faces in terms of curriculum design, material development, English language teachers and the hegemonic role of English over the Indian languages. *National Curriculum Framework (NCF) 2005* makes a case for ensuring resources for teaching-learning of English as a language during the formative years to provide for quality language learning. Language remains a serious academic, pedagogic and policy concern (in terms of number of languages to be learnt, medium of instruction and so on) in school education (Kidwai, 2016).

'Uncritical promotion' of English language as per the belief that the language is in demand, has been found to be undesirable for harmonious language learning and cognitive development. Researchers (e.g., Mohanty, 2010; Phillipson, 2006, 2008; Kangas, 2000) believe that the English language acts as 'a killer language' in these situations. While the demand for English language and English medium education from every quarter makes the language a 'neutral language' in terms of ethnicity, religious, regional and linguistic groups and 'the language that unifies India, it has become a medium to maintain inequalities in society' (Baik and Shim, 1995). As Anderson (2012) asserts, 'the language remains inaccessible

to those who are disadvantaged because of their economic situation, their caste, or both'. This is supported by conclusions such as, 'English teaching in school is built around establishing the intimidating power of English' and 'English is a language that allows a certain social and economic mobility; an access to an entire culture that one may aspire to', in an analysis of textbook from gender perspective (Bhog, Mullick, Bharadwaj and Sharma, 2009).

Nunan (2003) finds that the emergence of English as a global language has impacted the policies and practices in all the countries of Asia-Pacific region. There are significant problems including confusion and inconsistency, at the level of policy. This is in consonance with the study of English as a foreign language in the primary schools in States in Asia (Hayes, 2016), which also raises the concern that how an 'all English' policy will result in 'children ending up learning little or no English, frustrating the intentions of National Governments to develop English proficiency amongst the wider population which is, in turn, supposed to contribute to economic development'. Drawing on evidence from India and Thailand, Hayes (2010; 2017) questions the economic rationale for introducing English into primary schools and argues that decision on the starting age at which to teach English should, instead, be considered from an educational perspective by taking system constraints into account.

The movement of English language from third language to a 'common second language' within the nationally accepted language-in-education policy or strategy of the three language formula, is revealed in the language policy implementation studies by Meganathan (2011, 2015b), and Annamalai (2004, 2005, 2008, 2013). The role that English language attained as an instrument for upward mobility and the language of choice in education is evidenced not only as a part of globalisation, but also as a part of the decolonisation where English makes its way to be an Indian language (Annamalai, 2005, 2008, 2013). Mohanty (2010a) describes how 'mixed medium within a school and within a classroom' works. English is used to teach the 'prestigious subjects' like Mathematics and Science, whereas, Hindi or other languages are used to teach 'less prestigious' subjects like History and Social Sciences. Hindi used to be the second language in most of the non-hindi States in India. Now, it has been replaced by English and it is relegated to the position of a third language subject in most non-hindi speaking states.

Mother Tongue Based Multilingualism and the English Language

Mother tongue based multilingualism projects were initiated by the State governments in India as a result of global advocacy by the UNESCO (2003, 2015) and the demand for protecting indigenous languages, in an effort to bring in the mother tongue of learners belonging to tribal and minor communities to school education and to ensure mother tongue based medium of learning. Two such projects in India, one in Andhra Pradesh and the other in Odisha, yielded positive results showing the effect of mother tongue based learning in situations where children begin their learning in their mother tongue before they move to the State language, or they learn both the State language and mother tongue concurrently. Panda, Mohanty, Nag, and B. Bapujee (2011), in a longitudinal study of the Multi-Lingual Education (MLE) programme in Andhra Pradesh and Odisha, has reported that mother tongue based teaching serves as a facilitator for transition to other languages (the State language and learning of English) and helps to develop literacy and numeracy very well. Miller's (2005) study is an illustration of how language-in-education policy as implemented in schools serves as a hindrance for minority communities as the languages of the learners belonging to the minority community do not find a place in the school system. Even if the minority languages are available as a provision to study, the schools are less resourced to teach the languages in terms of availability of teachers and materials, which includes the textbook even. The incomprehensibility is compounded when children whose mother tongue is not the language of schooling, either drop out of the school or are declared as the ones who cannot learn (Jhingaran, 2005). Introduction of English language without adequate resources, particularly English language teachers, throws much greater challenges when it comes to the quality of education (Jhingaran, 2009). Scholey (2015) argues that 'students in India face real possibility of psychological and socio-cultural damage by being forced into the english medium education at a young age'. The researcher poses a pertinent question— how can learners in the lower-primary school develop useful and meaningful English language knowledge and skill and without impairing their mother tongue development at the same time?

Constraints in learning the subject in a language which is not the child's own, needless to say, is detrimental to learning of

languages as well as other subjects. Kushwaha's (2012) study on the effects of school language and home language gap with first generation learners belonging to disadvantaged groups stands as a testimony of this fact. Kujur's (2012) study on language difficulties of first generation learners in the Government Primary Schools in Delhi shows that the learners are made to undergo the language barrier because of the ill-equipped pedagogies. This supports the proposition by Heugh and Kangas (2010) in their analysis of different forms of transition in the Ethiopian contexts. Mohanty (2009), and Panda and Mohanty (2009) have shown through MLE experiment that the learning of mother tongue positively influences the learning of other languages, including English as a second or foreign language. The results of the above mentioned studies find support in studies conducted elsewhere (Cummins, 2009; Kangas, 2000; Phillipson and Kangas, 2009). This calls for a policy of sound mother tongue learning at least for the first six to eight year students for better academic achievement.

English language education policy research informs the contesting orientations in the spread and demand for English language education which has shaped the role and place of the language. The two dimensions have been brought out by research with evidence — one that it is the language of upward mobility and the language of empowerment, and the other that language plays a detrimental role in placing the Indian languages, particularly the tribal and minor languages, at a disadvantageous position. Ensuring resources for effective teaching-learning of English language in the diversified contexts, introduction of the language as a language and as a medium of instruction without resources in terms of language environment and English language teacher's proficiency as well as her pedagogical knowledge, are the major challenges brought out by the research. The other revealing aspect of the research is that English found itself in an advantageous position as the result of the developments in India in the 1990s such as the liberalisation of Indian economy and globalisation, which made it the language of international commerce and communication. It has lost its colonial notions that it carried even in the 1980s, and has become the language of popular demand and this has immense implications for school education.

English Language Curriculum

Research on the second language curriculum throws light on the processes and outcomes of curriculum development and implementation. Studies have been conducted on curriculum

making as a professional educational exercise to find evidences on how curriculum statements and processes of curriculum making assume and result in learning outcomes in the classroom and high stake examinations. Explorations into different approaches to English language curriculum and teaching have been attempted to find out the way a particular approach or method works. A theoretical exploration by Narayanan, Rajasekharan and Iyyappan (2009) advocates to meet the rising needs of the variants of general English Language Teaching (ELT) viz. English for Specific Purposes (ESP), English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). ESP marks the advancement in the conventional framework of ELT, which defines teaching requirements depending upon the specific needs of different groups of students instead of one multi-purpose course.

An unsound curriculum planning and the gap between the 'intended' and 'implemented' curriculum influence the teaching-learning of English in schools, particularly in rural areas. Meganathan (2009) analysed curricular statements and syllabi of Andhra Pradesh, Madhya Pradesh, Mizoram, Manipur and Nagaland. He reported a lack of holistic planning for introduction of English as a second language in schools in terms of basic assumptions about language learning or acquisition (how language learning takes place), learners' profile and the diverse contexts in which learning takes place, as well as the recent developments in language learning-teaching. Most States refuse to move beyond the good old structural approaches, while they stress on communication skills to help the learners for an upward movement.

Yadav (2011) studied the status of implementation of 10-year school curriculum developed in the States as a follow up to *NCF 2005* and its implementation. The study brought out the various models of curriculum development and implementation by the States across the country. Though there was a commonality in the structure and syllabi across the States, variations in the structure of schooling were found in some States in terms of material, classroom organisation and evaluation processes. There are three models of curriculum development that prevail in the country—the States which have adopted the *NCF 2005* developed by NCERT, States which have adopted the *NCF* with modifications, and the third category of States which develop their own curriculum based on the ideals of *NCF*. The study also found that the three language formula was implemented only in 14 states in its true spirit.

A study of implementation of Activity Based Learning (ABL) at the primary stage from the perspective of programme evaluation by the NCERT (2011a) revealed that the implementation processes require— (i) use of the materials developed for use by teachers and organisation of ABL classroom; (ii) development and use of self-learning materials for teachers, and (iii) development of use of other supplementary materials for classroom like audio-video CD Rom, craft work, puppet show and hand work. All the participants of the programme showed high motivation and competence in ABL. However, findings, that the village education committees (VEC) did not have much knowledge about ABL and teachers did not feel the need for using other materials in their day-to-day teaching, show the problems in implementation. Teachers were satisfied with the training components. An analysis of Classes II and IV students' performance in achievement tests conducted by NCERT at different points in time (2004 and 2008) before and after the implementation of ABL showed improvement in students' performance in three subjects, viz. Tamil, English and Mathematics.

O'Donahue (2012) reported the above curriculum change and implementation through Activity Based Learning (ABL) project and the British Council's 'Project English', which was intended to facilitate change in English language teaching-learning during the formative years of schooling. He recorded the way the trainers and teachers over the period of time, began to adopt the strategy, of what Fullan (2007) called as 'reculturing', with their aroused curiosity and willingness to learn. The study also brings out the lessons learnt from the point of view of project implementation and evaluation such as 'learning to go with flow', 'building a working relationship and open effective communication channels with those involved in the project for its smooth implementation', 'having a shared understanding of aims of the programme and who they look like in the classroom and 'recognising' the fact that the State policy cannot take every specific locality into account.

Meganathan (2013) studied the process of English language curriculum development and its initial implementation in Rajasthan and found that the pertinent aspects of curriculum development as well as its implementation include— (i) assumptions about 'what is language?', 'how language learning takes place?'; (ii) methods used question; (iii) materials used question; (iv) assessment questions; and (v) teacher development question. Authenticity is an

essential undercurrent of the whole exercise of curriculum design and implementation — authenticity of the syllabus, materials, classroom processes, in teacher becoming an authentic teacher as also of authentic assessment which makes a curriculum work well for promoting language learning. There has been a feeling of regret expressed in the findings of some of the studies. Contrived materials and less scope for language engagement in the tasks and activities contribute along with the ‘directionless’ teacher to what he calls ‘the sad-state-of-affairs’ of english language education (Meganathan, 2014). Findings of this study are similar to the one by Rajagopal (1972) conducted four decades ago.

Curriculum research has not attracted the attention of researchers much. Curricular innovations like the activity based learning (ABL), curriculum change by the States, taking the curriculum change to the teacher and into the classroom are the challenges which curriculum and syllabus research needs to address. English as a second language suffers from the lack of knowledge and understanding at State level in terms of stating the overarching aims and objectives of english language teaching-learning, in conveying the ‘ideal’ post method approach to language teaching.

Materials in English Language Teaching (ELT)

Materials play an influential role in the teaching-learning of a language, though there have been debates in the ELT profession on the actual role of materials in the teaching-learning of English as the second language and foreign language. The two aspects of materials — the potential for guiding students through learning processes and the limitations resulting from the preferences of teachers who use textbooks have been debated by the ELT professionals (Litz, 2005). Researchers have recognised the importance of materials ‘as the basis of much of the language input that learners receive and the language practices that occur in the classroom’ (Richards, 2001). Textbooks are also evaluated in terms of pedagogical understanding of language learning and theories underlying them (Bhat, 1986). Reviews of research concerning currently used ELT materials (Tomlinson 2001; 2005 and Tomlinson and Avila, 2007) conclude that most course books insist on providing explicit teaching and practices without understanding the language pedagogy.

Studies on the development of materials in English suggest that a holistic approach with concern for the learner, teacher, learning processes and learning outcomes would be effective (Meganathan, 2008). Available materials concentrate more on providing reading and writing skills while the listening and speaking skills are neglected. Providing meaningful linguistic inputs in the materials is a necessity for effective language learning to take place (Mahalingam, 2000). Materials developed as a follow up to the *National Curriculum Framework 2005*, stress the importance of linguistic as well as socio-cultural contexts of learners as inputs, recognising the learner as a constructor of knowledge. This understanding provides scope for authenticity to the tasks. However, curriculum and material development processes in the diverse Indian situations demand a much deeper understanding for developing expertise in material development for 'diversity within diversity' (i.e., variations within each State/region) (Meganathan, 2008). Materials for day-to-day use and the need of alternative materials, besides the textbooks, is another dimension which demands expertise on the part of the teacher to become material developers. Effects of the material have shown result on the two major skills viz. listening and speaking skills, which the textbooks tend to ignore for reasons not known (Kohli, 2009).

A comprehensive analysis of textbooks produced (prior to *NCF 2005*) at the national level by NCERT and the textbooks of Uttar Pradesh, West Bengal, Tamil Nadu and Gujarat from the perspective of feminist critique of nation and identity reveals how language pedagogy itself is perceived on 'what constitutes pedagogy of teaching language frame content. The purpose of language is primarily seen as comprehension and value generation'. Recent developments in language pedagogy, including language as a tool, skill, a lens through which meaning-making occurs, are not reflected when texts are used for learning tasks and activities (Bhog, Mullick, Bharadwaj and Sharma, 2009).

Textbook reviews and analysis reveal that a textbook can be a restrictive mechanism with its contrived and unauthentic materials and tasks which would not provide opportunities for meaningful engagement with language for learning (Meganathan, 2013, 2014). There are, however, studies which show that textbooks developed with a sound understanding of pedagogy and contexts of the learning can become an effective tool for language learning (Brundage, 2004). Transition in the methods of language teaching from audio-

lingual method to communicative approach to constructivism as advocated by the *NCF 2005* and its reflections on materials has been examined (Vajpayee, 2012). One major development is that the textbooks attempt to inform the teacher through ‘teacher’s pages and explicit advocacy’ of the desired language pedagogy. There is a need for situating English language teaching in local cultures as well (Singhal, 2014). For example, studies reveal how English language dominated the national imagination (Advani, 2009). English language learning programmes should consider social setting and prepare learners to deal with varied situations with successful communication. Materials such as newspaper clippings, magazine articles, and audio visuals should be used in the classroom; home culture can be used as a yardstick to which learners develop an informal understanding of the target culture (Singhal, 2014).

Bhattacharya, Madan, Sarkar and Basu (2012) explored the English language textbooks of Classes III, IV and V published by the NCERT, with the perspectives of multiculturalism, pluralism and literature as an input for language learning at the primary stage. Textbooks were analysed ‘as they are’ (i.e., as intended) and ‘in action’, that is as perceived and used by teachers and learners in the classroom. The views and understanding of textbook developers were also obtained. The study revealed that the textbooks reflected current pedagogical understanding. However, the selection of texts and tasks in many lessons did not reveal the intention of an ideal textbook. Teachers are left with no other materials to complement and supplement the textbook, thereby leaving them to explore ways and means to find materials to use in the classroom. The study also came out with characteristics of an ‘ideal’ English textbook for the students of primary and middle school. These characteristics included— (i) textbook should stimulate children’s interest, curiosity, be enjoyable as well as facilitate multifaceted learning; (ii) it should experiment with genres, and play with the notion of a text; (iii) it should encourage student-initiated learning; (iv) text-based exercises should move away from the idea of any one correct answer, and give space to creative interpretation and subject engagement; (v) grammar-based activities should instil interest and should not be given precedence over other activities; (vi) preaching values, morals and social awareness should not be the explicit intention of each chapter; (vii) textbooks should try to relate to students’ everyday contexts as far as possible; and (viii)

language used in the book should be simple, but with multiple registers and varieties of English.

Studying textbooks from the perspectives of power, gender and promotion of reading and literature reveals how material needs to cater to and serve as an input to language processing leading to learning of English (as a second language) and also for developing critical and abstract thinking (Srivastava, 2012; Chawla, 2011). However, studies show mixed trends which demand 'an informed understanding' of materials development based on the knowledge of linguistics, learning and critical pedagogy components in the selection and adaptation of materials and also reflecting assessment in the materials. Advani's (2009) analysis of the textbook shows the influence of ideology that shapes pedagogical practices in the classroom, which is conveyed through the textbooks. The shift in the construction of nationalism, modernity and identity in independent India and the development of a specific ideology of post-colonialism in Indian education policy, in turn gets translated into the state produced school textbooks, resulting in ideological debates in school education.

Singh and Choudhary (2015) examined the perception of teachers on English language textbooks for Class X prescribed by the Board of Secondary Education, Rajasthan and Central Board of Secondary Education and found that the aims and objectives of the books, design and organisation of contents in terms of text and tasks and provision for additional teaching aids do fulfil the needs of learners for learning the language. However, teachers felt that communicative aims and objectives of a teaching unit may be clearly specified and adequate coverage and integration of all the four basic skills needs to be promoted. Level of reading texts needs to be suitable for the age group and teachers' feedback may be considered important in the preparation of textbooks. Zarren (2001) evaluated specific materials for teaching of English language in order to make the teaching and learning of English language more interesting and fruitful both for the teachers and learners at the undergraduate level in India. The researcher observed that a combination of communicative language teaching and task based language teaching oriented materials rooted in life contexts are required for authentic language learning.

Development of materials, particularly textbooks, shows the trends in the process of development as well as in forming the contents of materials. The involvement of practising teachers,

connecting the lives of learners, and embedding progressive methodologies into materials through teacher's pages and engaging tasks are noticed in the materials development exercises at the national and state levels. On the contrary, textbooks in many contexts are found to be acting as a restricting mechanism with contrived materials insensitive towards the inclusion of social and cultural issues, including gender issues. Influence of ideological perspectives on textbooks is also reflected in the materials, in addition to the attempts at developing life skills and values. One major call in material development research is understanding the imperative of authentic materials and authentic tasks for engaging learners in language use in real life contexts leading to language learning with learner-learner interactions.

Methods of Teaching English and the English Language Classroom

This section is devoted to an analysis of research studies on methods and approaches, particularly prevailing communicative as well as Task Based Language Teaching (TBLT) approaches and how the methods are realised in the classroom, classroom research, English for engineering courses and ELT at the undergraduate level. Employing experimental designs to establish the effectiveness of one particular method or approach to English as a second language teaching in terms of syllabus, materials and tasks used in the classroom, studies show that methods could be localised and contextualised suiting to the needs of learners to provide exposure to and engagement with the language. Language use and learner-learner interaction in the classroom are found to be the precursor of, and essential for language development in the learner. As Agnihotri and Singh (2012) observed, 'In most of the studies, it was found that schooling and exposure were the two most important factors determining the quality of performance clearly showing that if children receive adequate exposure to the target language, their competence and performance does not differ from that of the so-called 'native speaker' in any significant way'. Devaki (2006), in her analysis of language learning strategy research, observed that 'there is a gap between teacher's use of strategy for ELT and students' preferences for the communicative approach as the strategy for language learning'. Opportunities for language use in the classroom are limited so that whatever input learners receive does not enable them to 'intake' so that they use

the language for purposes. Jangid (2004) in her study of Whole Language Approach to second language instruction reported that learners who undertook whole language approach were able to gain literacy and language proficiency much ahead of children who were taught as per regular conventional syllabus. A study of relationship between adjustment and achievement (Saraswati, 2005) reported the effect of the classroom processes on learning outcomes. Learner-learner and learner-teacher interactions serve as an instrument for increased learning outcomes (Sarkar, 2006).

The curricular revision which resulted in the development of *NCF 2005* in India could be seen as an illustration of the emerging development in the methods of language teaching. The *NCF 2005* advocates the whole language perspective and language across the curriculum approach with an eclectic perspective for promoting language learning based on the philosophy of social construction of knowledge (Vygotsky, 1978). Contextualisation of the themes and authenticity of tasks as well as providing an enabling environment clearly do not endorse any particular method or approach to be adopted by the teachers. It is imperative on the part of the teachers to have an understanding of the basic tenets of language pedagogy in order to develop their own flexible strategies for promoting language learning. The study of classroom transaction processes in government and private schools in Manipur reveals that the schools lack resources both in terms of materials and teacher input in facilitating interaction and this makes the students disinterested (Neumie, 2013).

Perception of students and parents on bilingualism as a methodology for teaching and communicative approach to language teaching in the Jammu region (at the secondary level and those who pursue professional and non-professional courses) shows that the combination of two or more methods work effectively leading to informed eclecticism (Nancy, 2011). The study found that disinterested lecturing and dictation as methods of teaching led to students resorting to only the prescribed textbooks. Non-involvement of teachers in syllabus and material development; teaching for tests and passing the examinations, and lack of English language environment in the classroom are the major reasons for not realising the communicative approach to language teaching. However, research reveals that the use of the local languages to teach and interact, promotes English language learning. Similarly, Upadhyay (2012) highlights the wrong practices of teaching English

as a second language, which refuse to move beyond the good old translation method. Teachers' lack of understanding regarding the objectives of teaching English, lesser or no attention to oral skills, vocabulary learning and product based writing activities, are the reasons for students not being able to acquire the English language. This calls for a sound professional training of teachers in the second language acquisition theories and language pedagogy.

An investigation into communication and its purpose in second language teaching and learning by James (2010) shows that 'the link between language and the communicative functions has proved beyond doubt the influence of the pragmatic communicative functions on the formation and evolution of linguistic structures'. Communicative competence in the second language emerges from the implicit knowledge that develops consequent to the learners' interactive and reflexive experience, assisted by the socio-cultural environment. Instruction generally aims at developing explicit knowledge that may be assessed under standard test conditions through controlled measuring processes. The study also makes a case for proactive bilingual communication in the classroom which may lead to language modification and linguistic restructuring. In the process of communication, learners also learn things through language in the sense that learning is both, a meaning system to be built up by the learners and the means by which they develop knowledge systems. Therefore, one of the primary intentions to learn a second language could be the need to widen the scope of experience and knowledge acquisition. This is further supported by Sircar's (2000) study which advocates dialogic teaching for literary interpretation as an instrument for reading, and interpretation of literary text by questioning the objectivity which is imposed on the reader in any narrative. Dialogic teaching paves the way for moving beyond the text and questioning it.

A study of discourse oriented pedagogy (introduced in Kerala after the curriculum revision in the year 2009) on upper primary students (Class VI) reveals that learners show marked improvement in all the four skills viz. listening, speaking, reading and writing. Effective planning and implementation of curriculum revision served as a contributing factor for the improvement in English learning (Balakrishnan, 2014). Effectiveness of reciprocal teaching over traditional teaching method in the milieu of language aptitude proves that the reciprocal strategies like collaborative learning, interactions among learners and teachers promotes language

learning. All the variables viz. gender, rural and urban showed positive effect of reciprocal teaching (Vani, 2004). The curriculum evaluation study by Yadav (2014) in the context of Haryana called for total revamping from curriculum design to assessment in order to promote effective interactive pedagogy in English language teaching at the tertiary level.

It is reported that multi-sensory approach to the teaching of English as a second language through the use of dramatic activities by employing non-verbal communication aspects of language makes the English teaching classes enjoyable (D'souza, 2011). Use of dramatic activities to grab the attention of students enhances their self-confidence, self-esteem, and understanding of literature and improves the speech and fluency of learners. Teachers with their pedagogical knowledge, attempt to teach students the opportunities to provide meaningful communication to build a bridge between the classroom and the real world outside. This provides a variety of activities and interaction to maximise students' talking time, develop their creativity and inter-personal as well as intra-personal intelligence (D'souza, 2011).

Based on the proposition that linguistic competence is directly proportional to strategic competence and the learners need to have a synchronous acquisition of three components i.e., form, content and use. Reddy and Santha (2003) found that meta-cognitive strategies viz. orientation, planning, monitoring, texting, repairing and evaluating are helpful in overcoming language learning difficulties. The study defined language learning difficulties as obstacles for normal language development and usage. For example, effect of lack of understanding in the use of phonological, morphological and syntactical rules; difficulties in conceptualisation of ideas and formulation, and lack of communicative function lead to language learning difficulties. Similarly, Vani (2013), in her study of effectiveness of synectics mode (i.e., problem solving) of teaching on the development of English language creativity, established a significant and positive correlation between (achievement) motivation and creativity performance in English; between the dimensions of creativity— poetic diction, story construction, descriptive style and vocabulary use by girls.

Asif's (2008) investigation brought out the language-literature dichotomy by assessing the use of literature in language teaching at the Senior Secondary Level in Aligarh, Uttar Pradesh. The survey on 300 students and 26 teachers at senior secondary level

revealed that literature was instrumental in learning vocabulary, grammatical knowledge and mastery of language along with developing imagination, creativity and critical thinking. Both students and teachers valued poetry teaching as instrumental for language awareness and learning.

Golshantafti's (2013) quasi-experimental study investigated the effect of three types of corrective feedback, viz. prompt, recast and explicit correction with metalinguistic information on elementary EFL learners' acquisition of definite and indefinite articles. Results indicate that different types of corrective feedback (CF) do not have differential effects on EFL learners' second language acquisition. The explicit corrective feedback group received feedback through provision of the correct form that was accompanied by the linguistic information on the error, whenever an article error occurred. This type of correction helped learners to locate the exact problem and thus the learner was made to think about his production. As soon as the learner became aware of the existence of problem in his production, its nature and its locus, the primary condition for the effectiveness of CF, which was 'noticing', was fulfilled. Provision of metalinguistic information following the explicit correction made learners aware of the rule at a deep level, which is referred to as 'understanding'.

In a study of development and implementation strategies to enhance communicative approach for English language teaching among 'student-teachers', Thakkar (2012) found that the use of English language by 'student teacher' in their writing aspect was up to the mark while their speaking aspect was found comparatively less as they used English language sometimes or rarely in their verbal communication. 'Student teachers' perception revealed that their efficiency in reading was much higher than other skills viz. listening, speaking and writing. The 'student teacher' were of the opinion that the knowledge of English language is very essential at present. Khatoon's (2004) study on the needs of teachers at the Senior Secondary Level and both pre-service and in-service teacher education in the context of communicative language teaching, revealed that there is a greater need for teachers developing competency to teach English language through communicative approach and three-month practicum for pre-service teachers, in order to develop teaching competencies in CLT.

The effect of pupil and institution related factors on the development of English language skills of secondary school

children informs that intelligence, socio-economic status, attitudes towards English language and proficiency in the language of pupils affect English language learning. The institutional factors like instructional strategies, library facility and co-curricular activities in English have a close relationship with learners' learning of English in and outside the classroom (Rajeswari, 1999; Rajeswari, 2012). Likewise, Singh (2007) studied how pupil-teachers develop language teaching competencies through micro-teaching approach and found no significant difference between experimental and control groups of pupil-teachers.

Studies on the methods of teaching English reflect the inherent diversity in the understanding of methods and approaches to second and foreign language teaching which prevail since the 1990s when the methodology of language teaching started getting questioned with the advent of post method condition (Allwright, 1991; Kumaravadivelu, 2003, 2006; Prabhu, 1987). Prevalence of varied approaches to language teaching, methods and strategies could be traced from the research processes and findings. Diversity within the study of 'newer' approaches and methods of English language teaching is illustrated by the concentration of research on communicative approach and Task Based Language Teaching (TBLT) and discourse based language teaching. Findings could be summed up as 'methods and strategies', which provide scope for and realise effective engagement of time with the language through learner-learner interaction, working with language and teacher-learner interaction to promote English language learning.

Studies on the Effectiveness of Task Based Language Teaching (TBLT)

Task Based Language Teaching (TBLT) has shown an impact on curriculum, syllabus and material development over the last two decades. Research has been conducted to establish the effect of TBLT as a method or strategy in the varied Indian contexts employing tasks to analyse the oral communication skills of tertiary level students. Ramamoorthy (2006) found that tasks can be used for developing implicit knowledge which develops incidentally as a result of the effort to communicate. Fluency in the second language can be gained when learners attempt to use the second language in real operating conditions leading to automisation. Group and collaborative work promote high amount of language practice which, in turn, increases motivation as negotiation for

meaning. Parthiban (2011) reported the effectiveness of task based language teaching in improving the listening skills of learners at secondary stage (Classes IX and X). The study also found gender differences. The male students first learnt grammar, vocabulary, pronunciation, syllabification, stress and meaning, while the order for female students was pronunciation, stress, syllabification, vocabulary and meaning. The study, notably, could not find any difference between rural and urban learners.

TBLT has immense potential to enhance the communicative competence of English language learners. Implementing TBLT in a large class is an uphill task as organising individuals in pair or group for tasks poses problems for 'pre-task, while-task post- task structure' as rubrics by the teacher could not be received by all the learners. This leads to lack of understanding regarding the goals of the tasks. Recommendations such as judicious use of L1 and flexibility of time for 'while-task' (learner's working time with language in the task) paves way for the adaptation of TBLT in Indian contexts (Dutta, 2015). Tasks used in the teaching of reading comprehension need to include meta-cognitive strategies which are essential for reading as meaning making rather than cognitive strategies which are universal human strategies (Zeba, 2009). Sivakami (2014) examined learner autonomy in task based language teaching as an innovative strategy and found improvement in learners' speaking skills with the provision of liberty for using vocabulary and sentence structures, and the learning process of their own. Speaking skill was found to be influenced by the medium of instruction of the learners and education of parents and other variables such as gender and locale. Motivation of learners and its relationship with autonomy emerged to be a crucial factor.

Task Based Language Teaching (TBLT) is, in a way, a dominant and current method of language teaching in the ELT scene today. Most studies employ experimental design to find the effectiveness of TBLT over the traditional methods or strategies of teaching English. TBLT, as the findings go, promotes learner autonomy, learner-learner interaction leading to language processing effectively when the tasks are designed with sound pedagogical understanding and the teacher facilitates learners for language use. It can be inferred from the findings of research which reported that TBLT can serve as an instrument for meeting the current demand of English language skills required for academic and employability purposes. This needs to be considered with all seriousness in curriculum design at

the secondary and higher secondary level of school education and at the undergraduate level. Researchers believe that TBLT can be an effective instrument in meeting the demand of English language skills for graduates who look forward to enter their professional world.

Classroom Research

The classroom research has had a long tradition in English as a second language. Allwright and Bailey (1991) perceive it as classroom-centred research. 'Classroom-centred research is just what it says it is, research centred on the classroom. It is different from research that concentrates on the input given to the classroom (the syllabus, the teaching materials, etc.), or on the output from the classroom (learner test score).' Ellis (2008a, b) describes three main categories of empirical research in language classrooms— (i) classroom process research, (ii) the study of classroom interaction and L2 acquisition, and (iii) the study of formal instruction and L2 acquisition. The studies reported here on classroom research, explored all the three categories. Teaching English in less resourced contexts has shown that inputs and exposure to the language and interactions enhances the language learning in school (Amritavalli, 2007). Prasad (2013) made an attempt to examine what happens in the classroom when the teacher and learners come together to learn English. The qualitative analysis of classroom language showed that the teacher's language dominates over the learners' peer response and interaction. Teacher questioning and teacher response were studied more than the learners' response and interaction in the schools.

The researchers have paid less attention to study the listening and speaking skills and the problems in the classroom. Ramanathan and Bruning (2003) concluded that barriers such as large classroom and low parental education lead to less home support. Also, the predominance of the first language at home and assessment procedures are detrimental to the development of oral English language skills. A clear move to interactive methods and strategies through engaging tasks has been advocated, which leads to eclectic ways of approaching the language classroom. The functional view of language and language learning to communicate, comprehensive pronunciation, and multilingualism are the strategies which teachers adopt in the classrooms for promoting second language (Latha and Fathima, 2016). An investigation into

the effectiveness of English language teaching strategies employed by the primary teachers with Collier's Conceptual Model of acquiring a second language found that the effective teaching strategies like teacher behaviour, lesson delivery and sequencing of content and learning expectation of learners added to their repertoire (Piller and Skillings, 2005).

Burmon's (2004) analysis of errors committed by students at +2 (Classes XI and XII) and university levels in the Garo Hills of Meghalaya revealed that the learners had problems in different areas of language operation. The sources of these errors, other than the mother tongue interference, were related mostly to teaching inadequacies on the part of the teachers and unsuitable teaching materials. Inadequate syllabus, teacher's lack of knowledge of how a second language is learnt, other systemic issues such as teacher deployment and large classrooms are some of the reasons for learners not paying attention to the correct use of language. In a mixed method research, Vidhyanathan (2015) did not observe the difference between English language teachers with and without hearing impairment on aspects such as their knowledge, attitude and practices towards teaching hearing impaired students.

It is evident from the above discussion that the classroom research has concentrated on studying classroom interaction—teacher-learner interaction, learner-learner interaction and whole class interaction, and its effect on language learning such as the use of language by learners and prevalence of English language in the classroom ambience. Findings clearly inform that language use is a precursor as well as core to language development in learners. Large classrooms, teacher's language proficiency and lack of pedagogical knowledge, and unsuitable materials are reported to be major constraints in English language learning. Advocating a kind of mixed methodologies, an eclectic way of planning and conducting the classroom processes, the studies expect the English language classroom to connect with the lives of learners and their lived experiences. However, there is a lack of studies in the area of language disability and disability for learning.

ELT at the University Level

General English Language Course

Demand of English as a skill in the job market and as an academic skill for higher education is increasing. There is a clear demand for

English language proficiency and English as a life skill for upward mobility. Manavalan's (2002) investigation on comprehension and communication skills in English in the context of undergraduate classes or courses found that the courses are more theoretical in nature and are characterised by a lack of workshops, discussions, paper readings and such creative activities, emphasises on rote learning; and lack of opportunities for developing speaking skills. These are the major hurdles in equipping learners to develop communication skills. The other causes contributing towards the development of insufficient skills among learners are large class sizes (which do not allow the teacher to give personal attention to the learners), absence of internal assessment, pure examination-orientation and faulty assessment procedure, poor quality textbooks, absence of guidelines (like hand books) for teachers, and so on.

Embedding an action research model in an experimental design, Kalanithi (2006) studied the effectiveness of teaching prose through communicative language teaching to science and arts undergraduates in their core English. Use of vocabulary games and communicative games through guessing, word grid, puzzles, mime, etc., as individual, pair or group work, contextualised grammar employing the pre-task, while doing task and feedback design were found to be effective. Bamon's (2008) investigation on perceptions and attitude of teachers and students of undergraduate courses towards the purpose, course material, methods and examination processes of teaching of English in the colleges of Shillong with 600 students from arts, science and commerce stream and about 100 teachers, established that contact with English language play a very important role in the linguistic repertoire of the undergraduate students. Interestingly however, much of the English learnt was not through formal instructions but from out-of-class experiences such as interactions with peers, reading of magazines, journals and of course the media. Students, irrespective of gender and course of study believed that the methods of teaching English at the university level are not supportive of acquiring the required proficiency to function academically and professionally. Teachers underscored the need for developing communication skills and were defensive of expressing any opinion about their students. Surprisingly, teachers themselves did not have much interaction in English with their colleagues and students in the college. The perspective that ELT as a discipline is separate from literature

teaching in English was an unknown concept to a majority of teachers of English in this region.

English language curriculum at the graduation level in the universities does not present an encouraging situation. The course design, contents and the classroom methodologies do not cater to the immediate and long time needs of learners (Bhattacharya, 2010; Jaya, 2009; Pandya, 2015). Jaya's (2009) exploratory study on teaching-learning of English as a second language focuses on the graduation level courses in arts and science colleges affiliated to Manonmanium Sundaranar University in Tamil Nadu. The study found that the teachers and learners perceived the English language curriculum as not promoting communication skills. The objectives of the curriculum were not defined well and the curriculum needed revision in order to meet the academic and professional needs of learners. Bhattacharya (2010) brought out the divide between language and literature in the general English language course at the under graduation level with an analysis of syllabi and perceptions and opinions of teachers and students at the Assam University. The study inferred that the existing course did not meet the need for developing communication skills of learners and equipping them to be employable. It was suggested that the general English language course for undergraduates should include a balance between language to promote skills of listening, speaking, reading and writing, and literature. Pandya's (2015) investigation calls for radical changes in the design and planning, as well as an effective execution of ELT programme, at higher education level in India. He argues for conducting needs assessment at the curriculum and classroom level, creating a learning culture in colleges and universities and professional growth of teachers. The encouraging note is that studies that investigated the use of ICT and multimedia for teaching of English yielded results (Vadivambal, 2012).

English for Engineering

With the spread of professional education, particularly technical education and as a result of improvement in the enrolment and completion of learners in schools, engineering education found its importance as a tool for job and upward mobility. English for specific purposes, English in engineering courses both for academic learning and to function in workplace gained importance. Studies on English in the professional courses present the demand for

functional English for academic and work purposes. P'Rayan (2008) examined the Engineering English course offered at the colleges affiliated to the Anna University in Tamil Nadu with the view to design a more profession oriented English as a life skills course. He found the (then) existing Engineering English course to be examination oriented. There was a wide gap between students' final examination scores in English and their proficiency in the target language. The reasons for this gap were the absence of effective syllabus, methodology, course organisation, assessment and learning outcome. Similarly, Kainth's (2014) study in the context of engineering English in Punjab finds the difference between what the teachers and learners perceive to be Communicative Language Teaching (CLT) and what actually gets translated into the classroom. Teachers resort to traditional ways of teaching due to large class size, faulty syllabus, lack of resources, flawed evaluation system and low proficiency of learners in English.

Ananthan (2013) investigated the technological competency of teachers and students and found facilitative effect of technology in improving communication skills of engineering undergraduates. Solanki (2014) also found the English language skills among engineering students deficient for proper application in the workplace context and also for real-life situations. There is a need to incorporate technical communication, interpersonal skills and general English language proficiency elements in the course for engineers. Mayavan (2014) investigated Communicative Language Teaching (CLT) as a tool for enhancing English language proficiency of first year engineering students of colleges in Chennai. He found that teachers' intercultural competence and critical thinking ability played a key role in the implementation and development of context-sensitive methodology for the first year B.E./B.Tech students. Likewise, Jayaprakash (2015) found that teaching in technical courses needed communication skills. Teachers' communication skills— oral, written and visual along with pedagogical skills, helps in realising the conceptual as well as the communication skills of undergraduates in engineering colleges. Content knowledge, experience and qualifications, personal character and professional achievements add to the strength of the faculty. Communication skills of teachers result in students, learning what the faculty intend to teach.

A kind of uneasiness and urgency in the demand for English language as a professional skill (a life skill as claimed by many)

for academic and job purposes is felt by the findings of research in ELT at the university level, both for general English courses (graduation core English) as well as professional courses like engineering. Empirical evidences from the studies reveal that the learners' major constraint is acquiring communication skills as well as advanced language proficiency to work in professional and academic settings. Constraints like large classrooms, lack of engaging time with English language, teachers with no or less knowledge of language learning aspects i.e., language pedagogy and language acquisition learning theories to enable learners to learn the language, less or no room for promoting listening and speaking skills among learners who are 18+, adopting to 'lecture only' method are found to be the causes for learners not being able to 'undertake' english language learning. Literature vs. language divide, which is a result of teachers' literature-based academic background makes teachers teaching the texts as literary texts rather than using them as inputs for language processing. Engineering English research expresses much more regrets than general English courses, for it underscores the need for English language as an essential skill both for acquiring the technical skills of engineering and also for finding high paid jobs.

Researching Literacy, Reading, Writing, Listening and Speaking, Vocabulary, and Grammar skills

The last decade witnessed a number of research studies on the various aspects of language learning in terms of skills. Writing seems to be the focus of researchers as a number of studies on development and mastery of writing are reported. Listening and speaking appear to be of least interest as only one research on speaking and listening could be found.

Reading instruction and reading pedagogy during the formative years of learning from psycholinguistics' view have shown that a lack of understanding of language pedagogy and processes of reading instruction results in learners not being able to start reading by meaningful decoding, leading to mechanical reading practices such as loud reading, reading without comprehension, etc. Learners in schools affiliated to CBSE perform better in reading than their counterparts in other schools (Agarwal, 2001). Children's story comprehension was uniquely related to children's emergent literacy; there was a positive correlation between the literacy environment of children's home and their English oral language

and literacy skills. Parents' book reading practices moderated the role of English in home in predicting children's English receptive vocabulary, such that high levels of book reading compensated for low ambient levels of English at home (Kalia, 2009). Youth libraries experiment in tribal language situations also prove that the availability of print language rich environment promotes reading (Sathyanarayanan, 2011).

School textbooks are written in standard English while learners are continuously exposed to many varieties of Indian English outside the classroom. Spoken English language instruction is always greatly influenced by the regional flavour or variety used by the teacher. Exposure to standard English may therefore be limited just to grammar. This affects the planning, processes and delivery of English language teaching with a view to promote spoken aspect of the language (Bhaskararoa, 2002).

The focus of teaching-learning of English from reading and writing shifted to include listening and speaking as a result of societal demand. Students' desire to learn English as a second or first language rather than a foreign language is shown by the dramatic growth of English medium schools. However, the demand for re-focusing of skills is not supported by the changes in curriculum, pedagogy or teacher education. In a society where english proficiency guarantees economic and social upward mobility, it is necessary to have much greater investment in research that informs policy and practice (Ramanathan, 2016). Peer-tutoring played a significant role in enhancing verbal abilities (i.e., verbal comprehension, word fluency and logical thinking) in hindi language learning. The experimental group of students made significant higher gain in comparison to their counterparts (Singh, 2008). Effectiveness of language games in teaching time and tenses (present indefinite, present progressive, simple past, past progressive and future time) in rural Kannada medium students has been demonstrated (Hemantharaju, 2015). The study did not find differences due to parents' educational qualification, occupation and gender in learning grammar through language (Hemantharaju, 2015).

Writing employing process based approach, provides scope for engagement with language and collaborative learning when carried out as pair and group work. Engaging undergraduate general English students in revision-editing cycles with maximum student participation proves the effective process based writing as

a collaborative exercise. The research reports that girls perform better than boys in the writing skills. It also states that there is a correlation between writing and speaking skills as the latter is enhanced by writing skills and there is a significant correlation between writing skills and class performance (Gupta, Joshi and Gunpal, 2015). Interaction effect of language proficiency, emotional intelligence and reasoning ability on teaching competency of pre-service primary teacher trainees found to be in positive relationship between language proficiency, emotional intelligence and reasoning ability with some categories of samples it was not found having any relationship (Neetha, 2008). Rupa (2013) reported that adequate time and attention was not paid to writing as a skill, in spite of the scope in the syllabus and board examination. Time allocated to teaching of English was comparatively less than other content subjects, which hampered writing skills in the classroom. Communicative approach is more suitable (other than the behaviouristic and cognitive approach) to teach vocabulary and an eclectic approach offers more potential for vocabulary learning or teaching than each of the other approaches (Verna, 2009).

One common thread which runs through all the themes of English language education research analysed in this review, is the knowledge and understanding of language pedagogy and its use in the varied Indian contexts. Research in literacy development, reading, writing, listening, speaking, vocabulary and grammar also brings out the lack of pedagogical understanding in the curriculum. The design of materials is also a major problem in achieving the goal of language development in learners. This has led to adoption of practices like loud reading without understanding and teacher dominated classrooms. However, use of games in english language learning, adopting the regional variety of English to connect with the social life of learners, peer tutoring, process based collaborative writing, register based vocabulary (media based vocabulary) facilitate language development (Sarifa, 2013).

Use of ICT in ELT

Studies on the use of different technologies show that audio-visual presentations and computer use are effective strategies for retention and to enhance global listening comprehension. Media based non-interactive strategies enhance learner's ability to guess the meaning of words and to understand and identify the key words and local listening comprehension (Balansubramanian, 2000).

According to Lunyal (2012), WebQuest could be seen as the most promising application of constructivist practices. 'What makes it really useful for learners is that it is designed or facilitated by their teachers who understand their requirements and limitations of their context and fashion the WebQuest accordingly'. WebQuest requires students to go beyond 'retelling and mastering factual information... to apply knowledge, engage in problem solving, creativity, design, and judgment' (Dodge, 2001). Use of computer word processing to develop writing skills among polytechnic students was found to be effective as students were able to undergo various stages involved in writing (Barbhuiya, 2011). The frequency of use of computer programmes or tool menu has positive effect on developing students' writing skills while the effect of teaching poetry through the use of multimedia courseware package has shown significant difference in the experimental group among learners. The possibility of immediate feedback and interactive features of multimedia courseware package and reinforcement also has an impact on the learning achievement of learners (Rajesh Kumar, 2013).

Ghotekar (2014) investigated the use of print media and internet as tools for teaching English language at the under graduation level to teach vocabulary and grammar in urban, semi-urban and rural colleges in the district of Nashik in Maharashtra. The study proved that the use of print media and internet to draw authentic material and to provide real life 'authentic experience' enhanced the learning experiences of learners. Teacher's experience and motivation to use print and cyber media promotes the language engagement of learners. Likewise, Arokya and Ravindaran (2014), in their study of teaching and learning grammar for teens using technological tools, found that the use of technology further facilitated learning grammar, as learners were able to internalise the forms effectively.

The use of ICT in communicative English classrooms at the higher secondary level in the context of Kerala extends beyond its motivational value to address the key outcomes of syllabus and allows students to become competent users of English (Viju, 2014). Research suggests that incorporating ICT into the English curriculum can improve writing, reading, speaking and listening skills of learners. In addition, it also supports their creativity and independence in learning through collaboration and reflection. As an interactive and collaborative medium, ICT offers students the opportunity to explore the language of texts more creatively and

develop as speakers, writers and readers for an ever-widening range of purposes in the 21st century technological age. Dabhi (2015) found that the use of modern media facilities such as internet, mobile phones and print medium proved useful in the teaching of language and communication skills. Study on the under graduate students found that using SMS, social media like Facebook and also the use of newspaper advertisements for English language learning and teaching in and outside the classroom gives an impetus for both teachers and learners. In a study of web based collocations instruction, Shahryari (2015) finds that web-based collocation instruction is an appropriate instruction for learning collocation and collocational knowledge. This strategy is a resource of fluency and accuracy in written and spoken communication. There is a strong relationship among collocational knowledge, writing and speaking ability. Pedagogical implications for further research are discussed on the basis of research findings.

Sultana (2015) studied the development of speaking skills in English among school children using technology support. The study showed how the use of technology enhances speaking skills of learners of Class VI in a Bengali medium school in the Malda district of West Bengal. Conducted as an experimental study using animated videos as technology support materials, the study found that it was effective and instrumental in enabling the experimental group perform better. Technology support therefore, made English language learning interesting and motivating.

Use of ICT in the teaching-learning of English, as a tool for improving language usage proves to be effective. Studies have shown the use of simple word processing software like WebQuest, internet, mobile phone and social media in developing language skills, grammar and vocabulary by providing authentic learning experience, in addition to increased interest and motivation of learners.

Teaching English to the Young Learners (TEYL)

Teaching young learners appears to be an area of interest to researchers these days. Studies on teaching English to young learners (TEYL) inform pedagogues and curriculum planners of the need for further diversification and flexibility in curriculum design. The studies in the Indian context attempt to understand the existing policies and their implications (Kapur, 2000). It also tries to understand the problems related to materials for teaching

young learners, whether it is the lack of availability or difficulty in accessing the available materials (Mathew and Pani, 2009). As discussed earlier, Graddol's (2010) study of the current status and future possibilities of English language and ELT in India throws light on the magnitude of the problem, keeping in mind the huge learner population and materials for quality English language education. NCERT's (2011a) study on the status of English language education at the primary level also explored the problems related to the introduction of English from Class I without much resources.

Ghatage's (2010) study makes a case for more communication oriented teaching at the primary level. Teacher's English language proficiency viz. pronunciation, vocabulary and lack of pedagogical content knowledge seems to affect English language learning in the classroom. There needs to be a balance between — (i) teachers' talk, pupils' talk and silence; (ii) teacher-pupil initiation response; (iii) teachers' reaction when the pupil stops talking; (iv) teacher diverted emphasis on content; and (v) sustained expression by pupil in the same category, are the key aspects for enhanced language engagement with English language in the classroom. Mukharji's (2007) study on the applicability of communicative method of teaching English at the primary level also shows that language use for communicative purpose with the effective teacher inputs and materials promote English language learning. Gaikwad (2003) investigates the problems in teaching English as a second language. He focussed on Classes V to VII in schools of Aurangabad district of Maharashtra with a survey of 650 teachers and by observing 150 classrooms. He found that teachers were qualified to teach and aware of the objectives of English language teaching, but could not implement the method suggested through the textbook in their classrooms. Teachers are aware to some extent, and use effective methods of teaching a prose text, poetry, grammar and writing skills, but not vocabulary and other skills.

Teaching English to young learners faces the major challenge of resource crunch in terms of materials, the English language teacher and her language use in the classroom. Universalisation of elementary education has made it possible for all children to come to school and thereby the demand for English language education, both as a language and as a medium. This has led to a huge pressure on improving the quality of English language education. Research also suggests that there needs to be a meaningful balance between teacher-talk, learner-talk and silence as also between the

use of learner's language and English language in the initial years of English language teaching.

Professional Development of the English Language Teachers

A series of research studies surfaced in the International Teacher Educator Conferences from 2011 to 2015 organised by the British Council with English Language Teachers' Association of India (ELTAI) and other agencies. Studies presented in the conferences analysed the existing pre-service, in-service training model innovations in English language teacher development, monitoring and evaluating the quality. These studies with varied processes which included experimental designs, surveys and perception studies trace the status, innovation and quality of English language teacher's professional development.

Researching the dynamism and localisation of practices in Continuous Professional Development (CPD) shows how professional development of teachers has been reshaping itself receiving inputs from the practices elsewhere as also from practices rooted in the varied Indian contexts. Baruah's (2011) exploration into training of English language teachers in rural contexts suggests ways and means of addressing the needs of English language teachers. Whereas, Pandit-Narkar (2013) brings out how the government driven top-down training initiative in Nellore, Andhra Pradesh, transformed into a powerful bottom-up response culminating in the formation of a teachers' association and the empowerment of local teachers to take control of their own CPD. Natraj's (2013) experiment in Gujarat on the other hand, studies knowledge creation at the classroom and college level, served as an instrument for continuous professional development. An inquiry into library use as a tool for teacher's subject content and pedagogical content knowledge in Bihar underscores the need for resources in school libraries for CPD (Waris, 2013). Chakrakoti (2012) found that portfolio can be a powerful tool for CPD, through his experiment using writing tasks and a process-based approach with pre-service trainee teachers in Bangalore, as a way of triggering thinking about teaching. Similarly, Mathew (2013) makes a case for keeping a diary and talking about writing as a tool for CPD, stressing the need 'for introspection and the social construction of understanding as elements in professional learning'. Shivakumar's (2013) method of teacher learning through shared vision and purpose, collegiality and the social dimensions; Menon's (2013)

account of effect of the use of social media as a mode of interaction within an overall development oriented framework; Bedadur's (2013) account of use of mobile phones to trigger and maintain the impetus for professional learning and Kapur's (2013) experiment as a mentor with Delhi teachers, are illustrations for ways and means of effective teacher professional learning.

Provision for opportunities in continuing professional development (CPD) for the teachers at a large scale, prove to be promoting what Fullan (2007) calls 'reculturing'. The British Council works in collaboration with a number of State governments (Assam, Bihar, Karnataka, Maharashtra and Punjab) to support CPD for teacher educators as well as teachers in both their language teaching skills and their English language proficiency. This is attempted by using the cascade model and through more restricted direct trainer and teacher development programmes with limited number of participants. This exercise culminated in the understanding that teachers need to 'extend beyond the traditional recipients of formal in-service training, and to a lesser extent, teacher-trainer, to encompass development for all stakeholders in the system' (Prince and Barrett, 2014). Padwad and Dixit (2014) reported how the continuing professional development policy 'think tank' initiative which resulted in creating conceptual framework for CPD in India with an understanding of three components of CPD viz. teacher priorities, institution priorities and profession priorities (adapted from SACE, 2008) and materials for teachers and teacher trainers in the form of posters and through competitions. The key issues that emerged in the exercise include — (i) significance of a shared understanding of CPD and the need for broad and holistic CPD view, (ii) systemic support, role of teacher voluntarism, importance of personalisation of CPD by teachers and (iii) significance of institution-based CPD integrated with teacher's regular work life (Padwad and Dixit, 2014).

Studies based on experiments and practices on teacher learning and continuous professional development (CPD) under the theme 'Ensuring Quality in English Language Teacher Education' (Pickering and Gunashekar, 2014) informs that teacher motivation falls under three dimensions — motivation to join, motivation to stay and motivation to grow in the profession (Padwad, 2015). It also underlines the need for teacher education to focus on English language improvement through face-to-face interaction and digital training (Hayes, 2015 and Sandhu, 2015) as well as supporting

language assessment literacy as a requirement for teachers (Mahapatra, 2015). Chakrakodi's study (2015) on the effectiveness of pre-service English language teacher training in the context of Karnataka shows the English language needs of trainees while Sandhu (2015) makes a case for accepting B1 on the Common European Framework of Reference (CEFR) scale as the required level of teacher-training before admitting aspirants to pre-service training. Studies on the effect of collaborative action research (CAR) by teachers teaching English for Specific Purposes (ESP) course reveals how CAR helped teachers to improve classroom research skills and self-reflective thinking (Chaitanya, 2015).

Professional development of the teachers gained importance with its varied models as research illustrates and outlines the practice of both the top down and bottom up angles. Teacher motivation, collegial learning, as well as adapting the aspects and practices learnt in the training in one's context through 'reculturing' (Fullan, 2007) are the effective strategies which teachers adopt for developing their pedagogical skills. However, lack of English language proficiency and pedagogical knowledge are found to be the causes for teachers' inability to deliver in the classroom. Shared understanding of continuous professional development, systemic support, teacher voluntarism, personalisation of professional development by teachers and significance of institution-based CPD integrated with teachers' regular work life are effective mechanisms for addressing the needs and quality questions in professional development of English language teachers.

Assessment

Language assessment does not notice much research during the period though it was the decade which underwent radical changes in the assessment processes as a result of the recommendations of *National Curriculum Framework 2005*. The shift towards 'continuous assessment' and 'assessment for learning' were reconceptualised and implemented to reduce the burden of examination-centred teaching and de-stress the impact of one-time written examination on classroom teaching and the processes of schooling itself. Changes in the typology of questions, scope for open ended and extrapolative questions gained momentum, which drifted away from textbook based examinations to move beyond the textbook in the teaching-learning processes and assessment as a strategy for learning. Research concentrated on the analysis of questions

of school boards in the States, and the new scheme introduced by the Central Board of Secondary Education (CBSE) as advocated by the NCERT. Chandrasekhar (2007) analysed the questions of board examinations at the end of Class X with the objectives of finding out the validity and reliability of questions and their strengths and weaknesses for a balanced question paper. Findings of the analysis revealed the sad-state-of-affairs of assessment processes in which question paper and conduct of examination play a greater role. Many question papers in English in the States did not test reading comprehension (with unseen or unfamiliar texts). Many questions in prose, poetry and extensive reading were bodily lifted from the textbooks which encouraged rote learning. Questions on language aspects i.e., grammatical aspects tested explicit form based understanding of language rather than testing integrated grammatical or language proficiency. Questions to test specific grammatical aspects such as reported speech, voice and tense, conversion of sentences— simple, compound and complex illustrated language items are tested as content. This informs the natural wash back effect of the direct explicit teaching of grammar. Language testing appeared like any content or subject test rather than the test of language proficiency. There is a need, as the analysis felt, for more emphasis to test reading comprehension and writing abilities, imagination and creativity. Incidentally most of the findings go with the analysis of Social Science question paper (Srikant, 2007) of the period from the states as the questions focussed more on knowledge i.e., information and were lifted from the textbooks.

Another research reported on the assessment of bright learners who appeared for the National Talent Search Examination (NTSE) conducted by the NCERT for learners of Class X annually, for a scholarship up to doctoral degree. A qualitative analysis of State level tests of National Talent Search Examination (NTSE) question paper and question types reveal that language based tests are difficult to translate into several languages and the language of the questions needed to be clear, precise and unambiguous. Use of unfamiliar and difficult terminology may impede the comprehension of questions. Questions should be so worded that by and large all students make the same meaning out of it (Chandrasekhar and Agarwal, 2008).

National Achievement surveys conducted by the NCERT and informal assessment conducted by NGOs like *Pratham* revealed

the learning levels of learners across the country. Conducted periodically, NCERT's achievement surveys at the end of Classes III, V and VIII study the levels of learning in each subject. Language has been tested on the basis of medium of the learners, that is, the state or regional languages. The case of North eastern India where English language happens to be the medium of instruction in most of the States and schools, and English language is tested under the language category is an exception. The parameters that are tested include vocabulary, structure, spelling and reading comprehension (of instruction, data, information or factual text and literary text). Learning achievement of Class V students in the baseline survey of 2006 (NCERT, 2006c) at the national level, found that girls performed better than boys in rural areas whereas boys belonging to scheduled caste (SC) performed better than girls. Achievement in grammar and usage was higher than reading comprehension. Twelve States crossed 60 per cent marks and three states viz. Manipur, Tamil Nadu and West Bengal crossed 70 per cent marks. Similarly, a mid-term achievement survey of Classes III and V learners revealed national average in language achievement to be 67.84 per cent. The state of Tamil Nadu performed the best with its 79.74 per cent average followed by the state of West Bengal with 78.15 per cent average. Students of 13 States or UTs performed significantly better than the national average and those of 18 States or UTs were found to have significantly lower average than the national level. However, there was no significant difference in the achievement between urban and rural learners in Class III (NCERT, 2008a). In Class V, the national average was 60.31 per cent, whereby 14 States or UTs performed above the national average. Performance in grammar and usage component of language was higher (65.21 per cent) than reading comprehension and writing (55.23 per cent) (NCERT, 2008b).

Learning achievements at the end of upper primary stage (Class VIII in some states and Class VII in other states) in the mid-term survey revealed the national average achievement in language as 57.58 per cent with Maharashtra as highest performing state (67.44 per cent). Only two states performed higher than the national average, with five states having significantly less average than the national level. Overall achievement of 21 per cent students was less than 40 per cent and this shows the low level of language development in learners.

ASER (Annual Status of Education Report) survey with rural learners conducted by PRATHAM, reported learner achievement of

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English language separately. In a test of a set of simple English reading and comprehension tasks, it was found that 48.9 per cent children enrolled in Class V could read English words or more, and 22.5 per cent could read simple English sentences. Among the children enrolled in Class VIII, 47 per cent could read sentences. Of those who could read words or sentences well above 60 per cent, could convey the meaning in their own language (ASER, 2013; Banerjee, 2012).

Assessment research is a matter of concern as the number of research studies is few. The developments in curriculum design and materials development, which call for a paradigm shift in assessment during the last decade, demand much more concentration of research in assessment schemes, processes and effects and outcomes of assessment. Wash back effect studies could have informed the system for reforms in the processes of examination system itself. Question paper analysis and typology of questions studied in the review serve as a warning for improvement. Achievement survey at the end of Classes III, V and VIII is a mechanism for diagnosis of the school system at the States as well as national level, for the purpose of planning school curriculum and teacher development. ASER survey is a reality check to find whether whatever is taught or learnt has been retained or forgotten; for it assesses understanding and language use in real life situations away from school.

Discussion and Conclusions

The landscape of English language teaching both at school and higher education levels is vast, diversified and complex. Thus, the English language education in India presents a serious challenge as well as generous opportunities for research in terms of themes, research processes and sample size. Adding to this is the prevalence of English language in professional and social settings with its forgotten colonial legacy and its indigenisation to become an 'Indian' language. Research on language policy in education and the role and place of English depicts the current crisis posed by the language in education as well as in the geopolitical scene in India. The language has become a 'common second language' and is in demand. With its development agenda, India now faces the problem of provisioning quality English language education. The demand for English (whether overstated or otherwise) has resulted in creating hierarchies and disparities in the delivery of English

language education in schools from the dimensions of locale (rural vs. urban), class and caste. Preference to English language is felt for upward mobility driven by instrumental motivation. The fact that the language is now introduced from the first year of schooling in all the states and the demand for English medium, has implications for a meaningful planning and implementation of English language education suiting to the varied contexts.

Learning through a 'foreign' language, which before the mother tongue or home language is fully developed, would lead to subtractive bilingualism against additive bilingualism or multilingualism [as proposed by the national language-in-education policy for mother tongue based multilingualism, the three language formula and the *National Curriculum Framework (NCF)* for school education]. Studies on the impact and effect of Multilingual Education (MLE) programme prove that children acquire literacy in all the languages they learn and in the content subjects when they begin their schooling in their mother tongue and move on to add other languages. The argument that resources should be ensured before the introduction of English as a language, is countered by the argument that the language cannot wait till the conditions are met. Introduction of English as a medium from Class I in schools run by the government to meet the societal demand, the trend which began at the dawn of this century and continues with rigour in this decade needs to be answered with sound pedagogical understanding. Researchers have begun questioning 'uncritical promotion of English' in their proposal for mother tongue based multilingual education and language policy planning from educational perspective.

The current status of English language and demand for the language as a skill for employment and economic development, and the kind of unrest reported calls for a sound planning for a suitable language education in terms of language-in-education policy, language curriculum design and implementation, development of materials and assessment. The notion that English medium or 'English knowing education' is synonymous with quality needs to be demystified with an understanding of quality education. Research into the role of English in skill development in South Asia (Erling, 2014) with an analysis of policies and interventions and based on existing evidence brings out— (i) the link between quality education and economic development, (ii) benefits of education in relation with other socio-economic variables, such as gender,

sector, class and location, and (iii) benefits of education may not be equalising, particularly in India. It is not English alone, but quality in education would help in economic development. Research in the context of Francophone West Africa on the introduction of English medium reveals the detrimental effect of English medium (Coleman, 2013). The strong assertion by Erling (2014) serves as a warning from the South Asian study, 'The strong beliefs about the power of English make it all the more important for policy-makers and project implementers to communicate clearly about the value of basic education — and that skills in English are only likely to be of value if a strong education base is in place. English language education, if part of skills development, should first build on language literacy and numeracy, and support the development of generic employability skills.' This dilemma is evident while analysing the studies on language policy and multilingual education. On the one hand, English as a life skill whereas on the other, English for developing communication skills for engineering and in higher education. Enabling conditions for language learning, particularly English language learning, in terms of the language teacher and her proficiency in the language, authentic materials situated in the learner's context, and prevalence of (English) language environment would serve the purpose of providing an ideal English language education. Teaching of English as a language would, in a way, minimise the uncritical and overstated demand for English medium education sans resources.

Regrettably not much research has been reported on curriculum and syllabus development and curriculum evaluation. However, a number of studies can be seen on the development of material in English as a second language. Focus on curriculum development and implementation, from the perspective of curriculum change, presents both 'top down' and 'bottom up' models. Innovative curriculum change initiatives such as Tamil Nadu's Activity Based Learning (ABL) and the curriculum revision with the three models of— (i) adopting the *National Curriculum Framework (NCF)* fully, (ii) adaption of *NCF* with modifications and (iii) developing new curriculum as a new exercise based on the ideals of *NCF*, indicates the top down and bottom up approach as well as an eclectic approach to curriculum development prevalent in the country. Basic tenets of language pedagogy viz. assumptions about language and language learning, language pedagogy, comprehensible input for language learning, language processing and output, learners'

context, materials and tasks from learner's lived-in experiences, need to be taken into consideration as essentials for English as a second or foreign language curriculum.

Research on materials development (particularly textbook) focuses both on materials 'as intended' and 'in action' in the classroom, leading to make a case for an ideal, authentic textbook. Emphasis on listening and speaking rather than reading and writing is not seen as an encouraging trend in the materials, though they aim at achieving communication skills. Looking at the textbooks through a gender lens reveals how the bias is reflected in 'positivist' as well as 'charity' approaches. Researchers make a case for promotion of multiculturalism and critical thinking as elements of language learning for which the materials need to find narratives, themes and tasks of authentic engagement. Tasks for critical thinking and literature as instruments of language use, which promotes language learning could also be added to the list which the textbook research calls for inclusion in an ideal textbook. Materials also need to provide space and scope for creative interpretation and both language and content engagement.

Concentration of research, particularly doctoral research, on the recent methods and approaches to English language teaching is an indication of the trend of search for a method to promote language skills within the newer methods in the current post method era (Kumaravivelu, 2003; 2006). Studies devoted to establishing the effectiveness of method or approach, particularly the communicative language teaching (CLT), task based language teaching (TBLT) reveal the needs for teachers to reflect on the time spent (by learners) in working with language for developing the language skills rather than the teacher dominated teaching method. These research studies were, in a way, warranted by the current English language needs of learners for academic and professional purposes and job market. Addressing the needs of the times, the studies found and advocated the practice and strategies for increasing the students' contact with English language. It also suggested tasks and opportunities for engagement with language, such as learner-learner interaction, learner-teacher interaction, and language processing, as essentials for learners undertaking language learning in order to make use of 'language input' for effective output. This method is not to be used in linear form. This supports the postulates based on research by Kreshan's (1985) Input hypothesis, Long's (1981; 1989) Interaction Hypothesis and

Swain's (1985; 1995; 2005) Output Hypothesis. What is needed to be realised is the understanding that language learning takes place when learner's attention is drawn to meaning, not on the form explicitly and this could be achieved by adopting any method or a combination of methods, moving beyond the regular methods. Tasks as work plans, both for cognitive engagement and linguistic engagement, could be achieved when the teacher has an informed understanding of the methods of language teaching and second language pedagogy from the perspective of learner's context, culture and motivation of learners. This would embed use of learner's language as a resource for teaching-learning of second or foreign languages leading to an informed bilingualism or multilingualism. Classroom research studies, though few in number, are illustrations of the strategies mentioned above for language learning. Constraints such as lack of understanding of language pedagogy, unsuitable materials, and large classroom come in the way of language engagement and language use by the learners.

Instrumental motivation is driving the demand for English language education as reflected in the studies on methods of teaching of English, classroom process studies as well as English language education at the university level and in terms of teaching English for professional courses. Studies on English language teaching at the undergraduate level demonstrate the dire need for equipping learners with English language skills for upward development, job market and higher education. There is a call for shift to language or communication oriented courses from completely literature based courses in the general English language courses. This warrants a serious introspection from the perspective of curriculum planning and implementation of language education at the university level. Literature needs to be an instrument for language learning. The issue of concern, it could be argued, is more of teachers' orientation (how to teach, understanding learner needs) and the methodology question rather than the 'contents' of the course. This also draws our attention towards the composition of students who enter the university without required English language skills. One hypothesis is that these students do not appreciate the literature based curriculum as shown by the findings of ELT practice at the university level. Striking a balance between the promotion of communication skills, appreciation of literature and abstract thinking skills,

would need to be the purpose of language education course and curriculum at any level, be it school or higher education. But the theses emerging out of the studies, particularly on general English language course at the university level, stresses on the immediate need for developing communication skills and skills of professional and academic purposes. Similarly, English for Specific Purposes (ESP), particularly English for technical (Engineering) purposes is felt to be needed as the studies in engineering english curriculum and processes, express frustration in the way current engineering english curriculum works. Communication skills are stressed as the single most important requirement for both academic and professional purposes. Researchers believe that the courses based on Communicative Approach to language teaching and Task Based Language Teaching (TBLT) would serve the purpose. Undergraduate English language curriculum, both general English and English for technical courses, needs to address this convincingly.

The impelling question could be whether the liberal university education should shape the youth for an intellectual pursuit where the search for knowledge and knowledge creation is prime using language as an instrument for thought and ideas, or language as a mere skill for market and employability. One needs to develop the basic proficiency in order to use the language for higher order skills, like abstract thinking and creative writing. The latter depends on the former. A sound language curriculum should aim at both. The two levels of language skills have been well observed by research and pedagogues. Bruner (1975) made the distinction between communicative and analytical competence while Donaldson (1978) called it embedded and disembedded language. Cummins (1984) makes a distinction between Basic Interpersonal Communication Skills (BICS) and Cognitively Academic Language Proficiency (CALP). BICS is the language for day-to-day communication and it refers to the development of conversational fluency (Basic Interpersonal Communicative Skills) in the second language, whereas CALP is the use of language in decontextualised academic situations. How the curriculum in English language at the university level would address this issue, is the question this review seeks to answer, but inconclusively. This calls for further explorations and action.

Research on specific skills viz. listening, speaking, reading and writing shows the trend of addressing the needs of language skills at school and university level. There is also a demand for training teachers in order to equip them to develop writing skills in learners

that includes conceptualisation, jotting down, drafting, redrafting and revision. Studies on comprehension and literacy development through varied strategies show the way for teachers and material developers to introduce focused activities as instruments for literacy and language development in the learner. Experiments on vocabulary teaching-learning underscore the need for teachers to adopt varied ways and means leading to an informed eclectic way of teaching vocabulary. Unfortunately, research on the other two skills viz. listening and speaking, is abysmally less.

Fascination for the use of Information and Communication Technologies (ICT) in English language teaching has not gained much support by the way of research. Use of audio-video and software like WebQuest, word processor for promoting writing, use of internet and social media for communication skills and vocabulary learning seems to be yielding results.

Research on Teaching English to Young Learners (TEYL) depicts the status and need for further research. The impact of introduction of English from Class I and demand for English medium on the socio-psychological development of young learners, makes it necessary. Findings of the studies reveal that there is a need for a curriculum which addresses the diverse needs of young learners including communication or language function as a precursor for emergent literacy in English language. Studies on the interplay between the child's language and second language, here English (otherwise known as bilingualism or multilingualism), have been found to be scant. Implications of introduction of English as a language and as the medium of instruction without ensuring resources are observed in the research in teaching english to young learners. This calls for multilingualism, both as a policy and methodology for effective learning of languages, as indicated by researches in language-in-education policy and practices of multilingualism.

Research in English language teacher development traced in-service teachers' learning and continuing professional development (CPD). Reporting from varied locales, researches brought out the various models of teacher development and their impact on teacher learning. Personalised continuous professional development would pave way for the teacher to become a learner and reflective practitioner. Opportunities for teacher development and researching, provided by the agencies like British Council and teacher associations such as English Language Teacher

Association of India (ELTAI) on dedicated theme conferences prove instrumental not only for professional development of teachers but also research on teacher development. Teachers as individuals and as members of associations, could play an instrumental role in promoting teacher learning with their activities as shown in the practice based studies. Classroom research and teacher research needs to be promoted wherein teachers, as also the associations, can take a lead role in the venture to promote both professional development and researching the professional development of teachers.

Research Processes and Reporting

Research processes adopted in the studies reported vary from documentation analysis to survey through experimental designs and qualitative analysis of classroom processes and perceptions and beliefs of the teachers and learners. Language-in-education policy and multilingual education studies adopted historical and field based quantitative and qualitative methods to understand the status, trends and implications. So far the policy proved to be effective to arrive at newer thesis for addressing the needs of the current situations and expectations of english language education. Doctoral research on methods of language teaching and classroom research mostly relied on experimental designs to establish the importance of enhanced interaction between learners and language. All the three categories reinforce the need of learner's use of language through interaction of varied ways and means for effective language learning. These findings were drawn with the use of research designs supported by empirical evidence. Regretfully however, none or very few studies of ethnography, discourse analysis and grounded theory based research have been reported, though there were studies which have employed qualitative methodologies and mixed methodologies.

Academic writing appears to be the major sufferer as reflected in the way the doctoral dissertations are presented. Organisation of thesis and coherence in a chapter indicate that researchers tend to present everything possible. The introduction part of most thesis includes the 'history of ELT in India' as a mandatory aspect. Such an introduction may inform the reader, but situating the ideas to the context of the research would serve much more purpose in exposing an argument focussing on the questions which are sought to be answered. Similarly, the review of research in many

researches were presented in a mechanical way rather than presenting the summaries with a critical understanding of the area researched. Reviews of related studies need to make a point of view in the minds of the reader with regards to the theme so that the reader understands the scope and need for further research. Writing skills need to be addressed both in schools and in higher education stage with view to promote higher order writing skills, for abstract thinking and critical reflection.

Research Gap

It needs to be underlined that English language education in India as perceived and practiced at present, warrants much deeper explorations from the perspective of language-in-education policy, language curriculum development and curriculum practices, english language classroom and its diversity, second language learning and acquisition, English language teacher and so on. These would include— (i) The gap between the intended policy and implemented policy; teaching of English as a second, third or foreign language and the diversity in ELT; (ii) English language curriculum development processes; implementation of language curriculum and its impact on language learning; (iii) Classroom research (What constitutes the English language classroom?) and Teacher research; (iv) Instructed English language learning in the varied Indian contexts and English language as a supplementary and complementary language in promoting multilingualism in Indian contexts, translanguaging; (v) Language Across the Curriculum (LAC), multilingualism as a strategy for promoting language and content learning and English for Specific Purposes (ESP): Interplay between English language and learning of content subject and English for professional purposes and job market; (vi) Materials for teaching-learning of English; Tasks and engagement with language; (vii) Task Based Language Teaching (TBLT) and post communicative approaches; (viii) Research in less explored areas like listening and speaking, communication skills and language for competitive examinations; (ix) English as a second language, language assessment— assessment of English language skills, assessment of English language for professional purposes and research; (x) English language in society—English language in the social media and translanguaging, social attitudes toward english, English language needs of common Indian, English for employability, and English language and power; (xi) Internalisation of English, globalisation and Indian educational demands.

Conclusions

Research findings and their implications

Research needs to be an instrument for societal and national development, contribution to furthering knowledge and creation of new knowledge. Findings of researches reported here inform us on education— both school and higher education, on the current trends in educational policy implementation, curriculum planning, processes of delivery of English language education, teacher development, teaching young learners and other areas which need to be researched upon. The following theses emerge out of the researches analysed in this review.

The demand for English language as a skill for upward mobility has resulted in a kind of tension and crisis in the planning and implementation of language-in-education policy. This crisis is the result of disparity in the education system— within school systems, and in the processes of schooling. The demand for English could be stated as one core finding of the many studies reviewed. The language has made a shift from third or foreign language to 'common second language' within the accepted national language-in-education policy, which aims at promoting mother tongue based multilingualism. It would be an onerous task to undo the demand, as the demand for languages brings in opportunities. The place for English language amidst Indian languages as observed by the Position Paper on Teaching of English (NCERT, 2006a) for its supplementary and complementary roles in fostering all languages through the strategy of multilingualism in the classroom needs to be addressed. It is high time that the policy planners and curriculum developers mindfully think of national language-in-education from the educational perspective for promoting all languages for harmonious language and cognitive development. Change in introduction of English as a language is out of question as the language is introduced from the first year of schooling in all the states. The worrisome question is when to shift to English medium, the transition from state or regional language to English as the demand for the medium is on the rise. This tension has been brought out by the research with contesting theses. There is a need for action here.

Researches reported here prove that time spent in using the language by a learner, learner-learner interaction, teacher-learner interaction, authentic materials and tasks along with other

variables of motivation of the learner and enabling conditions (resources for learning the language), etc., are the key components for learning the English language. This calls for change in teacher training methods to understand emerging language pedagogies and strategies which promote the above mentioned ingredients for language use. Research on English language education at the university level and for professional courses reflects the current need and demand for English language as a skill for upward mobility. This could be achieved, as the research findings indicate, through effective methodologies like Task Based Language Teaching (TBLT) and Communicative Approaches to language teaching. Shift from literature based courses to language (learning) focussed courses is advocated for realising the above aim. The imperative of developing communication and negotiation skills in English language and considerable English language proficiency needs to be recognised as it is perceived and also demanded for entry of students into higher education and jobs. This warrants a reorientation in the curriculum design and material development. It also requires a university teacher's need to understand language teaching approaches for teaching the skills and competencies to young adults.

Language Assessment is an area in which there have been very few research studies. Ways and means of continuous assessment and partnering the learner in the processes of assessment design rather than being an examinee, would need to be considered for harmonious assessment, different from the burdensome assessment process. Continuous assessment and directing examination rightly would serve the purposes of making assessment a means of learning and achievement.

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Implementation of Guidance and Counselling in Schools by the NCERT's Trained Teacher Counsellors A Follow-up Study

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ABSTRACT

The study explored the changes in the school environment as well as the benefits accrued to students due to the implementation of Guidance and Counselling (G&C) services in the school. Guidance personnel trained from 2009 to 2015 by National Council of Educational Research and Training (NCERT) at New Delhi and its Regional Institutes of Education (RIE) at Ajmer, Bhopal, Bhubaneswar, Mysuru and Shillong, were included in the study. The questionnaires were mailed to 300 Counsellors and 100 Principals. Of these, 146 Teacher Counsellors and 27 Principals returned the filled-in questionnaire (response rate is 49 per cent). Focus Group Discussions were held with 210 secondary level students from Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas and NCERT's Demonstration Schools. Teacher Counsellors and Principals stated that due to the implementation of G&C services in schools, there is a visible improvement in the school environment. Improvement in academic performance and reduction in drop-out, bullying, violence, aggression and indiscipline among the students were also reported. The subject teachers and parents have developed an understanding of the guidance needs of students, their developmental and behavioural issues and factors responsible for underachievement among the students. Teacher Counsellors suggested that there is a need to develop awareness about G&C, the appointment of regular Teacher Counsellors, providing space for G&C in the timetable, provisioning of funds for conducting G&C activities and separate

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counsellors for primary and secondary classes for both morning and evening shifts.

Keywords: Teacher Counsellors, Guidance and Counselling Services.

सार

इस अध्ययन में विद्यालयों में मार्गदर्शन और परामर्श (G & C) सेवाओं के कार्यान्वयन के कारण स्कूल के माहौल में परिवर्तन के साथ-साथ छात्रों को होने वाले फ़ायदों का अध्ययन किया गया है। नयी दिल्ली स्थित राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद (एन.सी.ई.आर.टी.) और अजमेर, भोपाल, भुवनेश्वर, मैसूर और शिलांग स्थित क्षेत्रीय शिक्षा संस्थानों (आर.आई.ई.) द्वारा 2009 से 2015 तक प्रशिक्षित कर्मियों को अध्ययन में शामिल किया गया था। प्रश्नावली 300 शिक्षक परामर्शदाताओं और 100 विद्यालय प्राचार्यों को भेजी गई थी। इनमें से 146 शिक्षक परामर्शदाताओं और 27 प्राचार्यों ने प्रश्नावली भरकर वापस भेजी (प्रतिक्रिया दर 49%)। साथ ही केंद्रीय विद्यालय, जवाहर नवोदय विद्यालय और एन.सी.ई.आर.टी. के प्रायोगिक विद्यालयों के 210 माध्यमिक स्तर के छात्रों के साथ मुद्दा समूह चर्चाएँ की गईं। शिक्षक परामर्शदाताओं और प्राचार्यों के अनुसार विद्यालयों में मार्गदर्शन और परामर्श सेवाओं के कार्यान्वयन के कारण, विद्यालय के वातावरण में सुधार हुआ है। छात्रों के शैक्षणिक प्रदर्शन में सुधार हुआ है और ड्रॉप-आउट, धमकाने, हिंसा, आक्रामकता और अनुशासनहीनता में भी कमी आयी। विषय शिक्षकों और माता-पिता में छात्रों के लिए मार्गदर्शन की ज़रूरत, उनके विकास और व्यवहार संबंधी मुद्दों और कम उपलब्धि के लिए जिम्मेदार कारकों की समझ विकसित हुई है। शिक्षक परामर्शदाताओं ने सुझाव दिया कि मार्गदर्शन और परामर्श के बारे में जागरूकता, नियमित शिक्षक परामर्शदाताओं की नियुक्ति, समय सारिणी में मार्गदर्शन और परामर्श के लिए स्थान प्रदान करना, मार्गदर्शन और परामर्श गतिविधियों के संचालन के लिए धन का प्रावधान और सुबह और शाम की पाली के लिए प्राथमिक और माध्यमिक कक्षाओं के लिए अलग-अलग परामर्शदाता की आवश्यकता है।

Introduction

Guidance is viewed as a process of adjustment and development. It is regarded as an integral part of education and not a special psychological or social service peripheral to education. It is a continuous process aimed at assisting the individual to make decisions and adjustments from time to time.

It was the Education Commission (1964–66), which recommended that guidance should begin from the initial class of the primary school because it helps students to make a satisfactory transition from home to school, and to identify learning difficulties and a need for special education. At the secondary stage, guidance

aims at the identification and development of the abilities and interests of adolescents. The emphasis was laid on preparing trained counsellors to provide guidance services in all the secondary schools. The *National Policy on Education* (1986) also recognised the importance of guidance and counselling services for school-going children. The *National Curriculum Framework* (NCF 2005) focused on elementary school years and advocated teachers to use guidance approach. According to *NCF (2005)*, teachers with a background in guidance and counselling, can design and lead activities to meet the developmental needs of children, thus laying the foundation for necessary attitudes and perceptions towards self and the world of work.

Strengthening Guidance and Counselling Services: NCERT's Role

The Department of Educational Psychology and Foundations of Education (DEPFE), NCERT, New Delhi started offering Post Graduate Diploma Course in Guidance and Counselling in 1958, with the aim to train professionals to serve as counsellors in schools. Since then, many transformations have taken place in the structure and modality of offering the diploma from face-to-face to International Diploma Course for Asian and African countries through Distance or Online Mode in collaboration with Commonwealth of Learning (COL), Canada. Beginning with 2009, the present Diploma Course is being offered in blended mode (distance or online and face-to-face) at six centres of the NCERT National Institute of Education (NIE), New Delhi and Regional Institutes of Education (RIEs) at Ajmer, Bhopal, Bhubaneswar, Mysuru and Shillong. In-service teachers deputed by Kendriya Vidyalaya Sangathan, Navodaya Vidyalaya Samiti and State Education Departments across the country participate in this course every year. The course aims to train in-service teachers and untrained guidance personnel as teacher counsellors to guide students in school and other related settings. The duration of the course is one year divided into three phases Guided Self-Learning (January–June), Intensive practicum (July–September) and Internship (October–December).

The trainee teacher counsellors, are trained in various aspects of G&C, such as understanding about guidance as an essential service in school, teacher as an effective guidance functionary, the process and approaches to counselling, understanding human

development, strategies of adjustment and coping with stress, psychological assessment and its effective implementation for G&C, understanding about various careers, career development theories and implementing them for career guidance and counselling. The trainees develop expertise in individual and group strategies for G&C of secondary and senior secondary students. They are also trained to develop and evaluate school guidance programme. After completion of the training, the trainees are expected to provide G&C services to the students in the school set up.

Since 2009, more than 1200 personnel have been trained as teacher counsellors who are working in different school settings. The need, therefore, was felt to examine the extent to which the trained teachers are using their G&C skills in the schools and the benefits accrued to school students.

Review of Literature

Research reports that counsellors do assist minority and disadvantaged students to become self-advocates (Astramovich and Harris, 2007), provide timely support to students reporting maladjustment at home and in society (Agnihotri, 2012), provide knowledge about career options (Supreeth and Arvind, 2015), empower students to make decisions regarding their careers (Ramakrishnan and Jalajakumari, 2013) and assist students in getting occupational information and in choosing a job (Sirohi, 2013).

The career and academic counselling was seen as the responsibility of the counsellors (Joy et al., 2011). The counsellors were able to deal with the students successfully who hindered the classroom teaching process (Bryan et al., 2012). The teachers were convinced that the school counsellors could in a measurable way, address the troublesome behaviour of students. However, teachers also felt that counsellors were not well-equipped with the essential knowledge of G&C (Khansa, 2015).

The research studies reported that consistent supervision by the trained counsellors and adequate practicum experience during training were warranted (Suman. and De, 2015) and in-service training through workshops, seminars, and conferences should be made compulsory to enhance the knowledge and skills of the school counsellors (Wambui, 2015). In future, school counsellors would need to acquire culture mediation skills to help linguistically diverse

students and families (Portman, 2009). It is essential for school counsellors to possess multicultural competencies, knowledge and application of racial identity theory to regulate systemic influences on further racial and identity development in students (Patrick and Cyrus, 2008), new courses on research methodology, statistics and evaluation techniques should be integrated in counsellor training programmes (Randall and Coker, 2007), guidance and counselling should be compulsory in all the schools which should be well-equipped with modern and up-to-date equipment and teachers should be trained at regular intervals so that they are abreast with new techniques in the field (Dimmitt and Wilkerson, 2012).

Active support of the Principal is important to implement guidance and counselling services effectively in the school. The crisis intervention, individual counselling, small group counselling and referrals from school, and support to community resources were most valued by the rural schools' Principals (Gerta and Kelly, 2009) and the principals wanted improvement in areas such as multicultural counselling, programme evaluation and accountability as well as parent education (Beasley & Lisa, 2006).

Objectives of the Study

The main objectives of the study included the followings:

1. To study the factors that facilitate the implementation of guidance services in the schools by the teachers;
2. To examine the changes in the school environment due to the implementation of guidance and counselling services; and
3. To investigate the benefits accrued to the students due to the implementation of guidance and counselling services in their school.

Method

The study aimed to examine the implementation of guidance and counselling services by teacher counsellors trained by the NCERT during the year 2009 to 2015.

Sample

The study was conducted on the teacher counsellors trained by the NCERT in its Diploma Course of Guidance and Counselling from 2009 to 2015, and a few Principals. The Diploma course is

offered at NIE, Delhi and RIEs of Ajmer, Bhopal, Bhubaneswar, Mysuru and Shillong. A list of 716 trained teacher counsellors was prepared. A questionnaire was sent to about 300 teacher counsellors whose correspondence details and e-mails were available. A total of 146 teacher counsellors responded (response rate is 49 per cent). A questionnaire was also sent to about 100 Principals. However, only 27 filled in questionnaires were received (response rate is 27 per cent).

Focused Group Discussions were conducted with 210 students from Classes IX to XII studying in 11 schools (two schools each from Bhopal and Ajmer, and seven schools from Delhi). It was ensured that a school counsellor trained by the NCERT was working in these schools.

Tools used

The quantitative and qualitative data were collected in the study. The quantitative data were collected through a questionnaire from the school counsellors. It contained questions concerning — (a) personal information, (b) guidance and counselling services provided to students, and (c) innovative methods used by teacher counsellors. A questionnaire for Principals also included similar sections. The qualitative information was collected from students through focused group discussions.

Results and Discussion

The results are presented in three sections — Teacher Counsellors' Report, Students' Perception, and Principals' Perspectives.

Teacher Counsellors' Report

Profile of Teacher Counsellors

A total of 146 teacher counsellors (73 male and 73 females) responded to the questionnaire. About two-third (67 per cent) of the teacher counsellors are permanent employees, 25 per cent temporary, 2 per cent free-lancers, and 5 per cent did not indicate their employment status. Further, most teacher counsellors (40 per cent) had a work experience of two to four years followed by the teacher counsellors (23 per cent) having work experience between a few months to two years.

Duties Assigned to Counsellors in the School

Table 1 indicates that the majority of teacher counsellors were assigned duties related to guidance and counselling. Besides these, they were required to be a part of various clubs and committees in schools such as discipline committee, cleanliness committee, co-curricular activities committee, etc. At times they were entrusted with the work to serve as class teachers, arrangement teachers, examination in-charge and school magazine in-charge.

Table 1
Duties Assigned to Teacher Counsellors in School

| Area | N | Percentage |
|------------------------|-----|------------|
| Guidance & Counselling | 116 | 79 |
| Subject Teaching | 101 | 69 |
| Life Skill Programme | 71 | 48 |
| Peer Education | 52 | 35 |
| Admissions | 28 | 19 |
| Library Work | 10 | 7 |
| Other Duties | 94 | 64 |

Facilities Provided to Teacher Counsellors in the School

The teacher counsellors reported (Table 2) that the basic facilities available to them range from guidance and counselling room (46 per cent) to transport facility (16 per cent). Some of them shared projector, speaker, stopwatch, telephone and stationery were also available in the school. However, some of the teacher counsellors reported that there is no facility of any kind in the school to provide guidance and counselling to the students and shared that they have created their own 'Counselor's Desk', which is not according to the norms for setting guidance and counselling room and lacks privacy. They also have to face difficulties in getting access to chart papers, computers, etc. Therefore, they have sent a letter requesting to the concerned authorities, so that all the facilities may be provided to teacher counsellors working in different school settings.

Table 2
Facilities Made Available to Teacher Counsellors

| Facility | Number | Percentage |
|---|--------|------------|
| Guidance and Counselling room | 68 | 46 |
| Computer | 64 | 44 |
| Printer | 56 | 38 |
| Cupboards | 53 | 36 |
| Career Corner | 51 | 35 |
| Books or Journals | 46 | 31 |
| No Provision of Funds | 33 | 22 |
| Psychological Tests | 31 | 21 |
| Allotted Funds After Submission of a Proposal | 28 | 19 |
| Transport Facility | 23 | 16 |
| Allotted Funds Activity-wise | 18 | 12 |
| Allotted Annual Funds | 10 | 7 |
| Provision under RMSA | 9 | 6 |
| Other Facilities | 66 | 45 |

Identification of Students' Needs: Teacher Counsellors Approach

Guidance needs of students varied from academics, career to behaviour related issues (Table 3). They also required guidance to handle examination phobia, improving the ability to concentrate on studies, enhance memory, early age marriage issues, suicidal tendencies, emotions regulation, etc.

Table 3
Major Guidance Needs of the Students

| Guidance Needs | Number | Percentage |
|---|--------|------------|
| Improving Academic Achievement | 120 | 82 |
| Career Guidance | 113 | 77 |
| Reduction in School Indiscipline | 108 | 73 |
| Improvement of Interpersonal Relationship | 87 | 59 |
| Dealing with Peer Pressure | 87 | 59 |

| | | |
|------------------------------|----|----|
| Parent-Child Relationship | 80 | 54 |
| Teacher-Student Relationship | 78 | 53 |
| Prevention of Child abuse | 48 | 33 |
| Reduction in Violence | 39 | 27 |
| Dealing with Drug Abuse | 32 | 22 |
| Other Issues | 51 | 35 |

Methods Used by the Counsellors to Guide Students

Teacher Counsellors' most preferred method was individual counselling and the least preferred method was a panel discussion (Table 4). They also used role-plays, *nukkad natak* and dramatics to impart awareness among students on various pressing issues. Career exhibitions, seminars and motivation talks by the experts and eminent personalities were also organised.

Table 4
Methods Used to Guide Students

| Method | Number | Percentage |
|------------------------|--------|------------|
| Individual Counselling | 126 | 86 |
| Interactive Talks | 115 | 78 |
| Group Counselling | 114 | 78 |
| Workshops | 71 | 48 |
| Using Therapies | 50 | 34 |
| Panel Discussion | 30 | 20 |
| Other Methods | 51 | 35 |

Techniques Adopted for Parental Involvement

It is evident from Table 5 that the most common method to involve parents in the guidance and counseling process was providing them an orientation, followed by the counselling sessions for parents and sometimes conducting home visits. The teacher counsellors' responses also revealed that they mostly relied on parent-teacher meetings, telephonic conversations and e-mails to involve parents in the guidance and counselling process.

Table 5
Strategies Used to Involve Parents in the Counselling Process

| Strategy | Number | Percentage |
|--|--------|------------|
| Orientation to Parents | 96 | 65 |
| Consulting Parents during the Process of Counselling to Students | 89 | 61 |
| Participation of Parent in School Activities | 74 | 50 |
| Guidance Sessions for Parents | 64 | 44 |
| Counselling Sessions for Parents | 62 | 42 |
| Home Visit | 25 | 17 |
| Other Strategies | 40 | 27 |

Specific Issues and Strategies Employed by the Teacher Counsellors

The teacher counsellors reported diverse types of guidance needs among the students. They also revealed the strategies adopted by them to meet the needs of the students. These are summarised below.

Indiscipline

Indiscipline among the students was manifested in the form of behavioural issues and aggression. Behavioural concerns involved absenteeism, reporting late to classes, incomplete homework, misuse of technology, destruction of school property and creating disturbance in the classrooms. Aggressive tendencies in students were noticed in the form of bullying, fights, violence and abusive behaviour. The teacher counsellors expressed that indiscipline (bunking), aggression and bullying were the major issue of concern in the school.

The teacher counsellors reported that they used individual counselling, group counselling, peer counselling and parent counselling. During group counselling, group discussions and orientation programmes for parents and teachers were organised and motivational talks and participatory activities for students were also held. Role plays, skits and story-telling sessions were carried out to impart awareness about bullying. Further, the strategy namely, 'activity counting tool' was used, wherein students had to keep a tab on the number of misconducts and thus regulate their behaviour. In connection with individual counselling, both positive

and negative reinforcements were employed. For this purpose, a transactional analysis was used to collaborate with the teachers and to deal with the issues of indiscipline, especially absenteeism.

Low Academic Performance

This covered low academic achievement, casual attitude of students towards academics, stress and examination anxiety. Moreover, teacher counsellors felt a dire need to equip students with skills on time management, goal setting, memory enhancement and study techniques. Some of the teacher counsellors stated that low academic achievement and adaptation to a new environment were major problems in the school.

Individual and group counselling were used to help students enhance their academic performance and overcome examination related stress. Individual counselling involved psychological tests of aptitude and intelligence while group counselling included class talks (to discuss and practise study skills and to motivate students) and orientation programmes for teachers and parents were held. Peer facilitators were engaged to assist academically weak students. The students were also familiarised with relaxation techniques to reduce stress. Career counselling was also given to students, which helped them set clear goals and achieve them.

Psychological Concerns

The psychological problems observed among the students were negative thinking, anxiety, stress, emotional disturbances, depression and mental disorders. Addiction to drug or substance abuse and misuse of technology was also prevalent. Some of the teacher counsellors expressed that there is a specific problem of 'Liquor and Smoking' among the students.

Students were helped through psychological therapies (Cognitive Behaviour Therapy, Rational Emotive Behaviour Therapy, Drama Therapy, Gestalt Therapy and Art Therapy) and peer group counselling (teacher counsellors collaborated with the psychologists to train students to be peer moderators). Further, for issues such as anxiety or stress and negative thinking, integrative method of counselling was used, i.e., class talks, seminars and discussions were incorporated in morning assemblies and subject teaching classes.

Interpersonal and Familial Concerns

Concerns, such as peer pressure, infatuation, problems in the teacher-student relationship and parent-child relationships were reported. Additionally, familial issues, for instance, single parent, parental illness or loss came to the light. Some of the teacher counsellors shared that the issues related to inter-personal relationships were the main cause of concern in their school. The students were provided with individual counselling (psychological therapies and mentoring) and group counselling (workshops, class-talks, awareness programmes, open forums, peer moderators), etc. The teacher counsellors shared that they conducted summer internships, set up E: Wall of expression (corner in the school where chart papers are put up and children are allowed to write down their feelings), which helped school authorities and counsellors to create interventions to address those concerns.

Improvement in the School Environment

Teacher counsellors reported improvement in the school environment due to the implementation of guidance and counselling services in schools (Figure 1).

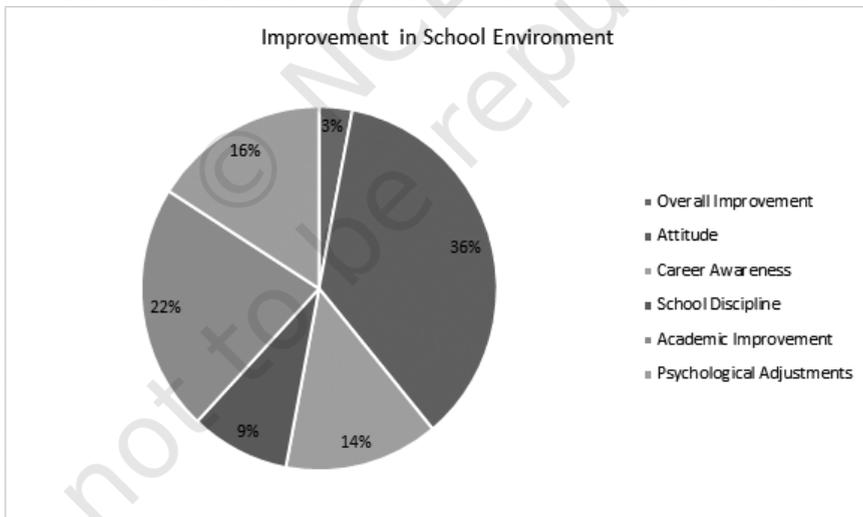


Figure 1: Percentage of responses showing improvement in the school environment

Attitudinal Changes

About 36 per cent teacher counsellors expressed change in the attitude of students towards guidance and counselling services in schools. The students themselves were coming to a counsellor to seek guidance and shared the issues with the counsellor. Some of the teacher counsellors shared that guidance and counselling services have changed parents' attitude towards counselling. It has created a better environment for students in school and at home.

Improvement in Discipline

It was shared by 9 per cent teacher counsellors that the number of cases of indiscipline in school has reduced. Teacher counsellors observed that there was a visible improvement in the behaviour of students, especially those who have been branded as 'trouble makers'.

Improvement in Academics

About one-fifth (22 per cent) teacher counsellors reported an improvement in academic performance among the students. The teacher counsellors expressed that, through guidance and counselling, low achieving students have shown tremendous progress in the areas of academics and they did well in their class test after getting guidance and counselling. It has also minimised drop out rate among the sixth and ninth class students.

Career Awareness

Teacher counsellors (14 per cent) expressed that there is an increased awareness among the students about career opportunities in different fields.

Interpersonal Relationships

It was reported by teacher counsellors (16%) that there was an improvement in the psychological adjustment of students which helped them to develop healthy interpersonal relationships. The students were able to understand the behaviour of others in a better way and act accordingly.

Overall Improvement in Personality

It was found by 3 per cent teacher counsellors that there is an overall improvement in the personality of students. The teacher counsellors observed positive behavioural changes and expressed

that the implementation of guidance and counselling service in school, made the students capable to analyse good or bad, self-motivate themselves for studying, acquire the knowledge of giving and receiving respect, and actively participate in sports, social activities, exhibition etc.

Students Perceptions

Focus Group Discussions were conducted among the students studying in Classes IX to XII in Kendriya Vidyalayas, Jawahar Navodaya Vidyalayas and Demonstration Schools of RIE's at Bhopal and Ajmer. In almost all the schools, a teacher counsellor had to share a room meant for medical purpose in the school. Teacher counsellors, as well as students, voiced it strongly that whenever students needed to discuss some issues with a counsellor, because of the presence of a doctor or a nurse, they were scared to speak and share their issues. Majority of the trained teacher counsellors were not given duties related to guidance and counselling, rather they were asked to focus on teaching of their subject. Every year a temporary counsellor was appointed in the school with fixed remuneration and was expected to look after the guidance and counselling needs of students. Therefore, it hampered the process of counselling, such as rapport building and maintaining confidentiality. The counsellors were not able to maintain consistency in providing guidance and counselling to the students due to the lack of fixed timetable or timeslot for guidance and counselling in schools, arrangement periods were allotted on a day-to-day basis.

Counselling was a taboo for most of the students, teachers and parents. Whenever a student goes to a counsellor, other students suspect and tease them about their mental state of being. The teachers showed resistance to send students for counselling because according to the them, guidance given by them was enough. Moreover, when students go for counselling, they missed their subject classes. The students also shared that parents considered counselling as a waste of time and suggested that counsellor should not meet parents. The students desired that a teacher counsellor should provide guidance on career in humanities, ways of strengthening student-parent relationship, information on various entrance examinations; conduct aptitude test; deal with homesickness, developing moral values, problem-solving, selecting a discipline of study, improving study skills, issue of puberty and

sex-related topics. The students further desired that guidance and counselling classes should be included in the school timetable, there should be a provision of two counsellors, counsellors should be available during vacations, counselling should be provided on Sundays and holidays, counsellor should conduct interesting activities, there should be more interaction between, students-counsellor and parents and confidentiality should be maintained. Students voiced the need for guidance in a more holistic way.

Principals' Responses

A total of 27 Principals responded to the questionnaire. With regards to the duties assigned to the teacher counsellors, majority of the Principals said that they perform activities related to guidance and counselling (93 per cent), followed by life skill programme (63 per cent), subject teaching (59 per cent), peer education (30 per cent), admission work (15 per cent), and library work (4 per cent). In addition, teacher counsellors were assigned academics related work (such as those related to class teacher, assistant teacher, subject in-charge and school magazine in-charge), administrative work (such as office work, examination in-charge, in-charge of the time table committee, membership of parent-teacher committee and pupil welfare fund committee) and supervisory activities (such as house-mastership and conducting co-curricular activities in schools).

When asked about the facilities provided to the teacher counselors, Principals responded that facilities such as career corner (67 per cent), guidance and counselling room (55 per cent), computer (44 per cent), cupboards (41 per cent), printer (37 per cent), books or journals (33 per cent), activity-wise funds (33 per cent), psychological tests (33 per cent), transport facility (19 per cent), allotment of funds after submission of proposals (15 per cent), allotment of annual funds (7 per cent) and provision under RMSA (4 per cent) and no provision of funds (19 per cent). The Principals also expressed that the materials such as stationery, art and craft materials and projectors were made available and facilities were provided as per the need of teacher counsellors (as mentioned in their proposals).

All the Principals' reported that the students needed career guidance (100 per cent), followed by areas such as reducing peer pressure (81 per cent), and parent-child relationship (77 per cent), low academic achievement (74 per cent), school indiscipline (70 per cent), interpersonal relationships (70 per cent), teacher-student

relationship (55 per cent), tackling violence (30 per cent), child abuse (30 per cent) and drug abuse (18 per cent). Adolescents' issues, examination stress, lack of confidence and self-esteem, bullying, maladjustment in residential setup and general homesickness were additional concerns of students as expressed by the Principals. When asked how parents are involved, most of the Principals responded that the preferred method for parents' involvement was consulting parents during the process of counselling (78 per cent), followed by orientation to parents (59 per cent), participation of parents in school activities (59 per cent), guidance and counseling session for parents (52 per cent), and visits to home (15 per cent). The Principals' responses revealed that career fairs were put up wherein information was disseminated on various career avenues. Parents are advised not to pressurise their wards to opt for a particular discipline, instead they should facilitate their children to choose a stream on the basis of their aptitude and interests. More so, parents who were themselves experts in their fields were called for giving career talks. Parents were also encouraged to be a part of various programmes initiated by the schools.

The Principals reported improvement as a result of implementation of guidance services in the school, such as improved academic result (22 per cent), attitudinal change (48 per cent), general improvement in psychological adjustment of students (19 per cent), improved career awareness (22 per cent), discipline (22 per cent), interpersonal relations (26 per cent), and overall school environment (30 per cent).

Conclusion

The study shows a visible improvement in the school environment due to the implementation of guidance and counselling services. It helped considerably in enhancing the academic performance of students, developing relationship between parents and teachers, and bringing positive improvement in the behaviour of students, especially those who have been branded as 'trouble makers'. Students show increased awareness about career opportunities in different fields and learnt to make an informed career choice.

However, there are a few impediments which need to be addressed by the school authorities to facilitate guidance and counselling services. The schools need to make provision for a dedicated guidance and counselling room, appointing regular

counsellors, a specific time slot, an earmarked fund for guidance activities, and optimum utilisation of trained guidance teachers. Guidance and counselling should be made available to the students during holidays and vacations. Also, awareness about the benefits of guidance and counselling services should be developed among the students, teachers and parents. The NCERT has developed “*Guidance and Counselling: Guidelines for States*” for effective implementation of guidance and counselling in the states. These guidelines may be useful in the schools for improving school environment as well as the performance of students with the help of teacher counsellors.

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Concept Attainment in Mathematics and Its Predictors

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ABSTRACT

Mathematics is an important subject of school curriculum because it is a science which draws necessary conclusions for cultivating our civilizations and developing intellectual values in human being. Mathematics is full of concepts. Basic to mathematics learning is the attainment of mathematical concepts. Without attaining concepts in mathematics, mathematical success cannot be achieved. The present study was designed to find the contribution of logical reasoning, mathematical creativity, socio-economic status and concept attainment model on attainment of mathematical concepts. The findings of present study show the predictive efficiency and contribution of predictors on attainment of concepts in mathematics.

सार

गणित, स्कूल पाठ्यक्रम का एक महत्वपूर्ण विषय है क्योंकि यह एक ऐसा विज्ञान है जो हमारी सभ्यता और मानव में बौद्धिक मूल्यों को विकसित करने के लिए आवश्यक ज्ञान प्रदान करता है। गणित अवधारणाओं से भरा है। गणित सीखने के लिए गणितीय अवधारणाओं की प्राप्ति आवश्यक है। गणित में अवधारणाओं को प्राप्त किए बिना, गणितीय सफलता हासिल नहीं की जा सकती। वर्तमान शोध में गणितीय अवधारणाओं की प्राप्ति पर तार्किक चिंतन, गणितीय सर्जनात्मकता, सामाजिक-आर्थिक स्थिति और अवधारणा प्राप्ति मॉडल के योगदान का अध्ययन किया गया है। वर्तमान अध्ययन के निष्कर्ष गणित में अवधारणाओं की प्राप्ति पर उपर्युक्त कारकों के प्रभाव को दर्शाते हैं।

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Introduction

Mathematics is the numeric and calculative part of the human life. It enables an individual to study various phenomena in space and establishes relationships among them. The learning of mathematics at primary and secondary level is, therefore, necessary for the development of human resources of any nation and is the foundation of higher education and research. But, many researchers have reported that mathematics education has remained in dilapidated condition all over the country. Rastogi (1983) observed backwardness in basic arithmetic skills. Das (1998) studied the assessment of class IX students on basic mathematics and found that the level of achievement was up to 47 per cent only. *National Achievement Survey* (2017) reported that learning outcomes in mathematics of class-VIII students is not very satisfactory across the country. Annual Status of Education Report- ASER (2018) released by 'PRATHAM' also revealed the same scenario.

Mathematics, as an educational discipline, is full of concepts. Most of the concepts are abstract in nature and are represented by the abstract signs and symbols. Mathematics helps individual to think logically. Basically, mathematics is a logically organized conceptual system (Ernest, 1991). But, the teaching of mathematics is not basically connected with conceptual understanding. Students learn mathematics by rote learning and solve mathematical problems with the help of calculation ability and by practising. Studies revealed that achievement level of students in mathematics is not quite satisfactory (ASER, 2018; National Achievement Survey, 2017).

Lindquist (1997) shared the comments of high achievers in mathematics and concluded that many of them do not understand what they know. It may be said that some students whose achievement is good, also do not understand mathematics properly. Drawing from contemporary literature, Mann (2005) concluded that a high level of achievement in school mathematics is not a necessary ingredient for accomplishment in mathematics. In an environment where computation is the basis of assessment, high achievement is possible without mathematical understanding (Mayer & Hegarty, 1996). Stroop (1998) (cited in Schloglmann, 2009) discussed that some students did well in mathematics at school but they never really learned anything, because they rote learned everything. Bhatnagar (1968) reported that many students, though passed

in examination, failed to achieve in terms of their abilities. Devlin (2000) states that current educational practices in elementary and secondary mathematics education focus on computation, formal reasoning, problem solving, they touch the applications but ignore the way of knowing and creativity. The knowledge acquired in such a learning process is very inflexible. That means, for instance, that when even just signs of the variables are changed, the learner cannot solve the exercise any more (Schloglmann, 2009). Needless to say that unless they understand concepts properly, they will not be able to apply its principles in problem solving and form an entire mapping of any concept in mind. These undeveloped concept-images limit the ability of mathematical applications in routine life as well as higher education and research.

The understanding of concepts is an important aspect of learning mathematics. Without understanding concepts in mathematics, mathematical success cannot be achieved and act as an epistemological obstacle for further studies. According to Schloglmann (2009), "Understanding mathematics refers to the essence of mathematics, which is to develop concepts and to use signs in a specific way. To develop students' understanding of essential concepts like numbers, function or equations is a central duty of mathematics education at school."

Thus, concept attainment is a major goal of mathematics teaching. It is a cognitive process where a concept transforms from being a process to become a mental object. Concept has been defined by Bruner et al. (1956) as, "a class or grouping of response, an act of categorisation, of 'rendering equivalent'. The act of categorisation involves rendering discriminately different things equivalent, to group the objects and events and people around us into classes, to respond to them in terms of their class membership rather than uniqueness."

The nature of mathematical concepts is abstract, so mastery over concept is a tough task. There are many studies conducted in the field of conceptual understanding and researchers have suggested that traditional method of teaching is not very effective for conceptual understanding. The studies suggested for the use of the concept attainment teaching model for teaching of mathematical concepts (Lekha, 2000; Prabhakaran & Rao, 1998; Minikutty, 2005). Bloom (1976) projected that 50 per cent of variance in school learning may be explained by cognitive characteristics. It is

important to know the variables which are accountable for growth of attainment of concepts.

Nous and Raven (1973) and Ring and Novak (1971) (cited in Pandey, 1981) have shown that cognitive style is a factor which should be considered in concept attainment. Cognitive domain is divided mainly into two parts— first is intellect and second is creativity. Carlton (1959) also reported difference in types of mathematical mind, one that is logical and the other one is intuitive. Pehkonen (1997) discussed the balance between logic and creativity. Krutetskii (1969) refers to children who are gifted in mathematics, i.e., having “a mathematical frame of mind”. Mann (2005) emphasizes that a balance between left and right hemisphere is needed for mathematical accomplishment. He further said that yet many students leave school with undeveloped right side of brain. This right side of brain is accounted for creativity. A balanced development of both sides of the mind is necessary for mathematical accomplishments.

Drefyus and Eisenberg (1996) said that a good mathematical mind is capable of flexible thought and can manipulate and investigate a problem from many different aspects. It is not uncommon to hear a student explain their poor performance in mathematics as being due to lack of mathematical mind (Aiken, 1973). Stadler (2004) considered the ability to create an internal picture of an abstract mathematical concept (Concept attainment) to be a major part of mathematical ability. Thus a question arises, does mathematical mind contribute in mathematical ability? If does, then what is the extent of this contribution? There are two facets of mathematical mind. One is formal or logical and other is intuitive or creative. Some studies revealed that most secondary students do not acquire formal level of cognitive development (Pandey, 1987; Rai, 1989). Is poor logical thinking ability accountable for difficulties in mathematical concepts? The answer of this question is important for mathematical progress. Mathematical creativity is the ability to think divergently in solving mathematical problems and produce unique solution. Can this ability help in the attainment of mathematical concepts? The study about this question would help the teachers to select appropriate strategy for teaching concepts.

Studies conducted in the field of mathematics are basically centralized on achievement. Though few researches were conducted

in the direction of conceptual understanding, the confusion still exists about the contribution of important cognitive and non-cognitive variables towards the concept attainment.

Studies also report that several non-cognitive factors are accountable for achievement (Bloom, 1976; Singh, 1976). Vattno (1987) reported that only 50–70 per cent of total factor variance could be accounted for by all measurable intellectual factors, whereas 30–50 per cent of the total factor variance is attributed for non-intellectual factors. A large number of studies reported that family background and socio-economic status (SES) is an important factor for achievement (Comber and Keeves, 1973; PISA, 2009; White, 1982). But the contribution of SES in attainment of mathematical concepts is not very clear. The present study attempts to find the contribution of logical thinking, mathematical creativity, socio-economic status and concept attainment model on the attainment of concepts in mathematics.

Concept

Concept is defined as a generalised idea about a class of objects, events, ideas, processes and relations on the basis of its common essential attributes.

Attainment of Concepts

Attainment of concepts refers to a clear mapping of essential and non-essential attributes of concept, seeing difference between examples of concepts drawn on the basis of essential and non-essential attributes, producing examples and non-examples, establishing relation with other concepts and identifying its supra-ordinate, co-ordinate and sub-ordinate concepts and differentiating them with the concepts.

Logical Thinking

Logical thinking is a process in which one uses thoughtful reasoning consistently in solving problems, framing inferences and making conclusions. The basis of logical thinking is sequential thought in situations that involves thinking for constructs and relationships in specific context. This process involves taking the ideas, facts and conclusions involved in a problem and arranging them in a sequential progression. Logical thinking is meaning-making procedure leads to a deeper

understanding by presenting arguments that is an organised and disciplined way of convergent thinking. Logical thinking is a systematic, rational and convergent in nature, is often referred to as analytical thinking (Hicks, 1991).

Mathematical Creativity

Mathematical creativity is ability to think divergently in solving mathematical problems and produce unique solution in one's own way. It breaks the mental set and helps to solve problem by exploring the areas outside the individual's known content universe involving imagination and intuition. Singh (1988) stated that, "Mathematical creativity is the ability to produce unusual or original concepts, theorems, principles and unique method for problem solving in mathematics. It is the process of generating significant ideas, making theoretical ideas practical, converting innovative ideas of other fields into the new field."

Objective of the Study

To find out the contribution of logical thinking ability, mathematical creativity, socio-economic status and teaching through concept attainment model on attainment of concepts in mathematics.

Null Hypothesis [Ho]

There is no significant contribution of logical thinking ability, mathematical creativity, socio-economic status and teaching through concept attainment model on attainment of concepts in mathematics.

Method

Population and Sample

The population of present study was Class IX mathematics students of U.P. In present study cluster sampling technique was used. At first stage, six districts were selected randomly from all districts of population. In second stage, from each district three secondary schools of U.P. board were selected and then one section of Class IX of mathematics was selected randomly from each selected schools. All students of these sections were included in the sample. In statistical analysis 524 students were considered as sample, who participated in all tests and treatments.

Tools and Treatments

The following tools were used in the study.

- 1. Mathematical Concept Attainment Test (MCAT):** For measuring concept attainment in mathematics MCAT was developed by researcher for selected six concepts (natural number, whole number, integer, rational number, irrational number and real number). MCAT was developed on the basis of Conceptual Learning and Development Model developed by Klausmeier and Hooper (1974) for concept attainment and Classroom Concept Learning Schema of Frayer, Fredrick and Klausmeier (1969), after concept analysis for identification of elements of concepts.
- 2. Lesson Plan:** Lesson plans were developed by researcher for selected six concepts of Mathematics, based on concept attainment model, which were developed by Joyce and Weil (1986) based on theory of concept attainment of Bruner, Goodnow and Austin (1956).
- 3. Logical Thinking Test:** This test was developed by Longeot (1965) for measuring operational reasoning of students. This test has been developed keeping in view the real spirit of piagetion concept of developmental stages of logical thinking. It measures four types (Class inclusion, propositional, proportional and combinatorial) of operational reasoning. Pandey and Bhattacharya (1985) adapted it in hindi named *Tarkik Chintan Parikshan*.
- 4. Mathematical Creativity Test:** Mathematical creativity test has been developed by Singh (1985) to identify mathematical talent of secondary level age group students. Test is based on comprehensive set of criteria developed by Balka (1974) for measuring creative ability.
- 5. Socio-Economic Status Scale:** For measuring the socio-economics status of Class IX students Upadhyay and Saxena's (2008) socio economic status scale was used. The scale consists of 31 items related to— (i) Personal information (ii) Family (iii) Education (v) Income and (v) Others Cultural and Material possessions).

To predict the attainment of concepts in mathematics and study the contribution of logical thinking ability, mathematical creativity, socio-economic status and teaching through concept attainment model on attainment of concepts in mathematics,

step-wise multiple regression analysis was carried out. Scores of students on logical thinking, mathematical creativity and socio-economic status were found through corresponding tests. The concept attainment model is like a treatment, so no direct score can be found on this variable

After conduction of pre-test of MCAT, treatment of concept attainment model as a teaching method was employed on students. After teaching through this model post-test of MCAT was administered and the difference between pre-test and post-test scores for each student was considered as a gain score of students. This gain score for each student was considered as score on concept attainment model because apart from teaching through CAM no other independent and extraneous variables are accountable for difference between means of pre tests and post-tests scores. For testing the significance of difference between means of pre-tests and post-test scores on MCAT t-test was used.

Results

Results show a significant difference in the pre-test and post-test scores (Mean pre-test score= 22.08, post-test= 30.91, N= 524, $t=90.96$, $p<0.01$) on MCAT. It thus can be assumed that the gain in post-test score is the result of teaching through concept attainment model (CAM). The gain score was considered as a score on CAM for regression analysis. As the correlation between pre-test and post-test score was very high (0.905), post-test scores instead of pre-test scores was considered as score on attainment of concepts in mathematics as a dependent variable for the purpose of regression analysis. The results of regression analysis are shown in Tables 1, 2 and 3.

Table 1
Multiple Correlation Coefficient and Coefficient of Multiple Determination between Predictors and MCAT

| S.N. | Independent Variable or Predictor | Multiple Correlation Coefficient (R) | Coefficient of Multiple Determination (R ²) |
|------|-----------------------------------|--------------------------------------|---|
| 1. | (Constant), CAM | 0.602 | 0.362 |
| 2. | (Constant), CAM, Logical Thinking | 0.757 | 0.573 |

| | | | |
|----|---|-------|-------|
| 3. | (Constant), CAM, Logical Thinking, Mathematical Creativity | 0.763 | 0.583 |
| 4. | (Constant), CAM, Logical Thinking, Mathematical Creativity, SES | 0.767 | 0.585 |

To study the significance of contribution of independent variables on dependent variable analysis of variance was used, which are shown in the Table 2.

Table 2
Analysis of Variance for Study the Significance of Contribution of Independent Variables on Attainment of Concepts in Mathematics

| S. No. | Independent Variables or Predictors | Variance | Sum of Squares | df | Mean Square | F | p |
|--------|---|---------------------------------|-----------------------------------|-----------------|--------------------|---------|-------|
| 1. | (Constant), CAM | Regression Residual Total | 4956.775 8742.697 13699.471 | 1 522 523 | 4956.775 16.748 | 295.95 | <0.01 |
| 2. | (Constant), CAM, Logical Thinking | Regression Residual Total | 7845.818 5853.653 13699.471 | 2 521 523 | 3922.909 11.235 | 349.15 | <0.01 |
| 3. | (Constant), CAM, Logical Thinking, Mathematical Creativity | Regression Residual Total | 7982.380 5717.091 13699.471 | 3 520 523 | 2660.793 10.994 | 242.013 | <0.01 |
| 4. | (Constant), CAM, Logical Thinking, Mathematical Creativity, SES | Regression Residual Total | 8054.843 5644.628 13699.471 | 4 519 523 | 2013.711 10.876 | 185.152 | <0.01 |

For study the contribution of independent variables on attainment of concepts in mathematics, step-wise multiple regression analysis was used and Table 3 contains the results.

Table 3
Stepwise Multiple Regression Analysis for Study the Contribution of Independent Variables on Attainment of Concepts in Mathematics

| Steps | Independent Variables or Predictor | Regression Coefficient (B) | Constant | Multiple Correlation Coefficient (R) | Coefficient of Multiple Determination (R ²) |
|-------|--|----------------------------------|----------|--------------------------------------|---|
| 1. | CAM | 1.383 | 18.694 | 0.602 | 0.362 |
| 2. | CAM, Logical Thinking | 1.274 0.438 | 10.009 | 0.757 | 0.573 |
| 3. | CAM, Logical Thinking, Mathematical Creativity | 1.265 0.367 0.028 | 7.424 | 0.763 | 0.583 |
| 4. | CAM, Logical Thinking, Mathematical Creativity, SES | 1.266 0.354 0.026 0.030 | 6.294 | 0.767 | 0.585 |

From Table 3 it is clear that 58.5 per cent of total variances of scores on attainment of concepts in mathematics was explained by teaching through concept attainment model, logical thinking, mathematical creativity and SES. Further, it is obvious that individual contributions of concept attainment model (CAM) is 36.2 per cent, logical thinking ability is 21.1 per cent, mathematical creativity is 1 per cent and individual contribution of SES is 0.2 per cent to the attainment of concepts in mathematics. Therefore, the null hypothesis that there is no significant contribution of logical thinking ability, mathematical creativity, socio-economic status and teaching through concept attainment model on attainment of concepts in mathematics is rejected and alternative hypothesis that there is a significant contribution of logical thinking ability,

mathematical creativity, socio-economic status and teaching through concept attainment model on attainment of concepts in mathematics is accepted.

On the basis of the results of the study, regression equation for prediction of the attainment of concepts in mathematics can be written as follows — Attainment of Concepts in Mathematics = $6.294 + 1.266$ (Gain Score from teaching through Concept Attainment Model) + 0.354 (Score on Logical Thinking) + 0.026 (Score on Mathematical Creativity) + 0.036 (Score on Socio-Economic Status). With the help of this regression equation attainment of mathematical concepts will be predicted on the basis of teaching through CAM, logical thinking ability, mathematical creativity and SES. This equation shows the predictive efficiency of CAM, logical thinking, mathematical creativity and SES on attainment of concepts in mathematics.

Discussion

In present study the contribution of concept attainment model (CAM), logical thinking, mathematical creativity and SES on concept attainment in mathematics were found significant. CAM (score gained after teaching through CAM) explains 36.2 per cent variance of concept attainment in mathematics. The contribution of CAM on attainment of mathematical concepts is obvious. Many researchers reported that CAM is a very effective model for conceptual attainment and understanding (e.g., Minikutty, 2005; Prabhakaram & Rao, 1998). Logical thinking explains 21.1 per cent variance of concept attainment in mathematics. For attainment of mathematical abstract concepts, logical thinking abilities are very important ingredient. Some researchers (Cantu & Herron, 1978; Lawson & Karplus, 1977) pointed out that formal reasoning abilities are highly correlated with understanding of concepts at different levels of abstraction. Schloglmann (2009) identified the problems with mathematics as being difficulties with logical thinking. Therefore, logical thinking and concept attainment teaching model would play important role in attainment of mathematical concepts. It is notable that common variance between CAM (gain score) and logical thinking is only 1.06 per cent. Bither (1991) found that formal operational reasoning explains 29 per cent variance of mathematical achievement. Pandey (1987) found that logical thinking covers 64 per cent variance of concept attainment in physics. Rai (1989) found that logical reasoning covers 29 per cent variance of conceptual understanding in physics.

Mathematical creativity explains one per cent variance of attainment of mathematical concepts in mathematics; even then this contribution is significant. This may be explained in the light of fact that the majority of the variance of mathematical creativity was accounted by logical thinking, because correlation between mathematical creativity and logical thinking is 0.603 and common variance among them is 36.36 per cent. The partial correlation between mathematical creativity and logical reasoning after controlling SES and gain score was also found 0.577, which indicates that mathematical creativity and logical reasoning are really correlated with each other and they shared common variances of attainment of mathematical concepts. The same is the case of SES, where SES covers only 0.2 per cent variance of attainment of mathematical concepts; even then this contribution is significant. The common variance among SES and logical thinking is 6.05 per cent and among SES and mathematical creativity is 4.7 per cent measured, hence it can be said that majority of variance of SES was accounted by logical thinking and mathematical creativity, that's why the contribution of SESS on concept attainment in mathematics is too less.

Therefore, a broad inference can be drawn that attainment of concepts in mathematics is not only the result of teaching with concept attainment model but also the result of both facets of mathematical mind, i.e., logical thinking and mathematical creativity and non-cognitive factor such as SES. However, remaining 41.5 per cent of the variance is unaccounted for. That may be the result of other factors which the researcher could not consider due to time constraint.

The present study produces the predictive equation for attainment of concepts in mathematics. The equation may be utilized for teachers in predicting attainment of concepts in mathematics for IX-graders. This regression equation can help the teachers for selection of students in mathematics and predicting their attainment and other purposes related to mathematics learning. The result of this study establishes that concept attainment model, logical thinking, mathematical creativity, and socio-economic status contribute in attainment of mathematical concepts significantly. Findings of present study suggest that teachers should use concept attainment model for teaching mathematics and teachers should also be trained in Piagetian theory as it applies to instruction and helps the students to acquire formal thinking. Students should

be trained to explore their creative ability and use divergent thinking in mathematical problem solving. The present study also indicates that socio-economic status contributes in attainment of mathematical concepts. Equal educational facilities are necessary for development of human resource through mathematical accomplishment.

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Cooperative Learning An Effective Teaching Learning Strategy for Mathematics

ROOHI FATHIMA*

ABSTRACT

Cooperative learning represents a shift in educational paradigm from teacher-centered approach to student-centered learning in small groups. It is a strategy in which the learning takes place in small groups where students share ideas and work collaboratively to complete a given task. The present study attempted to learn the effect of cooperative system of learning on the achievement in mathematics of Class X students. Two sections of Class X, with 30 and 32 female students, respectively, were randomly selected to participate in the study over a period of three weeks. Both qualitative and quantitative methods were used that focussed on examining students' participation while working on in-class cooperative learning activities in two different seating arrangements — rows and columns, and circles — as well as its impact on their achievement. Results show that cooperative learning helps to improve not only the understanding of the students but also motivate them to discuss the difficulties during the study, helped all students alike in terms of classroom participation and thereby improved their performance. The study underlines the fact that students should be encouraged to work in groups and to depend more on each other rather than the teacher to learn more efficiently.

सार

सहकारी शिक्षा शैक्षिक प्रतिमान में बदलाव की बात करती है जो शिक्षक-केंद्रित दृष्टिकोण से छोटे समूह में छात्र-केंद्रित सीखने की प्रक्रिया पर बल देती है। यह एक प्रक्रिया है जिसमें छोटे समूहों में सीखने की क्रिया प्रतिपादित होती है, जहाँ छात्र विचारों को साझा करते हैं और

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किसी दिए गए कार्य को पूरा करने के लिए सहयोग करते हैं। वर्तमान अध्ययन में कक्षा 10 के छात्रों की गणित में उपलब्धियों पर सीखने की सहकारी प्रणाली के प्रभाव को जानने का प्रयास किया गया है। इसके लिए कक्षा 10 के दो वर्गों से, क्रमशः 30 और 32 महिला छात्रों का यादृच्छिक रूप में चयन किया गया, जिन्होंने तीन सप्ताह तक अध्ययन में भाग लिया। अध्ययन में गुणात्मक और मात्रात्मक दोनों तरीकों का इस्तेमाल किया गया। अध्ययन में छात्रों को दो अलग-अलग तरीकों से बैठने की व्यवस्था की गई — पंक्तियों और स्तंभों, और वृत्तों में तथा उनसे कक्षा-सहकारी सीखने की गतिविधियों पर काम कराया गया। अध्ययन से पता चलता है कि वृत्तों में बैठकर सहकारी शिक्षण न केवल छात्रों की समझ को बेहतर बनाने में मदद करता है, बल्कि उन्हें अध्ययन के दौरान आने वाली कठिनाइयों पर चर्चा करने के लिए भी प्रेरित करता है, जिससे सभी छात्रों को कक्षा-कक्ष भागीदारी के मामले में समान रूप से मदद मिली और इससे उनके प्रदर्शन में सुधार हुआ। अध्ययन इस तथ्य को रेखांकित करता है कि छात्रों को समूहों में काम करने और अधिक कुशलता से सीखने के लिए शिक्षक की बजाय एक-दूसरे पर निर्भर रहने के लिए प्रोत्साहित किया जाना चाहिए।

Introduction

Lev Vygotsky was the one who introduced the idea of social interaction to child learning (Minnick, 1999). Learning is the act, process, or experience of acquiring new or modifying and reinforcing existing knowledge and may involve synthesizing different types of information. Learning is not one simple activity. It takes place at different levels of consciousness, and in different ways, in everything we do. Moreover, an individual learns in different ways and has his/her preferred learning styles. It may occur as part of education, personal development, schooling, or training. Learning results in formative effect on the mind, character or physical ability of an individual. In its technical sense, learning is the process by which society deliberately transmits its accumulated knowledge, skill and values from one generation to another. The term learning is quite common and frequently used in our day-to-day conversation. The level of learning can be groomed by various ways; one of those is the cooperative system of learning (Caspi et al., 2006).

Co-operative Learning

Most of our knowledge attitudes and values are formed by discussing and sharing what we know or think about our physical (concrete as well as abstract) and social environment. Initially the use of cooperative learning strategies began in the Western countries in the early 20th century as part of John Dewey's social studies project,

which has contributed greatly to the improving of learning in general, and helped to achieve the main objectives of the curriculum with great success and high accuracy. Thereafter, work on cooperative learning strategies for use in the classroom was carried out by different researchers. Brown (2007) proposed a simple definition of classes based on cooperative learning saying that they are 'learner-centered' classes that encourage students to work together, and to talk to each other in order to achieve specific goals. Slavin (1980), on the other hand, offers a more specific definition of cooperative learning. She describes it as a set of 'classroom techniques' where students work in small groups on certain activities. Co-operative learning is an instructional strategy involving use of small groups in which student's works together to learn and gain from each other. Co-operative learning method provides students an opportunity to utilise the limited resources.

Slavin (1983) identified 46 field experiments on co-operative learning conducted in elementary and secondary classes (Classes II-IX). He observed that the effect of co-operative learning on student's achievement was clearly positive. Not only in mathematics, but there are several studies conducted in other subjects as well. For example, research (Ahuja, 1995; Pandey et al., 2004; Towns & Grant, 1997; Yager, 1985) has reported greater effectiveness of co-operative learning for science achievement over traditional method. Hence, we can say that cooperative learning system is the best solution to achieve the maximum goals in educational life of a student. The first thing to realize about interactive teaching is that it is not something new or mysterious. If you are a teacher and you ask questions in class, assign and check homework, or hold class or group discussions, then you already teach interactively. Basically then, cooperative teaching is just giving students something to do, getting back what they have done, and then assimilating it yourself, so that you can decide what would be best to do next.

The teaching of mathematics is not about dispensing rules, definition and procedures for students to memorise, but engaging students as active participants through discussion and collaboration (Posamentier, 2006). Thus, the teaching of mathematics requires active participation of students through discussion and collaboration, but in most of the schools, we find that it is being taught through lecture methods. The learning of mathematics will be more successful if students are given the opportunity to explain or clarify their ideas. The quality of education

that teachers provide to student is highly dependent upon what teachers do in the classroom. Thus, in preparing the students of today to become successful individuals of tomorrow, science and mathematics teachers need to ensure that their teaching is effective. Teachers should have the knowledge of how students learn mathematics and how best to teach. Efforts should be taken now to direct the presentation of mathematics lessons away from the traditional methods to a more student-centered approach. One of such method is cooperative learning. Brown (2007) proposes a simple definition of classes based on co-operative learning saying that they are 'learner-centered' classes that encourage students to work together, and to talk to each other in order to achieve specific goals.

Expected Educational Outcomes of the Cooperative Learning

The main goals of the cooperative learning in mathematics education are — enhancement of achievement, problem-solving skills, and attitudes and inculcate values among the learners. Studies have shown that co-operative learning can improve performance, long-term memory and positive attitudes towards mathematics, self-concept and social skills. Cooperative learning is a strategy where learning takes place in small groups where students share ideas and work collaboratively to complete a given task. Worldwide several models of cooperative learning have been tried that vary considerably from each other (Slavin, 1995). For example, in STAD (Student Teams-Achievement Divisions), students are grouped according to mixed ability, sex and ethnicity (Slavin, 1994). The teachers present materials in the same way they always have, and then students work within their groups to make sure all of them mastered the content. Finally, all students take individual quizzes. Students earn team points based on how well they scored on the quiz compared to past performance. Another method is TGT (Teams-Games- Tournament) in which, unlike STAD, quizzes are replaced by tournaments (Slavin, 1990). Students compete at tournaments table against students from other teams who are equal to them in terms of past performance. Students earn team points based on how well they do at their tournament tables. Another model is known as JIGSAW, in which students are given the responsibility for teaching the material to each other (Slavin, 1990). The Assignment is divided into several expert areas, and each student is assigned with one area. Experts from different groups meet together and

discuss their expert areas. Students then return to their groups and take turns teaching.

The cooperative learning is used as both an instructional method and as a learning tool at various levels of education and in various subject areas. Johnson and Holubec (1994) proposed five essential elements of the cooperative learning:

1. **Positive Interdependence:** The success of one learner is dependent on the success of the other learners.
2. **Promotive Interaction:** Individual can achieve promotive interaction by helping each other, exchanging resources, questioning each other's conclusions, providing feedback, encouraging and endeavouring for mutual benefits.
3. **Individual Accountability:** Teachers should evaluate the efforts that each member is contributing. These can be performed by giving an individual test to each student and randomly calling students to present their group's work.
4. **Interpersonal and Small-group Skills:** Teachers must provide opportunities for group members to know each other, accept and support each other, communicate accurately and resolve differences constructively.
5. **Group Processing:** Teachers should also provide opportunities for the class to assess group progress. Group processing enables group to focus on good working relationship, facilitates the learning of cooperative skills and ensures that members receive feedback.

Several studies have been conducted employing different methods of co-operative learning. For example, Effandi (2003) reported positive effect of co-operative learning on achievement and problem-solving skills amongst Malaysian students. In this study, the experimental group was taught using co-operative learning methods and the control group using the traditional lecture method. Slavin (1983) identified 46 field experiments on co-operative learning, conducted in elementary and secondary classes (Classes II-IX). He observed that the effect of co-operative learning on student's achievement was clearly positive. Not only in mathematics, but there are several studies showing positive effects on other subjects such as science education (Ahuja, 1995; Pandey et al. 2004; Yager, 1985).

However, when exploring about the researches based on classroom furniture arrangements that match this framework of

co-operative learning in mathematics classrooms, one finds a limited number of studies. It should be mentioned though that textbooks or articles dealing with teacher training or classroom management usually affirm that how furniture arranged inside the classroom should match the activity being done (Brown, 2007; Emmer et al 2006; Hill & Cohen, 2005; Jones, 2000; Thornbury & Watkins, 2007). Harmer (2007) reviewed different seating arrangements in terms of pros and cons in relation to certain activities and interaction patterns. For example, he explained that the rows and columns of seating arrangement could suit formal classrooms where the teacher could take a front position for a lecture format while the circular seating arrangement would enable students to face each other while giving the teacher an opportunity to move around students. In other words, it is believed that if students are asked to work on individual activities, it would be better for them to sit in rows and columns in order to avoid student-student interaction. On the other hand, if group work activities are being used in a class, it would then be better to seat students in clusters or circles. As defined by Cornell (2002), 'furniture is both tool and environment'. He explains that thinking of furniture and seating arrangements is important in creating a suitable learning environment for students.

Thus, cooperative learning has been widely researched and used in classrooms in many countries since 1970's. The present study examined the use of co-operative learning, as one of the innovative and encouraging methods, in order to find out its impact on student's achievements.

Rationale of the Study

In the Indian context, several students do not like to take a mathematics course. These students sometimes find that mathematics is boring and believe that it will be of no use to them after they pass out of school. Many students think that mathematics is something that causes stress and is unpleasant. Such students have high anxiety about learning mathematics. Second, students have difficulty expressing their thoughts on paper or in their mathematics class. This occurs because many traditional mathematics classrooms foster a competitive atmosphere among students. Third, the students are not adapted to take an active role in learning mathematics. In light of these points, the author wanted to find a method of teaching

Secondary mathematics classes that would help students understand and enjoy mathematics. The research question was: Would students understand and enjoy mathematics more if co-operative learning approach through circle classroom arrangement would be applied rather than the traditional rows and columns seats-based classrooms taught by the teacher-centered method?

This study was limited to the Indian context. The educational institution where this study took place, followed the traditional rows and columns seating arrangement in all of its classes. At the same time, the education administration urges teachers to use more co-operative learning activities. At this point, it appears that the physical classroom environment contradicts the methodology they are trying to foster. This study aimed to explore whether this contradiction really existed or not as it examined whether the co-operative learning activities by modifying classroom seating arrangement, i.e., the circular seating arrangement, contributed to student's achievement over the traditional rows and columns seating arrangement

Research Questions

This study attempted answers to the questions:

1. Does classroom-seating arrangement affect students' participation in co-operative learning activities in Indian secondary classrooms?
2. In what ways do classroom-seating arrangements affect student's participation in co-operative learning activities in Indian secondary classrooms?
3. What preferences do students have for classroom seating arrangements? And why?
4. Are student's preferences for different seating arrangements related to their self-report of how shy/interactive they are in class?

Objective of the Study

To study the effect of co-operative system of learning on the achievements of Class X students in mathematics.

Method

This study employed both qualitative and quantitative method that focused on examining student's participation while working

on in-class co-operative learning activities in two different seating arrangements — rows and columns, and circles — as well as its impact on their achievement. It looked at the quality of students' comments to see whether different seating arrangements contributed to their completion of task or not.

Sample

The study was conducted in a Government Girls School of Department of Education, Delhi, India. Two sections of Class X were selected randomly to participate in the study over a period of three weeks. Section A had 30 female students, while Section B had 32 female students.

Experimental Design and Procedure

Before the start of the study, the students were asked to respond to a short free-form questionnaire. The questionnaire had three questions. The first one asked students to rate themselves on a Scale of 1 – 5 as to whether they considered themselves shy or interactive inside the class. This question aimed to collect data about student's perceptions about their personal attributes that could affect participation rate inside the class. The second question provided the option of two seating arrangements being examined; the rows and columns and the circular layout, and asked students to choose which one they would prefer to have in their classes. The last question asked students to state the reasons for their choices in the second question.

The experiment was set up according to the non-randomized pre-test, post-test quasi experiment control group design. The design was follows as—

| Purposively/ Assigned Group | Pre- Test | Treatment | Post- Test |
|--|----------------------|---|-----------------------|
| Control group (Section A) | A1 | Teaching in traditional rows and column in seating arrangement | A2 |
| Experimental Group (Section B) | A3 | Teaching through co-operative learning by modifying the seating arrangement to circular pattern | A4 |

A1, A3 - pre-test scores in of mathematics test paper

A2, A4 - post-test scores in mathematics achievement test

Before start of the course, the researcher collected the student's previous year's Mathematics score for both the groups (i.e., Section A and Section B), to ensure that the two groups had achieved the same levels of mathematics performance.

Both classes were asked to attempt the mathematics test paper before the co-operative method of learning by changing the classroom seating arrangement. As the treatment component of the study, participating students had their classes in two different settings; the regular rows-and-columns in classroom for the control group (Section A) and a meeting room where the students could sit in circles around the tables in the experimental group (Section B) (Figures 1 and 2).

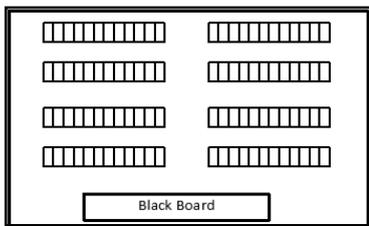


Figure 1: Rows and Columns

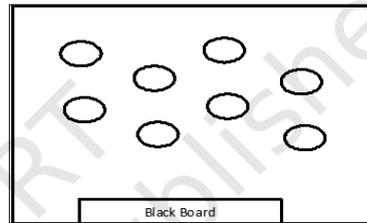


Figure 2: Meeting Room (circles)

Mathematics Achievement Test (30 Minutes Paper)

The researcher taught the students in row & column (control group) and circular seating (experimental group) arrangement classroom, respectively. They were taught the topic 'Polynomials and Pair of Linear Equations in two Variables' for three times a week for a total of three weeks. During the last week, students were asked to attempt a thirty-minute achievement test paper. This 20 marks question paper had two sets of questions of 10 marks each. Further, each question was subdivided into five short questions containing two marks each.

Results

To answer the research questions, descriptive statistics and qualitative analysis of student's responses to the questionnaire and the thirty-minute mathematics achievement test paper were used. The element of personality differences, as expressed by students' self-report about how shy or interactive they were in class was also taken into consideration while analysing the data especially in comparison to the actual performance of students.

Marks scored by the students in the mathematics test attempted before and after the experiment (termed as pre-test and post-test respectively) were recorded. The data were then compared between the groups as well as between pre-test and post-test. The data was analysed for individual students as well as an average for each of the classes. Data were analysed and presented using bar graphs of student's responses to the shy or interactive question, their preferences for seating arrangements before and after experiencing both of them. Comparison between students' responses to both the questionnaire and the reflective paper was also done in order to be able to closely see whether classroom-seating arrangements affected their achievement and, if they did, what the effects really were.

Questionnaire

Students' responses to the first question show that, in Section A, five students considered themselves shy students in class where they chose one on the scale. Eight other students chose Point 2 while 10 students chose Point 3 on the scale. Five and two students from Section A chose Point 4 and 5 respectively on the scale (Figure 3).

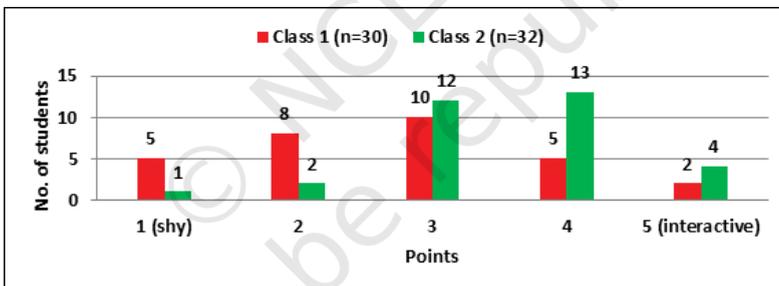


Figure 3: Student's responses to Question 1 about interaction (number of students)

Responses from Section B showed that one student considered herself shy in class, while two other students chose Point 2 on the scale. Twelve students chose Point 3 on the scale. Thirteen other students chose Point 4 while the rest, four students reported they were interactive students by choosing Point 5 in the class (Figure 3).

Student's Preference of the Cooperative Learning

In response to the second question, 20 out of 30 students (66.7%) in Section A said they would prefer the regular rows and

columns in seating arrangement for their classes, while the rest 10 students (33.3%) said they would like to have their class seating to be arranged in circles. In contrast to Section A, 27 out of 32 students (84.4%) of the Section B said they would like to be seated in circles during classes and only 5 students (15.6%) were in favour of sitting in rows and columns (Figure 4). On comparison, it was observed that Section B favoured interaction in the class while most of the students in Section A were shy and preferred to study alone.

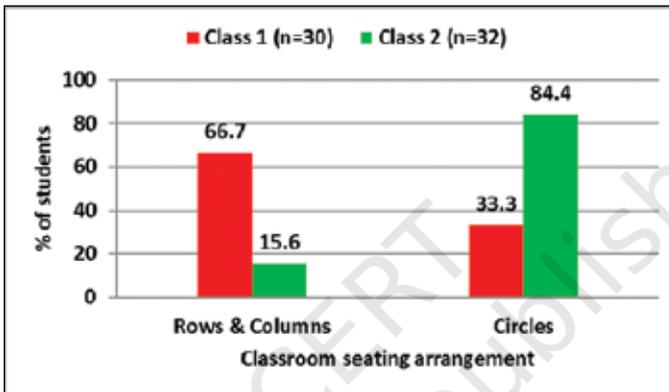


Figure 4: Student's responses to Question 2 about seating arrangement preferences in questionnaire (in percentage)

Table 1 shows the main reasons for choosing the rows and columns or the circles seating arrangements as reported by the students in both classes. Responses of students included reasons like sitting in circles would make it easier for them to communicate and talk together. In Section A, four students said they preferred the circles seating arrangement for better communication among group members and three of them said it helped them maintain eye contact with the rest of the group. One student chose the circles seating arrangement because 'sitting in rows and columns is boring' and because the circles would motivate him more. Two students reported that sitting in circles meant having a smaller number of students in class while two students said that the circles seating arrangement would help them understand more in class. Ten students who chose the rows and columns seating arrangement said that it was more organised and nine of them said that it was more comfortable to them. Another six students chose the rows and columns because they were used to it as it looks more

academic, five of these said they can see the blackboard easily and teacher can also see all the students. Three students reported that the rows and columns seating arrangement help to learn better, while two students said that it is eye relieving.

Table 1
Reasons for Choosing Rows and Columns or the Circular Seating Arrangements as Reported by the Students

| Seating arrangement | Reason | No. of students | |
|---------------------|--|-----------------|-----------|
| | | Section A | Section B |
| Circular | Better communication among group members | 4 | 18 |
| | Concentrate more | 1 | 6 |
| | Easier to share ideas | 1 | 8 |
| | Less number of students in the class | 2 | 1 |
| | Helps to understand more | 2 | 6 |
| | Attractive | 1 | 1 |
| | Helps to maintain eye contact | 3 | 10 |
| | Helps to motivate | 1 | 6 |
| | Sitting in rows and columns is boring | 1 | 5 |
| | More active | 1 | 1 |
| | More comfortable | 1 | 4 |
| | More friendly | 2 | 4 |
| Rows and Columns | More organized | 10 | 8 |
| | Concentrate more | 12 | 7 |
| | Enables the class discussions | 2 | 1 |
| | No one can feel rejected | 1 | 1 |
| | Many students in the class | 5 | 1 |
| | Sit among friends | 1 | 1 |
| | Comfortable | 9 | 3 |
| | See the board | 5 | 2 |
| | Communicate easily | 1 | 1 |
| | Easy to share ideas | 1 | 1 |
| | I am used to it | 6 | 1 |
| | Teacher can see all students | 5 | 2 |
| | Eye relieving | 2 | 1 |
| | Learn better | 3 | 1 |
| More academic | 6 | 2 | |

Reasons for choosing the circular seating arrangement in Section B included this arrangement being better for communication and eye contact among group members. Eighteen students said that the circular seating arrangement enabled communication among all group members and maintain eye contact easily with the group members as reported by 10 students from Section B. Six students said the circular seating arrangement helped them concentrate more in class while eight students said it was easier to share ideas in this arrangement. Four students reported that the circular seating arrangement was more comfortable and friendly while one student said that having the class furniture arranged in circles meant having less number of students in the class. On the other hand, seven of the students who preferred the rows and columns seating arrangement said that it helped them concentrate more while eight students said it was more organized. Three students said it was more comfortable for them to sit in rows and columns, two said this seating arrangement enabled the teacher to see all students in the class and was more academic.

Mathematics Achievement Test (Thirty-Minute Paper)

Students from Section A studied in the rows and columns seating arrangement, while Section B studied in circle for three weeks. During the last week, students from both the classes were asked to attempt 30-minute mathematics achievement test paper. The data on the marks obtained in the achievement test paper are given below. Based on the marks scored in the pre-test and post-test: the students were grouped into Seven Categories: A–G. Students, score in: Category A: >85 per cent, Category B: 75–85 per cent, Category C: 65–74 per cent, Category D: 55–64 per cent, Category E: 45–54 per cent, Category F: 33–44 per cent and Category G: <33 per cent (failed).

Section A: (Control Group)

All the 30 students from the control group (Section A) attempted the test paper before and after the experiment. On evaluation it was found that one student (3.3%) could not pass in the pre-test as she scored <33 per cent marks (Cat. G), however she qualified in the post-test (Figure 5). In contrast, one student was able to score >85 per cent (Cat. A) marks in post-test as compared to none in the pre-test. No difference was observed for the number of students in categories B, C and D. Further, the number of students in Category E increased from 20 per cent in pre-test to 33.3 per cent in post-test.

However, it was reversed for Category F, where the number of students dropped down from 30 per cent in pre-test to 16.7 per cent in post-test.

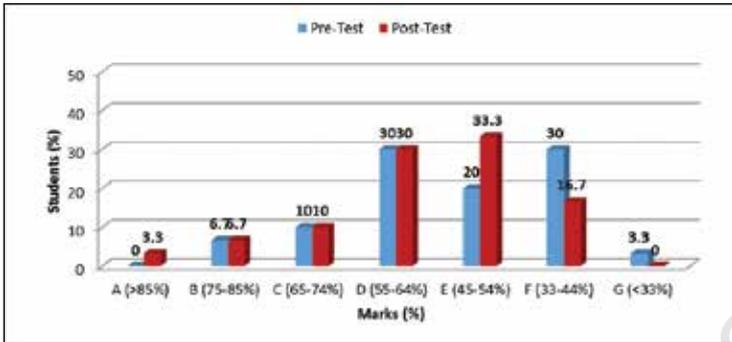


Figure 5: Percentage of Section A students (control group) placed in various groups categorized based on the marks obtained in pre and post-test mathematics achievement test paper

The mean of the marks obtained by the students in the pre-test and post-test mathematics achievement test for Section A showed a marginal increase from 51.0 to 55.67 per cent. However, this difference was not found to be significant. It was noticed that 95 per cent confidence interval of the mean was lesser for the post-test as compared to that for the pre-test. The range of the marks for both pre-test and post-test was found to be quite broad and showed no difference.

Section B (Experimental Group)

Like Section A, all 32 students from the Class II (experimental group) attempted the pre-test and post-test mathematics achievement test paper. Although, pre-test scores of Section B students were similar to that of the Section A, the post-test scores of the students were significantly higher (Figure 7). For example, while 3 students (12.5%) were not able to score the pass percentage (<33 per cent, Cat. G) and one student was in the Category F with 33–44 per cent in the pre-test, it was found that every student scored >45 per cent in the post-test. Similarly, the number of students in Category D and E reduced from 41.6 per cent and 21.9 per cent respectively in pre-test to 9.5 per cent and 12.5 per cent respectively in the post-test. However, the post-test scores of the students were better than pre-test as evidenced by the post-test increased frequency of students in categories A, B and C as compared to that for the pre-test achievement test paper.

For example, 10 students (31.2%) each scored between 65–74 per cent (Cat C) and 75 per cent–84 per cent (Cat B) in post-test as compared to 3 students (9.4%) each in the pre-test. Surprisingly, 5 students (15.7 per cent) scored >85 per cent (Cat. A) in post-test as compared to only one student (3.1 per cent) in pre-test.

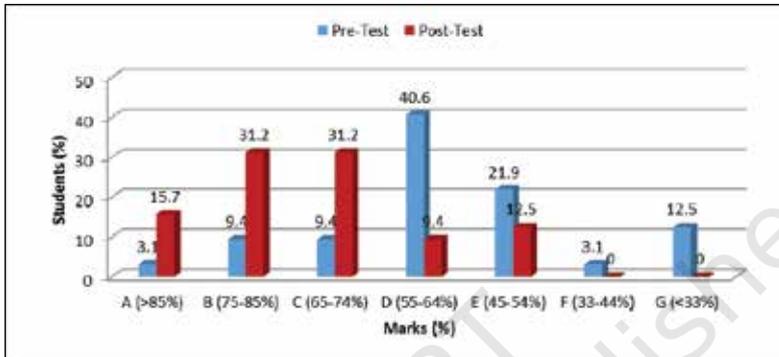


Figure 7: Percentage of Section B students (experimental group) placed in various groups based on the marks obtained in pre and post-test mathematics achievement test paper

Comparative Analysis of Scores of the Students of Section A (Control Group) and Section B (Experimental Group)

Only one student (3.3%) failed from Section A as compared to 4 students of Section B in the pre-test mathematics test. Therefore, the pre-test passing percentage of the Section B was lesser (87.5%) as compared to Section A (96.7%). However, post-test passing percentage was reached to 100 per cent for both the classes (Figure 8).

On comparison of the mean scores in pre-test between Section A and Section B, it was observed that the mean score of the Section B was 55.5 per cent as compared to 51.0 per cent of Section A. When the post-test means were compared with that of the pre-test mean scores for both the classes, a significant increase ($p < 0.0001$) in the mean score was observed only for Section B and not for Section A. Although, there was an increase in the post-test mean score for Section A, but the difference was not significant ($p = 0.16$).

Effect of the Co-Operative Learning through Circular Classroom Seating Arrangement on Student's Learning

The Section B underwent the change in the seating arrangement from rows and columns to circular pattern as an experimental

treatment and thus constituted the experimental group. The pre-test scores in the mathematics test paper for both the classes were comparable, rather the number of students failing in this test was higher for Section B as compared to that of the Section A. However, the mean score of Section B students was more than that of the Section A suggesting that the individual students who passed from the Section B scored better than that of the Section A. This is because the higher number of students' found place in Category A (>95 per cent), B (84–95 per cent) and Category D (55–64 per cent) as compared to that of the Section A. However, post-test evaluation revealed that one student from the Section A scored >95 per cent marks as compared to none in the pre-test. Further, the number of students scoring 45–54 per cent (Cat. E) in post-test was higher than that in the pre-test and it was reversed for the Category F (33–44 per cent). This might be attributed because some student who scored lesser in the pre-test but performed better in the post-test resulting in the shift from Category F to E. Although there was an improvement in the post-test score as compared to that of the pre-test score in the control group, the means of the scores of the pre-test and post-test were not significantly different. This can be attributed to their second attempt of the mathematics test paper and not the effect of the experimental set up as no change was used for the seating arrangement of this group.

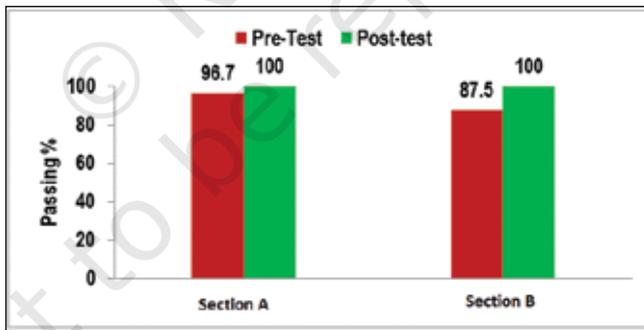


Figure 8: Passing percentage in mathematics achievement test paper of both classes

On the other hand, students of Section B experienced the change in the seating arrangement from row and columns to circular pattern as an experimental design for three weeks during the course of this research. In contrast to Section A (Control group), the student of the Section B (Experimental group) performed

significantly better in their post-test as compared to the pre-test. The passing percentage of the Section B was lesser than that of the Section A in pre-test, however 100 per cent of the students from both the classes qualified in the post-test. The passing difference between for the Section B was higher than that of the Section A. This improvement was not only in terms of the number of students who passed in post-test but also the students got the better grade as most of the students from Category D (55-64%) in pre-test jumped to either of the Category A, B and C. When we analysed for the mean difference of the marks obtained by both the classes between pre-test and post-test mathematics test, the significant increase was observed for the Section B and not for the Section A. These results highlight the influence of the co-operative learning by changing the traditional rows and columns classroom seating arrangement to circular on the passing percentage as well as the grades of the students of the Section B. These results show that, according to the students, the co-operative learning is very helpful in understanding the subject and share their doubts to each other. It also helped them to discuss the difficulties and find out the solution of the problem. In contrast studying alone in the rows and columns gave them a feeling of un-cooperation and affect their learning capability. Therefore, circular seating arrangement is a priority to them. Students care for where and how they feel comfortable. Comfort, being part of the Ehman et al.'s (2003) affective factors, is what helps students learn more efficiently. It can then be argued that classroom seating arrangement is directly related to student's participation while working on co-operative learning activities since it has to do with student's feeling comfortable in class. Student's comments thus agree with Cornell's (2002) argument that furniture arrangement should be functional. By functional, he means that seating arrangements should help both the students and the instructor equally to achieve the course goals. They also agree with what Chambers (2004) said about the importance of classroom seating arrangements being 'comfortable to use' for both the teacher and the student.

Conclusion

In this study, it was observed that the co-operative learning by modifying the classroom seating arrangement from the traditional rows and columns to circular arrangement improved the students' learning capability, and understanding of mathematics

significantly. This interpretation is mainly based on the comparison of improvement in the passing percentage and the marks obtained by the students of the experimental group (Section B) in the post-test mathematics achievement test paper.

Results of this study show that co-operative learning helps to improve not only the understanding of the students but also motivate them to discuss the difficulties during study. There are different ways of co-operative learning and one way of that is to transform the classroom seating arrangement in a way which suites the most to the requirement of the student's performance. Here the study shows the modification of the rows and columns into circular seating arrangement, but there can be many more ways to do so. Some of the students who considered themselves shy but when seated in a circle, their performance in the achievement test was very good. This means that it could be claimed that co-operative learning through class seating arrangements, not only affect the highly interactive students in class, but could also help shy students to be more active and participate in the discussion which in turns improve their performance in the subject.

Implications for the Teaching

Data obtained from this study highlights a number of points concerning the beliefs of the educational institution. The way seats are arranged inside classes reflect the beliefs that the teacher is still the main source of information. Although there has been a call directed to all teachers to encourage co-operative learning activities and group work among students, the way classes are laid out does not encourage this teaching method.

Students should be encouraged to work in groups and to depend more on each other rather than the teacher in order to learn more efficiently.

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Study of Existing Pedagogical Practices, Issues and Challenges of Inclusive Education in Chandigarh

HARPREET KAUR* AND SNEH BANSAL**

Introduction

'Inclusive education' or 'Education for All' has taken centre stage within the human rights framework. In inclusive education, children with disabilities are taught in regular schools with their age and grade peers with the support services provided within the school system. Inclusion involves valuing diversity in teaching groups and the adaptation of teaching approaches to support them. Inclusion cannot go very far without developing the capacity of schools to respond to diversity among children.

In India, there has been no single policy or act which included all kinds of disabilities till 1995. The PWD Act of 1995 covered seven major disabilities — blindness, low vision, leprosy-cured, hearing impairment, locomotor disability, mental retardation, and mental illness. With evolving time, different policies and acts include different categories. As per the Rights of Person with Disabilities Act of 2016, these have been increased to 21. This act defines inclusive education as a system of education wherein students with and without disability learn together and the process of teaching and learning is suitably adapted to meet the learning needs of different types of students with disabilities.

Children with disabilities constitute one of the largest groups that are still outside the fold of the general education system. They remain marginalised across the region, with their right to education far from being fully realised. Although significant efforts have

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been made to overcome the historic discrimination and exclusion they experience, too often such measures are fragmented and un-coordinated both across and within ministries.

Rationale of the Study

The present study was undertaken to identify the best teaching strategies or methods or approaches for inclusion being used by the government school teachers in Chandigarh, India. It was presumed that such an effort would serve to develop standards or benchmarks for developing inclusive pedagogy practices for use by the teachers. Additionally, the study has also focused on the issues and challenges faced by the teacher or educators in accommodating children with special needs in regular schools and the training needs of the teachers to provide meaningful learning experiences to these children.

Objectives

1. To identify the pedagogical practices used by the teachers for children with special needs in regular classrooms.
2. To find out the challenges faced by the teachers and others in inclusive classrooms.
3. To identify the training needs of the teachers in inclusive education.

Research Questions

1. Are there any pedagogical practices specific in nature facilitating inclusion of any particular type of children with special needs?
2. Are there any pedagogical practices specific to nature of the subject being taught in the inclusive classrooms?
3. What are the practical challenges faced by the teachers and others to include children with special needs in regular classrooms?
4. What are the training needs of the teachers in inclusive education?

Method

Sample

The researcher selected the elementary schools of Chandigarh as the learning site for the study. Among these schools, those with the maximum number of CWSN students were selected for the purpose of gaining a deeper understanding into the existing

pedagogical practices, issues and challenges in the implementation of inclusive education.

Considering how the study required a sample of inclusive schools where CWSN were enrolled, a two-staged sampling procedure was adopted. In the first stage the list of clusters of all government schools in Chandigarh was collected from the Directorate of Education records.

Thus with the help of cluster random sampling, 28 schools were selected, from which 240 teachers teaching maximum CWSN were selected purposively along with 28 principals of these inclusive schools. The study thus targeted principals or administrators and at least eight educators from each of these schools from Classes I to VIII.

Tools

Rather than going by a single tool, multiple tools were used in the study. The details are given below.

Semi-structured Questionnaire

The semi-structured questionnaire was prepared for the teachers and principals. In the former case, the questionnaire consisted of two sections. The first section comprised of seven questions on the demographic information about the teachers, whereas the second section consisted of eleven questions that were both open ended and close ended, which were categorised into groups of common themes. These themes included the concepts of inclusive education, pedagogical practices, learning environment, challenges, etc.

In the case of principals, once again, the questionnaire consisted of two sections. The first section comprised of five questions dealing with demographic information. The second section consisted of eleven questions on themes like facilities, resources, admission policy, etc.

Observation Schedule

The observation schedule for teachers was developed on the basis of the Performance Indicators (PINDICS) for elementary school teachers developed by the NCERT. In addition to the first four components that were taken from the PINDICS, two more were added. All the components — designing learning experiences, knowledge and understanding of subject matter, strategies for facilitating learning, admission policy, contribution of the school in

inclusion, and challenges in implementation — were used keeping in mind the needs of all the learners.

Other Methods

Focused Group Discussions were conducted with teachers and resource teachers teaching CWSN from each site. The discussion focused on the concept of inclusive education, curriculum adaptation and modification to include CWSN in classrooms, support given by the school to CWSN, barriers and suggestions.

To study the practices adopted by the schools towards being inclusive, case studies were done keeping in mind factors like infrastructure and aids provided to CWSN, resource centers, teaching aids, instructional practices etc.

Various existing documents like school information record, policy documents on inclusion, attendance registers, student records, circulars, etc., were also analysed.

Results

The pedagogical practices towards implementing inclusive education include lesson designing, teaching strategies, teaching and learning materials and aids. Result showed that about 90 per cent of the teachers engaged the students in various activities, whereas nearly two-thirds (66.78%) of the teachers prepared teaching learning material and half of the teachers (53.36%) used previous performance record of the students to plan the lessons. Apart from this, 66.78 per cent teachers stated that they prepare extra worksheets for children with special needs as per their disabilities and pictures or visual aids are also added in the lesson plan. With respect to the teaching strategies, majority of the teachers (about 79%) used cooperative method, nearly 71 per cent used task analysis and about 60 per cent used some visual aids while delivering lessons. In addition, 58.26 per cent of the teachers reported that they use storytelling method, practice in smaller units, use drill method and questioning techniques to create interest and draw attention to the lesson.

With regard to the teaching learning material and aids, a majority (about 79%) of teachers reported that they use flash cards and pictures. Newspaper and magazines were other resources used as TLM by nearly half (48%) of teachers in their classes while around 74 per cent of the teachers reported use of diagrams, maps and charts in their classes. The teachers also made adjustments

in the learning environment to facilitate the CWSN in their class. A majority (83%) of the respondents reported that they make seating arrangement for special children close to the blackboard, particularly for those with vision problems. Approximately 79 per cent teachers said that they give appropriate desk or table to CWSN in their classrooms. Proper lighting in the learning environment is ensured by about 65 per cent of teachers. Special children need a lot of motivation and encouragement to do even a small task, and about 91 per cent of teachers responded that they ensured this. Apart from this, 24.36 per cent teachers reported other adjustments in learning environment such as teaching them patiently and empathetically, flexible time table, providing emotional support, giving responsibilities and duties, conducting peer sensitization programmes, being approachable to students and holding regular meeting with the parents.

More often than not, the teachers also faced with challenges in implementing an inclusive approach in the classrooms. Nearly 12 per cent of the teachers responded that the furniture in the class rooms were not as per the requirements and this made it difficult for them to change seating arrangements for the children. Around 14 per cent found the school infrastructure to be lacking. This included a lack of ramps and other required modifications and adaptation with regard to toilet facilities, laboratories, libraries, playgrounds, etc. On the other hand, one third (30%) of the teachers reported that they do not have enough TLM.

Pointing at a very crucial issue when it comes to teaching students of different levels under the same roof, nearly 46 per cent of teachers stated that in inclusive set up they faced difficulty to complete the syllabus within the time. In addition, only about 9 per cent of the teachers reported that they got support from other staff or the head of the school. Around 40 per cent of the teachers pointed out that they did not get cooperation from the parents. Furthermore, according to approximately 24 per cent of the teachers, services of professionals and specialists were not provided for CWSN and thus they found it difficult to evaluate the performance of CWSN.

With regard to training, most (76%) of the teachers reported that they have not received any special training and about 43 per cent of the teachers said that due to the lack of training, they were not able teach these children according to their needs.

Nearly 65 per cent of the teachers reported that they needed in-service training to meet the needs of CWSN in an inclusive set up.

Conclusion

Inclusive set up needs some changes and adjustments in the physical environment therefore most of the teachers use few strategies for creating a positive environment in the class. Majority of the teachers make the seating arrangement of the CWSN near the blackboard and on front desk. Other than this they provide proper infrastructure, i.e., table and desk as per the needs of the children and appropriate lighting. They also stated that to provide conducive learning environment the CWSN students are taught patiently and empathetically using flexible time-table and by providing emotional support. To enhance the confidence among these children, responsibilities and duties are given to them, peer sensitization programmes are conducted, and, most importantly, teachers remain easily approachable by the students.

The classroom observation, suggested that most of the teachers gave their best efforts to make their classroom inclusive in nature but there remain some areas which need improvement like availability of TLM, infrastructure, resource teachers, rationalisation of class size, parental awareness and involvement, training and administrative support.

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Work Education and Entrepreneurial Intention among the Students of Higher Secondary Schools in Imphal West District, Manipur

KHUNDRAKPAM DEVANANDA SINGH*

Introduction

India is facing a number of challenges that can be met if the country has innovative, well-educated and entrepreneurial citizens who have the spirit and inquisitiveness to think in new ways. The courage to meet and adapt to the upcoming challenges is to be developed while selecting a career during higher secondary school education of a student.

The North Eastern Region (NER) of India lags behind the other parts of the country in terms of development. The region is facing the problems of unemployment, social unrest, law and order situations, lack of infrastructure, uncertainty, poor industrial establishments etc. If entrepreneurship is considered to be accelerator of growth and development, the educated youths can change their mindset from being 'job seekers' to 'job providers'.

The main goal of education is to develop the efficient self-thinking process to the learner. In this regard, the need to operationalise the concept of entrepreneurship in school cannot be undermined. The entrepreneurship education at the secondary level will enable the students to learn about life skill activities. The introduction of 'entrepreneurship education' at this level is a constructive step to inculcate the spirit of entrepreneurship among the young students, changing the mind-set of the students in their future career. This

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process may lead to individual growth and development and also socio-economic development and prosperity.

Rationale of the Study

This research investigated the factors that affect entrepreneurial intention among the higher secondary students of three different streams. A picture on the relationship between the curricula of streams and entrepreneurial intention among these streams in Higher Secondary Schools was also drawn. The findings of the study provide a policy message to the appropriate authorities to implement these policies effectively and efficiently for creating more employment opportunities.

Objectives

1. To study the factors that affect entrepreneurial intention.
2. To examine the impact of independent variables on entrepreneurial intention.
3. To compare the entrepreneurial intentions among Science, Arts and Commerce students.
4. To find out the correlation between the curricula of streams and entrepreneurial intentions among Science, arts and Commerce students of Higher Secondary Schools in Imphal West District, Manipur.

Method

Sample

The focus of the study was on entrepreneurial intention among higher secondary students of Imphal West District, Imphal, Manipur. In the district there were 9623 (8088, 1420 and 115 Science, Arts and Commerce students, respectively) students admitted in Class XII as on 31st December, 2017. For the purpose of studying the response of students from different streams, all the Commerce students (N=115) were included in the study. Also, samples from Science (N=115) and Arts (N=115) streams were drawn. This means that the total sample size was 345.

Tools

The study is exploratory in the nature. The primary data for the study were collected from the sampled students through a well designed questionnaire. Along with personal interviews, focus

group discussion with the respective teachers and students were also used to collect more information from the respondents.

Results

It was found that five factors, namely—attitude towards the behaviour, subjective norms, perceived behavioural control, entrepreneurship education and personality traits affected entrepreneurial intention of the students of science, arts and commerce streams. Perceived behaviour control was ranked first, followed by attitude towards the behaviour, entrepreneurship education, personality traits and subjective norm securing second, third, fourth and fifth ranks, respectively.

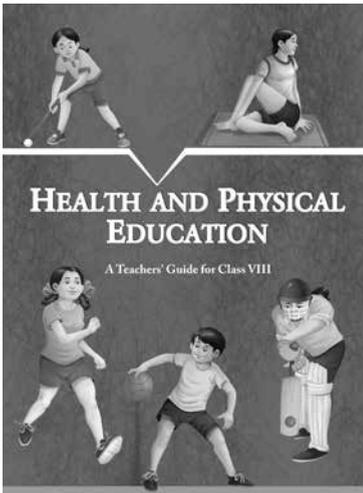
The study found that all the independent variables, namely—attitude towards behaviour, subjective norm, perceived behavioural control, entrepreneurship education and personality traits were positively correlated with entrepreneurial intention. It also found that personality trait is the predictor variable that contributes the highest to the variation of entrepreneurial intention. It is followed by entrepreneurship education, perceived behavioural control, subjective norms and attitude towards behaviour respectively.

It was also found that all the students of the three streams, namely science, arts and commerce showed entrepreneurial intentions. Among the three streams, the students of commerce stream showed more entrepreneurial intention, which was followed by the students of arts and science streams respectively. There was, however, no significant correlation between the curricula of all streams (science, arts and commerce) and entrepreneurial intentions among the higher secondary students in the study area.

Conclusion

In the present scenario of advanced technology all over the world, the higher secondary schools in India have a lesser amount of curricula related to entrepreneurship in commerce stream. It is absolutely meager or even nil in the science and arts streams. Therefore, the students after their study are unable to utilise their skills for entrepreneurship related activities. Entrepreneurship education is the driving force behind the country's economy, directly or indirectly. But the passed out students are lacking the entrepreneurial skills and innovative thinking to work through the present day requirement. To mitigate this issue, adding more

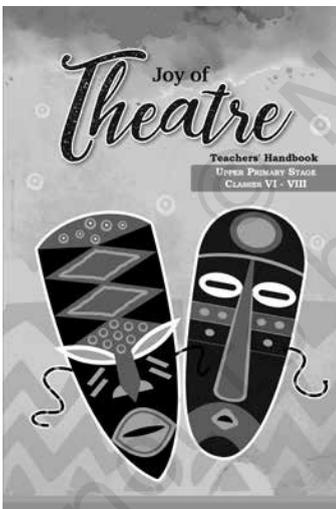
entrepreneurship related curricula in all the streams of study is highly recommended. This will enable learners to develop and increase the entrepreneurial intention among them. This particular intention is not only useful for starting business activities, but will also help create jobs for self and others, leading to the economic up-liftment of the country. Therefore, inclusion of entrepreneurship education in the curriculum of all the streams in higher secondary schools, need to be of an immediate concern for the policy makers.



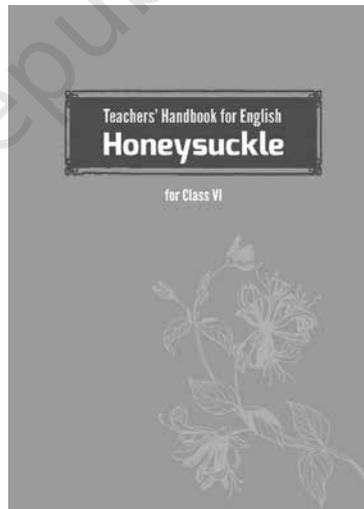
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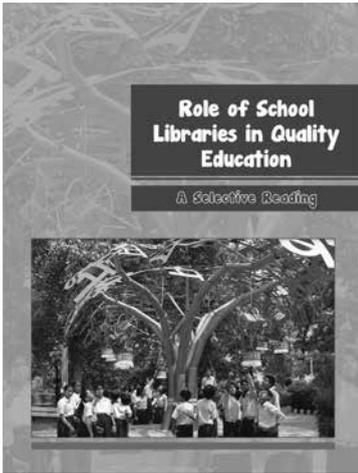
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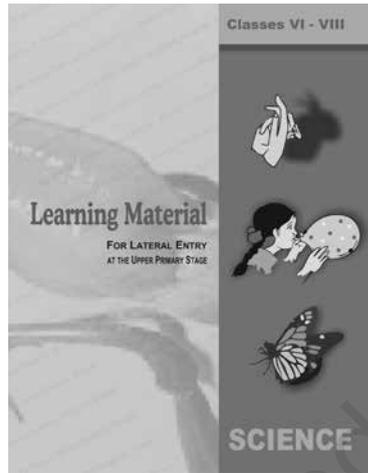
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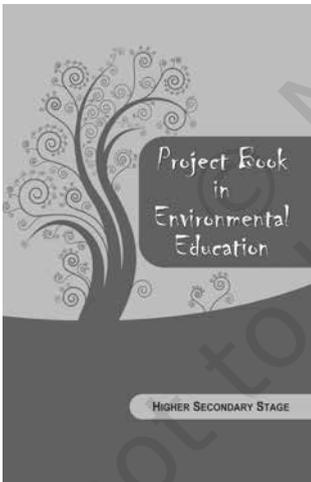
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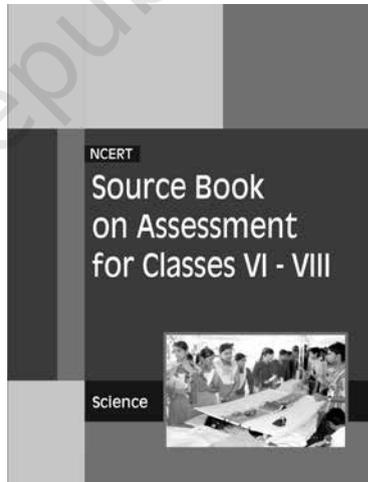
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