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# Indian Educational Review

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RESEARCH PAPERS

Medium of Instruction in School Education in India: Policy,  
Status and Demand for English Medium Education

Evaluation of English Textbooks for Class X Prescribed in  
BSE and CBSE Schools

Influence of School Environment on Mental Health of Students  
at Formal Operational Stage of Cognitive Development

A Study of Classroom Behaviour of Prospective Teachers in  
Relation to Their Teaching Aptitude

Interactive Effect of Gender, Type of School and Mental Health  
on Social Adjustment of Adolescents

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विद्यया ऽ मृतमश्नुते



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## EDITORIAL

This issue of *Indian Educational Review* contains five research papers focusing on medium of instruction in the schools, evaluation of English textbooks, mental health of students, prospective teachers' behaviour in the classroom, and adjustment of adolescents in the school. It further carries summaries of three research projects related to children with developmental coordination disorder, discalculic children, and motivation of students belonging to the disadvantaged groups. A book review on rural teachers' continuous professional development is also included in the issue.

The first paper discusses the policy provisions, status and problems in implementation of medium of instruction vis-à-vis role of English language in school education in India. The evaluation of English language textbooks prescribed for Class X students by the Central Board of Secondary Education and Board of secondary Education, Rajasthan has been carried out in the second paper. The study identifies gaps in the English textbooks that need consideration. The formal operational stage of children's development, which begins around 11 or 12 years of age, is considered to be important for mental health of students. The third paper studies mental health of boys and girls drawing sample from the state of Haryana. The results show positive influence of some of the factors of school environment on the mental health of the students. The fourth paper examines the effect of teaching skills on classroom behaviour of prospective teachers and shows significant effect of intervention on the teaching skills of experimental group. The results of the fifth paper reveal that type of school and mental health play important roles in the social adjustment of students.

The NCERT provides academic and financial support to researchers working in different Universities/research institutions for conducting researches. The issue contains summaries of three such research projects. These research studies are the followings: (1) Development of an Assessment Tool and Integrated Management Protocol for Children with Development Co-Ordination Disorder, (2) A Study of Dyscalculic Primary School Children from Salem District and Evaluation of Applicability of Innovative Strategies as Remedial Measures, and (3) Enhancing Performance of Disadvantaged Pupils through Motivation.

The issue also contains a review of the book "Developing Support Systems for Rural Teachers' Continuing Professional Development".

The *Indian Educational Review* focuses on enriching the discipline of education by disseminating findings of educational research, providing opportunities for exchanging research experience among fellow researchers, motivating academicians and providing inputs to all those involved in policy making and planning. Contributions of academicians, researchers, and freelancer writers are cordially invited for the next issue. We seek your suggestions and views on improvement of the journal and research initiatives.

*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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# **Medium of Instruction in School Education in India: Policy, Status and Demand for English Medium Education**

RAMANUJAM MEGANATHAN\*

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## **ABSTRACT**

*The linguistic diversity in India makes language planning complex and flexible. This paper presents how the medium of instruction in school education is implemented in terms of policy provisions, status of implementation, its problems and place and role of English as a language and as a medium of instruction in schools. It is based on the data collected through questionnaires and interview schedules with the state and national level agencies involved in language planning by the author at the national level during 2009-2011. It is disturbing to find that the number of languages used as medium of instruction has been reduced to 47 from 60 during the last two and a half decade. 33 of 35 states/provinces claim to offer English as a medium of instruction; this is more than any other language, but number of schools offering English as a medium of instruction is very less compared to Indian languages as medium of instruction. The paper then moves on to discuss how the language policy acts as an instrument for exclusion of languages, particular minority, minor and tribal languages as media of learning as well as a subject even in primary years of learning. The paper also suggests ways to prevent the languages being thrown out of the school system and the need for recognising the importance of medium of learning through the mother tongues while providing quality learning of English as a language in schools.*

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**Key words:** Language planning, medium of instruction, multilingualism, English language

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### ***Linguistic Scene of India***

India has now, according to 2001 Census (complete data of 2011 Census is not available), a total of 122 languages and 234 mother tongues belonging to five different language families namely, Indo-Aryan, Dravidian, Austro-Asiatic, Tibeto-Burmese and Semito-Hamitic (The 1961 Census lists 1,652 languages as mother tongues (NCERT, 2006)). The Constitution of India recognises 22 languages. About 87 languages are used in print media, 71 on radio, and the administration of the country is conducted by around 15 languages. However, as the position paper on teaching of Indian languages regrets (NCERT, 2006), only 47 languages are used as the media of instruction in schools. The number of languages used as media of instruction two decade ago was about 60 (Rao, 2008; Meganathan, 2011). Indian Constitution allots a schedule to deal with languages. Articles 343 to 351 of part XVII and the 8th Schedule of the Constitution of India are on issues of languages of the country. Hindi (though a majority language) is India's official language, not a national language, and English is the co-official or associate official and link language across the country in spite of the efforts from many quarters to contain the language in public offices and from education. English language medium is now being introduced in government run schools in many states.

### ***Language Policy in School Education***

Language policy formulations during the formative years of Indian independence took into consideration of bringing in harmony and equality among Indian languages, particularly between Hindi, the majority language, and the rest of the Indian languages and having a common language which could serve the purpose of 'cross national communication within the country'. English language found its place as an associate official language and a link language between Hindi speaking and non-Hindi speaking states. Since independence, the language policy debates in India have been a political question rather than an academic one. This can be noticed even in the recent curricular revision, the National Curriculum Framework – 2005 which states, "The level of introduction of English has now become a matter of political response to people's aspirations rendering almost irrelevant an academic debate on the merits of very early introduction" (Position Paper Teaching of English (NCERT, 2005c, p. 1)). So, there is no wonder the language-in-education policy, the three language formula was devised as a

strategy (for harmonious language development among learners in school) in various conferences of Chief Ministers of Indian states and in the meetings of the Central Advisory Board on Education (CABE) which consists of education ministers and high level officials from the states and the national government. Language-in-education strategy known as the three-language formula as stated in the National Commission on Education (GOI, 1968 p. 192) recommended a modified or graduated three-language formula to include:

- (1) the mother tongue or the regional language
- (2) the official language of the Union or the associate official language of the Union so long as it exists; and
- (3) a modern Indian or foreign language not covered under (1) and (2) and other than that used as the medium of instruction.

The language-in-education policy attempts to provide a flexible language policy in order to accommodate at least three languages in school education and assumes that learning through mother tongue is ideal for cognitively sound language development in children. The three language formula also aims at promoting national integration among young children in schools.

Thus the language planning and policy in India has been closer to status planning at the national level (the national government planning) with less of corpus and policy planning while at the state (provincial) level is more of corpus planning than status planning. The national government takes the responsibility of corpus planning of the majority language, Hindi and some minority languages like Urdu, Sindhi, Persian, etc. The national government has departments known as Hindi prachara sabha (meaning Hindi Promotion Wing) and National Council for Promotion of Urdu. This is to spread the languages in the states where they are not available and to those who migrate to the Hindi heartland for work, education and so on.

There are, however, states that chose not to implement the national government's language policy for political, social and cultural reasons. One illustration is the South Indian state of Tamil Nadu which for its linguistic national (Tamil) identity and protection of Tamil language from Hindi being imposed on it, refused to accept the three language formula and India's plural democratic policy had to accept it. In such states, status planning also takes place at the state level. In many of the north eastern states, English plays a functional role in day-to-day affairs and

Hindi, though available in the school system, does not have much to do in social and academic domains.

### **Media of Instruction**

The three language formula envisages that the children in the primary school study through their mother tongue for a harmonious development and pedagogically sound quality education. It is evident, as reported by the Seventh All India School Education Survey (hereafter referred to as Seventh Survey) with date of reference 30th September 2002 (NCERT, 2007), that more than 90 per cent of schools at the primary and upper primary stages teach through the mother tongue or the language of the region of children. In fact, one would observe an increase in the number of schools teaching through mother tongue during the last ten years. Appendix A contains the number of languages offered as medium of instruction in the states. The following section presents the percentages of schools teaching through mother tongue in comparison with the status ten years prior to Seventh Survey as reported in the Sixth All India School Education Survey (hereafter referred to as Sixth Survey, with date of reference 30th September 1993). (NCERT, 1993)

As shown in Table 1, the Seventh Survey found that 92.07 per cent schools at the primary stage teach through mother tongue in comparison to 91.65 per cent schools in the Sixth Survey. Rural and urban comparison shows that 92.39 per cent schools in rural areas and 90.39 per cent schools in urban areas teach through mother tongue as compared to 91.70 per cent schools in rural area and 91.32 per cent schools in urban area in the Sixth Survey. As regards upper primary stage, 91.34 per cent schools teach through mother tongue. The corresponding figure in the Sixth Survey was 88.64 per cent. The rural and urban comparison shows that 92.71 per cent schools in rural areas and 87.37 per cent schools in urban area teach through mother tongue as compared to 89.49 per cent schools in rural areas and 86.07 per cent schools in urban areas in the Sixth Survey. The Seventh Survey also found that the 12.14 per cent schools at the primary stage, 14.47 per cent schools at the upper primary stage, 8.53 per cent schools at the secondary stage have two or more media of instruction. This also shows the increase when compared to the corresponding figures in the Sixth Survey the percentages which were 7.21 per cent, 12.49 per cent and 13.34 per cent respectively.

The Seventh Survey also reported the percentage of schools teaching through English medium and the percentage of increase during the last ten years. English as medium of instruction is used in 12.98 per cent schools at the primary stage, 18.25 per cent schools at the upper primary stage, 25.84 per cent schools at the secondary stage and 33.59 per cent schools at the higher secondary stage. The corresponding figures in the Sixth Survey were 4.99 per cent, 15.91 per cent, 18.37 per cent and 28.09 per cent respectively. Hindi as medium of instruction is used in 46.79 per cent schools at the primary stage, 47.41 per cent schools at the upper primary stage, 41.32 per cent schools at the secondary stage and 48.11 per cent schools at the higher secondary stage. The corresponding figures in the Sixth Survey were 42.26 per cent, 40.93 per cent, 33.94 per cent and 45.37 per cent respectively. It was also found that the increase from 30 states/UTs to 32 States/UTs are imparting education in the languages other than that of majority language at primary and upper primary stages of school education, to cater the needs of linguistic minorities. In the Sixth Survey, 30 States/UTs were having this facility.

**Table 1**  
**Percentage of Schools Teaching through Mother Tongue and Two or More Languages as Medium**

Stages of schooling	1993*			2002**		
	Rural	Urban	Total	Rural	Urban	Total
Mother Tongue as medium						
Primary	91.7	91.32	91.56	92.39	90.39	92.07
Upper primary	89.49	86.07	88.64	92.71	87.37	91.34
Two or more languages as media of instruction						
Primary	-	-	7.21	-	-	12.14
Upper primary	-	-	12.49	-	-	14.47
Secondary	-	-	13.34	-	-	8.53

**Source:** \* Sixth All India School Education Survey (NCERT, 1993)

\*\* Seventh All India School Education Survey (NCERT, 2007)

The data collected from the states (Appendix A) for the present study reveals that a minimum of two languages are available as medium of learning and the maximum of languages used as medium of learning is ten in the different school systems in the states. Number of languages used as medium of instruction

keeps increasing as one moves from primary to secondary stage. Fifteen states offer two languages as medium of instruction at the primary stage. The state of Karnataka and Andhra Pradesh offer ten and eight languages, respectively, as medium of instruction from primary to secondary stages of schooling. The state of West Bengal makes a provision for ten languages at upper primary and secondary stages. The states could be grouped on geographical and linguistic grounds in the count of number of language available as medium of instruction. The other two south Indian states, Tamil Nadu and Kerala present a different picture. The state of Kerala makes a provision for four languages as media of instruction while the state of Tamil Nadu makes it available in two languages at the primary and in five languages at upper primary and secondary stages of schooling. Table 2 shows the number of languages choices offered by the states and individual languages offered or available to learners as medium of instruction.

**Table 2**  
**Number of Language Choices and Number of Individual Languages Offered as Medium of Instruction by States/UTs (N=35)**

School level	Language choices offered by states/UTs	Individual languages available as medium
Primary	107	31
Upper Primary	124	25
Secondary	124	24
Total	355	31

India has now 36 provinces known as the states of which 7 are centrally administered provinces known as Union Territories. The state of Telangana was not created when this study was conducted. So there were 35 states and UTs.

The states in the Hindi heartland, Bihar, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Jharkhand, Uttaranchal and the National Capital Region of Delhi make a provision of three or four languages as media of instruction from primary to secondary stage. The languages available are: Hindi, Urdu, Sanskrit, Marathi (in Madhya Pradesh), Bengali (in Jharkhand) and English. The state of Rajasthan has two languages as media of instruction from primary to secondary stage of schooling. The states of Odisha, Punjab and U.T of Chandigarh, Maharashtra and Gujarat could be categorised as one in their pattern of providing number of languages as media of instruction. These states have two or more languages as media

at the primary level and three or more languages at the upper primary and secondary levels. For example, the state of Odisha has Odia and English as media at the primary stage and Odia, Hindi, English and Sanskrit as media of instruction at the upper primary and secondary stages. Urdu is a medium of instruction in madararasas.

The states of north east region too present a pattern where some states make a provision for two languages as media of instruction and some states make a provision for four. The state of Nagaland is the state with maximum number of languages as medium of instruction. The state has seven or more languages as media of instruction at the primary stage and six languages at upper primary and three languages at the secondary stage. The states of Meghalaya, Mizoram and Arunachal Pradesh make a provision for two or three language at the primary level and one or two language(s) as the upper primary and secondary level.

The state of Goa makes available five languages at the primary level and two languages at the upper primary and secondary levels. Among the union territories, Andaman and Nicobar Islands provides instruction in five languages while the UT of Daman and Diu does in two languages. The states of Kerala, Tamil Nadu and Goa ensure the provision of dual media instruction in the same school.

## **Introduction of a Language in School**

### ***Introduction of First Language***

All the states introduce the first language from class one. The first language is the mother tongue/home language of the child or the language of the region. Most of the states and union territories record the first language as the mother tongue of the child or the regional language. There are, however, debates about defining the first language. The government schools in the states make an attempt to accommodate the language of the child, the home language or the language of the region as the first language in schools.

### ***Introduction of Second Language***

Table 3 presents how the second language is introduced in schools across the country. The second language is introduced within the five years of the schooling. Twenty-two out of the thirty-five states and the union territories introduce the second language from the

first year of schooling. The rest of the states introduce the second language either from class three or five. The states which introduce the second language from the first year of schooling are spread across the country starting from Tamil Nadu in the southern part of the country to Jammu and Kashmir in the northern region. So there is no region specific pattern or trend in the introduction of the second language. The same is the case of states introducing the second language in class three or five. The state of Kerala in the south and the state of Assam of the north-east region introduce the second language in class three. The states of Karnataka and West Bengal introduce the second language in class five.

**Table 3**  
**Introduction of Second Language**

<b>Class at which the second language is introduced</b>	<b>States/UTs</b>
Class One	Andhra Pradesh (English), Arunchal Pradesh (Hindi), Bihar (Urdu, Bengali), Chattisgarh ( ),* Goa (English), Gujarat (English), Himachal Pradesh (English), Jammu and Kashmir (English), Madhya Pradesh (Gen. English / Gen. Hindi), Manipur (Hindi / one of the recognised lang. / MIL), Mizoram (English), Nagaland (MIL / Alternative English), Punjab (Hindi, Punjabi, Urdu), Rajasthan (English), Sikkim (MIL), Tamil Nadu (English), Tripura (English), Uttaranchal (English), Andaman and Nicobar Islands (Hindi / English), Chandigarh (Hindi / English), National Capital Region of Delhi (English, Urdu, Punjabi) Puducherry (English),
Class Three	Assam (Hindi / Bengali), Kerala (English), Odisha ( English)*, Daman & Diu ( Hindi) Dadra Nagar Haveli (Hindi)
Class Five	Karnataka (English), West Bengal (English)

\*Not stated clearly

The table also shows the language introduced as the second language in the states and the UTs. The second language in most cases is English. Almost twenty states have English as a second



language while Hindi is offered as a second language in ten states. Urdu, Bengali, Punjabi are the other languages offered as second languages in the states where either the language is one of the languages spoken or a language in the neighboring state. Out of the 19 states which introduce English as the second language 16 states / U.Ts introduce it from class one, one state from class three and two states from class five.

### **Introduction of Third Language**

Introduction of the third language varies from state to state (Table 4). Most states introduce the third language from Class VI while five states start the third language from Class III and a few states introduce from the Class V. The states of Tripura and Orissa commence teaching of a language as a third language from Classes VII and VIII respectively. The Jammu and Kashmir is the only state which introduces the third language from Class IX.

**Table 4**  
**Introduction of Third Language**

<b>Class at which the third language is introduced</b>	<b>States/UTs</b>
Class III	Manipur, Mizoram (Hindi), Nagaland (Hindi), Uttaranchal.
Class IV	Punjab (Hindi, Punjabi, Urdu, any MIL), Sikkim (Hindi)
Class V	Dada Nagar Haveli, Goa (Marathi, Konkani, French, Portuguese), Kerala (Hindi),
Class VI	Andhra Pradesh (Hindi), Arunachal Pradesh (Sanskrit, Assamese, Butia), Assam, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh (Urdu, Sanskrit, Marathi or any MIL), Rajasthan (Sanskrit, Urdu, Sindhi, Gujarati, Punjabi, any MIL), Uttar Pradesh (Sanskrit, Urdu, any MIL), West Bengal (Sanskrit, Hindi), Orissa, Andaman and Nicobar Islands, Daman & Diu (English) National Capital Region of Delhi (Sanskrit, Urdu, Punjabi, any MIL).
Class VIII	Tripura (VII- Sanskrit, Hindi)
Class IX	Jammu and Kashmir (Dogri, Boding, Punjabi, Arabic, Sanskrit, Persian)

The third language in most non-Hindi speaking states happens to be Hindi, wherever it is not introduced as a second language and in Hindi speaking states it is Urdu, Sanskrit, Punjabi, Persian or the language of neighbouring state.

### **Duration of Study of Languages within Ten Years of Schooling**

#### ***Duration of Study of Second Language***

Since the first language is introduced from class one, the study of the language lasts for ten years of schooling. Second language as has been shown in the previous section is introduced from different classes by different states. Table 5 shows that in a majority of the states a student has to undergo the study of a second language for ten years. Twenty-two states ensure the study of second language for ten years while in five states a student has to undertake the study of second language for eight years. Two states, Kerala and West Bengal make a provision of five years of study of a second language.

**Table 5**

**Duration of the Second Language Studied within Ten Years of Schooling States in which children study the Second language for**

<b>Ten years</b>	<b>Eight years</b>	<b>Five years</b>
Andhra Pradesh (English), Arunachal Pradesh (Hindi), Bihar (Urdu, Bengali), Chhattisgarh ( )*, Goa (English), Gujarat (English), Himachal Pradesh (English), Jammu and Kashmir (English), Madhya Pradesh (Gen. English / Gen. Hindi), Manipur(Hindi / one of the recognised lang. / MIL**), Mizoram (English), Nagaland (MIL / Alternative English), Punjab (Hindi, Punjabi, Urdu), Rajasthan (English), Sikkim (MIL**), Tamil Nadu (English), Tripura (English), Uttaranchal (English), Andaman and Nicobar Islands (Hindi / English), Chandigarh (Hindi / English), National Capital Region of Delhi (English, Urdu, Punjabi) Puducherry (English),	Assam (Hindi / Bengali), Kerala (English), Odisha ( )*, Daman & Diu (Hindi) Dadra Nagar Haveli (Hindi)	Karnataka (English), West Bengal (English)

\*Not stated clearly

\*\*Modern Indian Language (which is one of the 22 recognised languages)

#### ***Third Language***

Thirteen states/UTs make a provision of five year of study of third language (Table 6). In the three states/UTs, Darda Nagar Haveli,

Goa and Kerala, the study of third language spans for duration of six years while the state of Punjab and Sikkim provide its learners a duration of seven years to study the third language. Children are offered the study of third language for a period of eight years in the states/UTs of Manipur, Mizoram, Nagaland and Uttaranchal. The states of Tripura and Odisha introduce the third language from class VII and VIII respectively making a provision for a period of three and four years respectively. The only state which has a provision of only two years for the study of a third language is Jammu and Kashmir.

**Table 6**  
**Duration of Study of Third Language within Ten years of schooling**

States in which children study the Third language for	
Eight years	Manipur, Mizoram (Hindi), Nagaland (Hindi), Uttaranchal.
Seven Years	Punjab (Hindi, Punjabi, Urdu, any MIL), Sikkim (Hindi)
Six Years	Dadra Nagar Haveli, Goa (Marathi, Konkani, French, Portuguese), Kerala (Hindi),
Five Years	Andhra Pradesh (Hindi), Arunachal Pradesh (Sanskrit, Assamese, Butia), Assam, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh (Urdu, Sanskrit, Marathi or any MIL), Rajasthan (Sanskrit, Urdu, Sindhi, Gujarat, Punjabi, any MIL), Uttar Pradesh (Sanskrit, Urdu, any MIL), West Bengal (Sanskrit, Hindi), Andaman and Nicobar Islands, Daman & Diu (English) National Capital Region of Delhi (Sanskrit, Urdu, Punjabi, any MIL).
Four / Three Years	Tripura (VII- Sanskrit, Hindi), Odisha (VIII)
Two Years	Jammu and Kashmir (Dogri, Boding, Punjabi, Arabic, Sanskrit, Persian)

Table 7 shows the frequency of languages offered as first, second and third language in different school systems. One minority language (Urdu), one classical language (Sanskrit), the majority language (Hindi) and English are shown in the table. English stands as a natural choice for the second language while other languages are also making a case for second and third language. What is interesting or unbelievable to notice is that English is considered and offered as first language in many systems. Urdu which has blurred territory now (once a language of power and a dominant language in today's Hindi heartland) and Sanskrit (which does

not have any territory) can be chosen as third language while the vibrant languages, English and Hindi are offered more as first and second language in the system.

**Table 7**  
**Languages Most Frequently Offered by States / UTs as L1, L2 and L3 (N=35)**

Level of schooling	L1/L2/L3	English	Hindi	Urdu	Sanskrit
Primary (N=33)*	L1	10	18	7	2
	L2	23	5	1	0
	L3	1	4	2	2
Upper primary (N=34)*	L1	16	16	11	3
	L2	27	14	0	2
	L3	8	18	6	15
Secondary (N=34)***	L1	17	18	10	3
	L2	21	14	1	3
	L3	8	12	6	12
Total	131	119	44	42	

\* Two states did not furnish data for primary level.

\*\* One state did not furnish data for upper primary level

\*\*\* One state did not furnish data for upper primary level

## Discussion

### *The Fallacy of Mother Tongue Based Multilingualism*

India's language-in-education policy aims at promoting mother tongue based multilingualism at least in the primary years of schooling as delineated in the three language formula. This vision of 'mother tongue based multilingualism' is in question because the very intention of establishing linguistic equality in school education is flawed. There is an inherent inequality which could be seen in the way the language policy has been implemented.

Firstly, the mother tongue based multilingualism is not realised as many minor or tribal languages have not been able to find their place in school education while many of the languages which are in the school system are being thrown out of the systems. As Panda (2009, p.122) describes official languages of the states in India are treated as 'default mother tongues of all children and tribal and minority languages are stigmatised as dialects.' This has been illustrated well by many researches. Mohanty (2010, p.165) says,

*In most of the multilingual societies, only a few are languages of power and privilege; the rest are marginalised and weakened in the hierarchical power relationship among languages. With English as the dominant language in post-colonial India, as in South Asia and other parts of the world, the linguistic hierarchy has created major power gaps in society which can be seen as a double divide between English and major languages and between major languages and the indigenous and tribal minority languages.*

The 'double divide' that happens in Indian education system is not a recent phenomenon; it started the day India had begun to think of language planning for its administration and in education. This is from the days of Macaulay's famous minutes in 1835 which records the linguistic enormity, in other words the diversity, of India as a problem. Even today the policy planners think on the same lines while (not) making provisions for accommodating tribal and minor languages in school education in spite of constitutional and legal provisions. At the planning level the language policy accommodates tribal and minor languages. But in the implementation / practice level it is a matter of convenience. The increase in the mother tongue medium (Table 8) is due to an increase in the number of schools being opened as the country has enacted a law, The Right of Children to Free and Compulsory Education Act -2009 (RTE), which ensures the right to schooling for every child. This is due to the Sarva Shiksha Abhiyan (SSA), which has created one primary school in each habitat in the country. This does not mean that all children belonging to tribal and minor languages get their initial years of schooling in their mother tongue. Rather it is the language of the state that is thrust upon such children as their first language. Mother tongue is conveniently taken to be synonymous with the language of the state or the regional language.

### **Role and Place of English as a Medium of Schooling**

A closer look at the analysis in this paper would reveal that Hindi and English are the most offered or opted media of education in the school system (Table 9). Hindi language is used as a language of administration and judiciary in about eight states and the language is used as an additional language in the day-to-day language use in public sphere (this means most people can understand and

**Table 8**  
**Schools with Hindi and English Medium Policies in India**  
**(percentages)**

Policies	Primary (Class I to V)		Upper Primary (Classes VI to VIII)		Secondary (Classes IX to XII)	
	1993	2002	1993	2002	1993	2002
Hindi as medium	42.26	46.79	40.93	47.41	33.94	41.32
English as medium	4.99	12.98	15.91	18.25	18.37	25.84

communicate in Hindi) in another five states. So, Hindi serves as a medium of instruction in about forty percent of the schools. The case of English as a medium is to be seen from the cross national point of view i.e. the increase in English medium schools across the country. These schools include private English medium schools, schools run by the national government for its employees who are on transferable basis and the special schools for rural talents, the Jawahar Navodaya Vidyalayas. We can notice the steady increase in the number of schools having English as the medium from the primary to the secondary levels.

**Table 9**  
**Languages Most Frequently Offered by States/UTs as the Medium of Instruction (N=35)**

Stage	English	Hindi	Urdu	Tamil	Sanskrit
Primary	27	21	7	6	3
Upper Primary	32	24	9	7	6
Secondary	33	24	9	7	7

There are schools in some states which offer dual medium or mixed medium within one school system. For example, the states of Tamil Nadu and Kerala offer Tamil and English, Malayalam

and English as media of instruction, respectively. This mixed or dual medium is also in response to the demand of the parents who cannot afford to send their wards to private English medium schools. So the schools in the government run systems have opened one English medium section in each class. Another trend is that the English language is considered as a language of science and mathematics for the two national level school systems, the Kendriya Vidyalayas (KVs) and Jawahar Navodaya Vidyalayas (NVs) with about one thousand and five hundred schools, respectively, teaching science and mathematics through English medium in quite a number of their schools (particularly in the Hindi speaking states). This is because of the wash back effect as the science stream courses at the higher secondary level and almost every course at the university level is offered only in English medium. What needs to be explored in these English medium courses is that the actual transaction, particularly in rural settings, may take place in the regional language. Added to this is a known fact that majority of the graduates from which universities and university colleges do not possess minimum proficiency in the English language. In other words, what the market economy would call it, 'they are unemployable' because of lack of proficiency in English. Mohanty (2010, p.168) describes how this 'mixed medium within a school and within a classroom' works in this category of schools with the government school system.

*English is used to teach 'prestigious subjects' like mathematics and science whereas Hindi or other languages are used to teach the 'less prestigious' subjects like history and social sciences. Hindi used to be the second language subject 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 states.*

Today English language has attained a place where it is both admired and envied, and hated for varied reasons from different quarters. The elite and urban class as well as the socially disadvantaged groups like the dalits (who were once at the bottom of the Hindu caste system and still face disadvantages) feel that the English language is an instrument of development and upward mobility, while a section of political class and ethnic groups from cross sections of the society feel that English may act as an instrument of eliminating the indigenous languages from

the school system leading to their endangerment. This dilemma of 'to have it' or 'not to have it' as a medium of instruction is felt in day-to-day discussions in every part of the country. What is worrying in processes of language education is the lack of resources for teaching-learning of English as a language in most Indian schools. These are the state run native medium schools. While most school systems are not able to ensure resources (in terms of teacher's language proficiency, materials and effective assessment strategies), the demand for English medium keeps increasing. This demand comes from every section of the society. This puts the children from the rural areas and children from socially disadvantaged groups and tribal groups at a disadvantage. Graddol (2010, p. 120) brought this out well in his 'English next India' when he observes,

*Throughout India, there is an extraordinary belief, among almost all castes and classes, in both rural and urban areas, in the transformative power of English. English is seen not just as a useful skill, but as a symbol of better life, a pathway out of poverty and oppression. Aspiration of such magnitude is a heavy burden for any language, and for those who have responsibility of teaching it, to bear.*

There are also counter reactions to the 'over stated demand for the English language'. English today is simultaneously sought after and suspected (Tickoo, 1996) phenomenon. The motives, generally, are not only social-political and but academic too. While the demand increases on the one hand, the quality of English language education in our state run schools, more particularly in rural schools, presents an abysmal picture. The 'divide' between the urban and rural is further contributed by the way English language education is making its way as a medium of instruction. The paradox of demand and suspicion (Tickoo, 1996) mentioned above could be further reflected through the paradox of access depicted by the report of the National Knowledge Commission (NKC) (GOI, 2007, p. 47), India as:

*There is an irony in the situation. English has been part of our education system for more than a century. Yet English is beyond the reach of most of our young people, which makes for highly unequal access. Indeed, even now, more than one per cent of our people use it as a second language, let alone*



*a first language ..... But NKC believes that the time has come for us to teach our people, ordinary people, English as a language in schools. Early action in this sphere would help us build an inclusive society and transform India into a knowledge society.*

### **From Additive Multilingualism to Subtractive Bilingualism**

The three language formula is aimed at creating multilinguals within the ten years of schooling. But what happens in reality is subtractive bilingualism where the dominant languages of the states and the English language are taking a ride over the minor and tribal languages. These minor and tribal languages face double disadvantage for they are dominated by the language of the state as well as by the English language. Indian languages bear the burden of the English language while they act as an instrument of exclusion of tribal and minor languages. A child with his/her tribal mother tongue has to undergo schooling in another language which is not their language. In the process they lose their mother tongue. Instead of increasing the number of languages known, the language policy (the way it is practised) plays a role in reducing the number of languages known to children. Though this may be contested, the loss is on the part of tribal and minor languages. This happens faster when the medium of schooling becomes English. There is a general complaint from teachers in the high schools that children do not possess any proficiency in any of the languages when they reach Class VI. Children are made, in a way, semi-linguals, not even monolinguals because of the faulty language policy in practice and classroom processes of language education in schools. Even before the first language is acquired well the second language, an alien language, is imposed on them. In the absence of evidence in large scale, this needs to be examined seriously.

### **Planned Policy and Practised Policy Gap**

Table 3 lists the languages available or offered as medium of instruction in the states. This is what the national government or state governments mention in their language policy statements. This does not ensure that all the languages mentioned in the policy documents are taught/studied in schools. Even if all the languages mentioned are available in schools, this again does not mean that children whose mother tongue is one of those minor or tribal languages are learning in their mother tongue as medium of

learning. However, Spolsky (2007) argues that 'policy and practice need not be seen as distinct and that there is a policy within language practices themselves'. In the Indian context, this needs serious examination for the practised policy may inform much more than the 'political' and 'intellectual' understanding of language policy making. Added to this is the question of '*Is mother tongue based multilingualism far removed from reality?*' This question arises because people belonging to the tribal and minor language groups themselves feel that there is necessity to impart education to their wards in English in light of the new market based economic activities and for development. The question often posed by those who advocate English as a medium is, "When other groups (upper caste and urban elites belonging to any category) can study through English medium and still continue to keep their identity and culture, why do you want us (rural socially and economically disadvantaged, tribal and minor groups) to study in 'our' mother tongue which may not take us anywhere?"

### **Conclusion**

Language-in-education policy in India culminated as a result of political consensus keeping in view the linguistic and other diversities. Policy provisions and practices show that the majority and regional languages are offered both as a language and as a medium of instruction. Hindi is a language with the highest percentage of schools offering it as the medium of instruction and this is followed by English. The sufferers are the minor and tribal languages as mediums of instruction. Many of these languages are mentioned as languages available or offered as medium of instruction. In reality many are either not available or not opted (but available) as medium of instruction. The demand for English as a language and as a medium from all sections of society puts the pressure on Indian regional languages and doubly on the tribal and minor languages. This linguistic imperialism is seen both as a threat and as an unavoidable necessity by policy planners and parents as well. The very objective of bringing equality among languages is challenged as the way the English language is demanded as a language and as a medium of instruction for upward mobility. English as (more or less) the sole medium of instruction at the university level has a wash back impact on school education, particularly on science and mathematics education in schools.

This would pave way for the divide between science and technology courses and social science courses in the school education too.

While on the one hand the demand for English language education in schools is increasing, the quality of English language teaching at the school level (Kurrien, 1997; Meganathan, 2011) is not so encouraging. Majority of the state run schools lack resources including teacher's English language proficiency. Teacher development, materials for teaching-learning of English and resources for English as a medium of learning demands serious attention. Language across curriculum (LAC) as a strategy, though advocated by the National Curriculum Framework – 2005 (NCERT, 2005a), is yet to be accepted in all seriousness by teachers and the school systems because of lack of resources in equipping the teachers and school administrators.

Linguistic diversity in school education in India today is in a way under threat as the number of languages offered / available as mediums of instruction is slowly receding. This has led to the exclusion of indigenous Indian, minor and tribal language. Some of the languages can face endangerment sooner or later, if they do not find their way out at least in school education. Though there are constitutional and legal provisions at the policy level to study through one's mother tongue up to class VIII, this is not practised for reasons very complex. People themselves prefer to study through some other language medium, the dominant regional language or English medium. It is high time the country seriously thought of revisiting the language policy in school education and thought of a national language policy which addresses the language use at all levels from school education to judiciary to higher education. The policy question should also address the business of recognising or declaring languages as 'recognised languages'. A country of 121 million people with 122 full-fledged languages recognises only 22 languages. This could be described as an inability of the nation to protect and benefit from her linguistic diversity. First step in this direction is to ensure that children in the formative years of learning have their schooling in their mother tongue with English as a second or third language.

There is also an urgent necessity to understand the demand for English both as a language and as a medium of instruction through research based evidences in India. This would answer the question, whether the demand for English is meaningful? Or is it an irrational demand (whether the demand is over stated)? We also need to listen to the consequences of policies which promote

English language from other Asian and African contexts. In the words of Hussain (2010, p. 236) from Ethiopia,

*The view that education through mother tongue and political elevation of mother tongues being detrimental to the promotion of English is either mere linguistics chauvinism or linguistic self-denial founded on irrational theory about language, education and cognition. As a position, it runs counter to the well-established fact that if they are properly planned, native languages and their cultures can become helpful resources when learning a different language. Therefore, disentangling the problem of English requires addressing the misconstrued deficit view of native languages.*

Thus, medium of instruction in language-in-education policy in India is caught in the vicious circle of first the post-colonial and now post-national (moving from nationalistic perspective to 'from the periphery' perspective) in which the minor and tribal languages are put under the survival question while the dominant Indian languages and English compete among themselves to retain their status and English with its popular demand has an edge over the others.

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**Appendix 1****Media of Instruction in the Indian States**

Sl. No.	Name of the State / Union Territories <sup>2</sup>	Media of Instruction		
		Primary	Upper Primary	Secondary
1.	Andhra Pradesh	Telugu, Urdu Oriya, English Hindi, Marathi Kannada Tamil	Telugu Urdu Oriya, English Hindi, Marathi Kannada Tamil	Telugu Urdu Oriya English Hindi, Marathi Kannada Tamil
2.	Arunachal Pradesh	English Hindi	English	English
3.	Assam	Assamese Bengali Bodo English	Assamese Bengali Bodo English, Hindi Others	Assamese Bengali Bodo English Hindi Others
4.	Bihar	Hindi, Urdu, Sanskrit English	English Hindi Sanskrit Urdu	English Hindi Sanskrit Urdu Others
5.	Chhattisgarh	Hindi Others	Hindi Others	English Hindi Others
6.	Goa	English Konkani Marathi Urdu Kannada (Dual Medium)	English Marathi	English Marathi
7.	Gujarat	Gujarati Others	English Gujarati Hindi Others	English Gujarati Hindi Others

<sup>2</sup>India has at present 29 states (provinces) and 7 specially administered regions called Union Territories (UTs). Some of the UTs are directly governed by the national government with a special administrator and some of them function like any other state. All the UTs get special attention from the national government on financial matter and welfare schemes.

Medium of Instruction in School Education in India...

8.	Haryana	English Hindi Others	English Hindi Sanskrit Others	English Hindi Sanskrit Others
9.	Himachal Pradesh	English Hindi Others	English Hindi Others	English Hindi Others
10.	Jammu & Kashmir	Dogri English Hindi Kashmiri Urdu Others	Dogri English Hindi Kashmiri Urdu Others	Dogri English Hindi Kashmiri Urdu Others
11.	Jharkhand	English Hindi Sanskrit Others	Bengali English Hindi Sanskrit Others	Bengali English Hindi Sanskrit Others
12.	Karnataka	Kannada English Hindi Marathi Tamil Telugu Urdu Malayalam Sanskrit Arabic	Kannada English Hindi Marathi Tamil Telugu Urdu Malayalam Sanskrit Arabic	Kannada English Hindi Marathi Tamil Telugu Urdu Malayalam Sanskrit Arabic
13.	Kerala	Malayalam English Tamil Kannada (Dual Medium)	Malayalam English Tamil Kannada (Dual Medium)	Malayalam English Tamil Kannada (Dual Medium)
14.	Madhya Pradesh	Hindi English Urdu Marathi	Hindi English Urdu Marathi Others	Hindi English Urdu Marathi Others
16.	Manipur	English Hindi Manipuri Others	English Hindi Manipuri Others	English Hindi Manipuri Others
17.	Meghalaya	English Garo Khasi Others	English	English

Medium of Instruction in School Education in India...

18.	Mizoram	English Mizo	English Mizo Others	English Mizo Others
19.	Nagaland	Angami Ao English Hindi Konyak Lotha Sema Others	Angami Ao English Hindi Konyak Sema Others	Angami English Hindi Others
20.	Odisha	English Odiya	English Hindi Odiya Others	English Hindi Odiya Sanskrit Others
21.	Punjab	English Hindi Punjabi	English Hindi Punjabi Others	English Hindi Punjabi Others
22.	Rajasthan	Hindi Others	Hindi Others	Hindi Others
23.	Sikkim	English Others	English Others	English Others
24.	Tamil Nadu	English Tamil	Tamil Telugu Malayalam Urdu Kannada	Tamil Telugu Malayalam Urdu Kannada
25.	Tripura	Bengali Kakbarak English Others	Bengali English Others	Bengali English Others
26.	Uttar Pradesh	Hindi Others	English Hindi Sanskrit Others	English Hindi Sanskrit Others
27.	Uttaranchal	Hindi Others	English Hindi Urdu Others	English Hindi Urdu Others
28.	West Bengal	Bengali Others	Bengali Hindi English Urdu Odiya Tamil	Bengali Hindi English Urdu Odiya Tamil



Medium of Instruction in School Education in India...

			Telugu Gujarati Tibetan Nepali	Telugu Gujarati Tibetan Nepali
29.	Andaman & Nicobar Islands	Bengali English Hindi Tamil Telugu	Bengali English Hindi Tamil Telugu	Bengali English Hindi Tamil Telugu
30.	Chandigarh	English Hindi Punjabi Others	English Hindi Punjabi Others	English Hindi Punjabi Others
31.	Dadra Nagar Haveli	English Gujarati Hindi Marathi	English Gujarati Hindi Marathi Sanskrit	English Gujarati Hindi Marathi Sanskrit
32.	Daman and Diu	English Gujarati	English Gujarati	English Gujarati
33.	Delhi	English Hindi Urdu Others	English Hindi Urdu Others	English Hindi Urdu Others
34.	Lakshadweep	Malayalam Others	English Malayalam Others	English Malayalam
35.	Puducherry	English Tamil Others	English Tamil Others	English Tamil Others

# Evaluation of English Textbooks for Class X Prescribed in BSER and CBSE Schools

RAJNI SINGH\* AND SANJIV KUMAR CHOUDHARY\*\*

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## ABSTRACT

*In India, the schools are affiliated to Central Board of Secondary Education (CBSE), Indian Certificate of Secondary Education (ICSE) or State Boards of Secondary Education. Every state has its own state board of education with its own syllabus. Variation is found in the syllabi of English at secondary school level of different boards. That is why the textbooks prescribed for the schools affiliated to different boards are also different. This study traced the appropriacy of English textbooks prescribed for class X by CBSE and the Board of Secondary Education Rajasthan, Ajmer (BSER). Data were gathered using checklist from the respondents and were analysed using descriptive and inferential statistics. The findings show that there are various aspects of textbooks with which teachers are quite satisfied. However, there are areas which need modification or to be supplemented by additional materials.*

**Keywords:** *English textbook; Textbook evaluation; Evaluation scheme.*

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## Introduction

In India, CBSE, ICSE and various other state boards regulate the norms for school education. Schools of the same state are affiliated to different boards. Sometimes, there are multiple boards within a state. Teachers teach different textbooks and use different teaching materials which ultimately affect the teaching and learning process. This process comprises the teacher, the learner, the classroom, the

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curriculum, materials of instruction and administration (Acero, Javier & Castro, 2000). The teaching materials and methodology are important aspects of education for imparting knowledge and it engages both the teachers as well as the students. At the secondary level, teachers of English language teaching (ELT) try to teach all four basic language skills: Listening (L), Speaking (S), Reading (R) and Writing (W) which is assumed to develop good communication skills among the students. Being the formative years of education, it is important to pay attention to students studying in Classes IX and X, where they need to have certain basic competency and proficiency in communication skills.

Though the prescribed teaching materials are different in schools affiliated to different boards, the objectives of teaching English language remain the same. Among various secondary education boards, BSER has prescribed one main course book (First Flight: Textbook in English for Class X) along with supplementary reading for Class X as per the guidelines of National Curriculum Framework (NCF)-2005, whereas CBSE has prescribed one book (Literature Reader: Interact in English) along with two supplementary books (grammar practice, main course-communicative) for Class X. This study aimed at evaluating the English textbooks used in various schools of Rajasthan affiliated to BSER and CBSE for teaching English in Class X by using checklist method. To gauge the level and degree of appropriacy, the parameters used by the teachers who handle these textbooks for evaluating them were (a) aims and objectives, (b) design and organisation, (c) language content, and (d) additional teaching aids.

### ***Theoretical Background: An Overview***

Teaching and learning of a language are closely related processes. One is incomplete without the other. According to Dessus, Mandin and Zampa (2008), teaching and learning are causally tightly bound activities, so questioning “what is learning?” might lead to have a closer look about what precisely are the components of teaching—and their underlying principles as well—that can cause efficient learning. Earlier researches focused only on language analysis; only after when the language systemisation was done, learning factors were incorporated in the domain of language teaching and learning (Suharno, 2010, p.48). “The conceptualisation of language teaching has a long, fascinating, but rather tortuous history” (Stern, 1983, p.453). A similar view has been expressed by Brown (1994,

p.52) when he points out “changing winds and shifting sands of language teaching”.

Theorists like Skinner, Pavlov, Chomsky, Vygotsky and Piaget have proposed different theories on different aspects about how second language learning takes place. However, the process of learning a language still seems fluctuating. There are different language learning theories such as behaviourism, nativism, cognitivism, etc. Anthony’s (1963) model of ‘Method’ was modified by Richards and Rodgers (1986, p.28) as illustrated in Figure.1. In this model, method

- (a) is theoretically related to an approach (nature of language and language learning),
- (b) is organisationally determined by a design (objectives, syllabus, role of learner and teacher, activities), and
- (c) is practically realised in procedure (technique, practice, actual implementation of teaching in classroom).

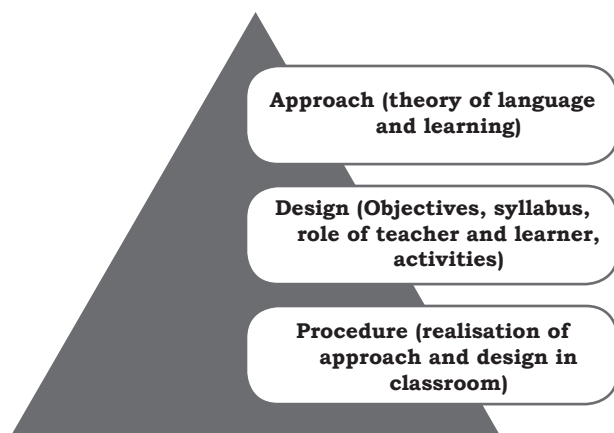


Figure 1: Framework of Method (Adopted from Richards & Rodgers, 1986)

As one theory in isolation cannot address all the aspects of learning, similarly one teaching method cannot be based only on one theoretical approach. “Language teaching is no longer visualised in terms of a single undifferentiated methodological prescription” (Krishnaswamy & Sriraman, 1994, p.105). Mukalel (1998) is also of the view that “teaching English in India has become a complex affair and the problems that arise in our approach to ELT are multidimensional”. In other words, the single approach to ELT cannot be a panacea. Except Communicative Language Teaching

(CLT), all the teaching methods like Grammar Translation Method (GTM), Direct Method, Audio Lingual Method, Oral approach, etc have focused only on one or two language skills and do not emphasise on all four skills together (Richards & Rodgers, 1986).

### **Methods of Teaching English at School Level**

English holds the position of second language (L2) in India. It is a compulsory subject in all states. However, it is perceived that the students lack the desired proficiency when it comes to the English language skills even at secondary school level because the students take English merely as a subject. According to NCF-2005, English is one of the subjects in which a large number of students do not fare well, 50 per cent of them fail (as cited in Planning Commission, 2007-2012, p.16).

The teaching methods and materials function as a tool for the betterment of language skills in classroom and can fill this chasm if properly channelised. There is a vast history of evolution of different teaching methods and materials to cater to the need and demand, and thus make the language learning effective and efficient. Different methods -from GTM to Post CLT- are based on different approaches. Kumaravadivelu (2001, p.538) even proposed the concept of Postmethod Pedagogy i.e. Post CLT, “where pedagogy includes issues not only pertaining to classroom teaching and materials, curricular objectives and evaluative parameters but also historical, political and socio-cultural experiences influencing directly or indirectly the L2 teaching”.

Schools under BSER broadly follow the National Council of Educational Research and Training (NCERT) syllabus. The NCERT has been bringing many changes in curriculum of English, including syllabus, methods and activities for Class IX and X. In 2005, NCERT brought out NCF-2005. NCF-2005 has proposed five guiding principles for curriculum development:

- (a) connecting knowledge to life outside the school;
- (b) ensuring that learning shifts away from rote methods;
- (c) enriching the curriculum so that it goes beyond textbooks;
- (d) making examinations more flexible and integrating them with classroom life; and
- (e) nurturing an overriding identity informed by caring concerns within the democratic polity of the country.

The above stated second principle deals with the changes to be brought in teaching methods which also include teaching materials

and the teacher. In present time, the learning of a language is not only limited to four language skills in isolation but as an integrated whole to achieve communicative competence. Due to this, “the focus is on CLT approach because CLT means little more than an integration of grammatical and functional teaching” (Richards & Rodgers, 1986, p.66). The teachers and the teaching materials are equally important because textbooks might have content but it is the teacher who uses these textbooks. Hence, to have well qualified and trained teachers is very important because it is the teacher who transforms the theory into practice and textbooks help him/her in doing that.

### ***Need for Textbook and Evaluation***

“Teachers, students, and administrators are all consumers of textbooks”(Ansary & Babaii, 2002). Textbooks are used not only for English language teaching but for other subjects as well. Textbooks acquire an important position at all levels, be it a school (primary, middle or secondary) or a college. One of the most useful tools an instructor possesses and uses is the textbook (Lamphear, n.d.). Hutchinson and Torres (1994, p.315) opines that, “the textbook is an almost universal element of English language teaching.....No teaching-learning situation, it seems, is complete until it has its relevant textbook”.

Textbooks represent the visible heart of any ELT programme, play the double role of teaching material as well as learning material, and serve different purposes for teachers, (Sheldon, 1988; Awasthi, 2006; Garinger, 2002). These points highlight the importance of textbook. O'Neill (1982) says that, “learners who do not work from textbooks may be deprived of orientation. These theorists have argued that the textbooks have an important role to play in English as a Second Language (ESL) teaching, as textbooks make the same easy, efficient, interesting and fruitful. Hence, it is very important that the textbooks selected for the ELT classroom are suitable and in accordance with the need of the learners.

“Educational researchers have continuously pointed out the lack of research centring on textbooks and their role in teaching practice, and have called for more studies in this area” (Fan & Kaeley,1998). Sheldon (1988) also supports the textbook evaluation as textbook selection involves not only educational but administrative (higher authorities, publishers, markets) decisions also. Evaluation would bring all the points like teaching objectives,

teaching criteria and the learners need in picture which would help managerial or teaching staff in selecting the textbooks. Evaluation enables teacher development through helping in giving instructions, lesson preparation, engaging the students in activities and professional empowerment. Tomlinson (2001) contends that textbook evaluation is an applied linguistic activity through which teachers, supervisors, administrators and material developers can make sound judgments about the efficiency of the materials for the teachers using them.

### **Textbook Evaluation Scheme**

“The literature on the subject of textbook evaluation is not very extensive” (Sheldon, 1988, p.240). Before 1970 there were very few studies on textbook evaluation (Awasthi, 2006, p.5). Systematic research on textbook evaluation gained momentum only when theorist like Rivers (1968), Williams (1983), Cunningsworth (1984), Grant (1987) and Sheldon (1987) raised their strong voices for textbook evaluation. Since the selection of textbooks depends on several factors like economic condition, social structure, native/non-native status of the learners, etc., scholars have proposed many ways of textbook evaluation. There has to be proper and chronological steps in the process of evaluation. Though there can be no global list of criteria to be applied to all learning and teaching environments without considerable modifications (Sheldon, 1988, p.242), still most of the standardised evaluation checklists contain similar components that can be used as helpful starting points for ELT practitioners in different contexts (Litz, 2005, p.9). In the field of ELT textbook design and analysis, theorists like Williams (1983), Sheldon (1988), Brown (1995), Cunningsworth (1995) and Harmer (1996) feel that evaluation checklists should have some criteria related to the physical characteristics of textbooks such as layout, organisational, and logistical characteristics. Hence, evaluation criteria for different textbooks are guided by related factors only, for which specific evaluation scheme is needed.

Researchers (Ansary and Babaii, 2002; Block, 1991; Breen & Candlin, 1987; Chastain, 1971; Cowles, 1976; Cunningsworth, 1995; Dauod & Cele-Murcia, 1979; Davison, 1975; Ellis, 1977; Garinger, 2002; Harmer, 1996; Hutchinson & Waters, 1987; Littlejohn, 1998; McDonough & Shaw, 2003; Rivers, 1968; Tucker, 1975; Williams, 1983; Sheldon, 1988; Skierso, 1991; Ur, 1996) have proposed eminent textbook evaluation schemes. Similarly,

Agrawal, Chakraborty, Gollapudi, Kannan and Kenthapadi (n.d.) are on their way of building a diagnostic tool for doing pure empirical/quantitative study on textbook evaluation. All these models are used in different contexts and criteria depending upon the need of evaluation.

### ***The Objectives and Research Questions***

The purpose of the study was to assess the extent of appropriacy of the main English textbooks of Class X taught in various schools affiliated to BSER and CBSE. For this purpose, the present study tried to explore the answers for the following research questions:

1. Are the BSER affiliated school teachers satisfied with English textbook of Class X?
2. Are the CBSE affiliated school teachers satisfied with English textbook of Class X?
3. Is there any difference among BSER and CBSE affiliated school teachers' opinion on the English textbook of Class X?

### **Method**

The data were collected from 30 schools of three tehsils of Jhunjhunu district in Rajasthan of India selected by stratified random sampling method. A checklist was used to evaluate the textbooks' appropriacy and differences in opinion among teachers. The reliability coefficient of the checklist was found to be 0.926. Face validity and content validity were assessed by experts and accordingly changes were made. A five point scale was used in the checklist where five meant 'to the greatest extent'; four meant 'to a large extent'; three meant 'to some extent'; two meant 'just barely' and one meant 'not at all'. The evaluation criteria suggested by Cunningsworth (1995) seems to encompass many items of the checklist used in the study under the four categories of aims and objectives, design and organisation, language content and additional teaching aids.

The respondents in this study included teachers from thirty schools, comprising 15 BSER affiliated and 15 CBSE affiliated schools, and their responses have been analysed using Excel and SPSS programmes to derive the findings. The data were subjected to descriptive statistics (frequency, percentage, mean, standard deviations) and inferential statistics (Independent Sample t-test) to arrive at final results and conclusions drawn.



## Results

Table 1 presents the means and standard deviations based on frequency of BSER and CBSE affiliated schools' teachers responses for all four categories on various checklist items for textbook evaluation. The findings in the table are described below.

**Table 1**  
**Means and Standard Deviations of Responses from BSER and CBSE**  
**Affiliated School Teachers (N=15 for All Items)**

SN	Items for Evaluation	BSER		CBSE	
		Mean	SD	Mean	SD
<b>Parameter 1. Aim and Objectives</b>					
1.	The book deals with the current aims and objective of teaching English as a second language	3.6	1.121	3.27	0.884
2.	The material is audience specific	3.6	0.828	3.47	0.834
3.	The specific communicative aims or objectives are indicated in connection with teachable and individual units	2.93	1.033	3.47	0.915
4.	The content, exercises and activities of textbooks meet the individual differences among students	3.47	0.834	2.93	0.799
<b>Parameter 2. Design and Organisation</b>					
5.	All the four skills (L,S,R &W)are integratively introduced in the book	3.73	0.799	3.6	0.91
6.	The language proficiency is appropriate for the students	3.8	0.941	3.4	1.056
7.	The language presentation, organisation of content is simple and right for learners and teachers	3.87	0.915	3.73	0.799
8.	There is a list of new vocabulary	3.73	1.033	3.2	1.014
9.	The coursebook have communicative activities	3.87	0.834	3.6	0.986
10.	The visuals (photographs, line drawings, cartoons) are reasonably well produced and attractive	2.87	0.915	2.87	1.246
11.	The content is appropriate to learners' needs	3.6	1.121	3.53	0.743
<b>Parameter 3. Language Content</b>					
12.	There is a balance between subject-specific language items (grammar, vocabulary, discourse structure) and operational skills and strategies in language use	3.27	1.033	3.27	1.28
13.	The learning activities have outcomes or products which will help learners to evaluate their performance	3.47	0.99	3.67	0.816

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14.	The language content relate and engage the learners' knowledge system, i.e. the knowledge of the world that they bring with them	3.07	0.884	3.47	0.834
15.	There is sufficient material of genuine interest to learners	3.73	1.163	3.13	0.834
16.	Grammar is introduced implicitly throughout the book	3.27	1.033	3.2	1.014
17.	The units include material for pronunciation work	2.6	0.986	2.33	0.816
18.	The units deal with any aspects of discourse	3.2	1.014	2.53	1.125
19.	All four skills are adequately covered	3.47	1.187	3	0.845
20.	The listening material is set in a meaningful context	3.53	1.506	2.6	0.986
21.	There are specific strategies for conversation or other spoken activities, eg debating, giving talks	3.2	1.014	3	0.926
22.	Reading passages and associated activities are suitable for your students' levels, interests, etc	2.87	1.246	3.2	0.775
23.	There is a focus on the development of reading skills and strategies	3.47	1.187	3.53	0.99
24.	The subject matter is appropriate (interesting, challenging, topical, varied, culturally acceptable, unlikely to date)	3.8	0.941	3.6	0.91
25.	Attention is given to the language resources specific to the written form, such as punctuation, spelling, layout, etc	3.47	1.187	3.27	1.1
26.	Learners are encouraged to review and edit their written work	4.13	1.06	3	0.845
<b>Parameter 4. Additional Teaching Aids</b>					
27.	Main book contains any audio/visual material like CD	2.4	1.404	2.6	1.502
28.	Mainbook is provided with supplementary materials	3.47	1.06	2.47	1.125
29.	Mainbook is supported by another book for practice other than supplementary book	2.47	1.06	2.93	1.163
30.	The available supplementary book and workbook for practice is sufficient for students	3.27	1.163	2.8	0.775
31.	Course book contains teachers' manual or book	3	1.414	2.6	1.502
32.	The materials are sufficient to motivate both teachers and students	3.2	1.32	3.2	0.941

**Note:** 1 = Not at all, 2=just barely, 3=to some extent, 4=to a large extent, 5=to a great extent

### ***Aims and Objectives***

There are four aspects, i.e. items 1-4 covered under this category for textbook evaluation. The teachers of BSER and CBSE were satisfied with item one and two, i.e. aim and objective of teaching English and audience specificity respectively. There was no difference in their opinion for these two items. They felt that textbook covers these two aspects. For item three and four, i.e. communicative activities and content and exercises addressing the individuality of the students respectively, difference in opinion of teachers of BSER and CBSE was observed. The teachers of BSER were not satisfied with item three but satisfied with item four, whereas the teachers of CBSE were not satisfied with the item four but satisfied with item three.

### ***Design and Organisation***

The mean values given in Table1 for all the seven aspects covered under this category describe that the teachers of BSER and CBSE were satisfied with all the aspects except one, i.e. item 10, integration of visuals in textbook. The teachers of both boards were not satisfied with this aspect. The table also represents that there was no difference in opinions among teachers of BSER and CBSE for all the aspects covered under this category.

### ***Language Content***

There are fifteen aspects, i.e. items covered under this category. From the means and standard deviations value as presented in Table 1, it has been found that the teachers of BSER and CBSE have almost similar views for all the aspects. They were satisfied with all the aspects which means that textbook fulfils and fits in the category of language content except one aspect, i.e. inclusion of materials for pronunciation work. The teachers of both boards were not satisfied with this aspect which means that textbook lacks appropriate pronunciation materials. There was also very little variation for one or two aspects. Like, for item 20, i.e. setting of listening material in meaningful context, the teachers of BSER were satisfied whereas the teachers of CBSE were not satisfied up to the mark. For item 22, the level of reading passage and the activities associated to those passages given in the textbook, the teachers of BSER were not satisfied with this aspect covered by the textbook whereas the teachers of CBSE were satisfied with this

aspect, which shows variations in the teachers' opinion of BSER and CBSE for this aspect.

### **Additional Teaching Aids**

There are six aspects covered under this category. The findings showed that the teachers of BSER were satisfied with all the aspects except item 27 and item 29. In contrast, the teachers of CBSE were not satisfied with all the aspects under this category except one, item 32. The differences in the mean value of responses of teachers of BSER and CBSE for three aspects reflects that there is a high variation in the teachers' opinion of both boards and their dissatisfaction under this category which means that the textbook does not fulfill the required criteria for this category. In the open ended response most of the respondents complained that there were no sufficient materials on pronunciation and audio/visual aids.

### **Differences in Responses among BSER and CBSE Affiliated School Teachers**

Since there were not much differences in the means revealed for BSER and CBSE affiliated school teachers for all the four categories included in the study, Independent Sample t-test was employed in order to ascertain the statistical significance of the minute differences between BSER and CBSE teachers' responses towards all the four categories in terms of their suitability and appropriateness in Indian ESL setting known to them. Table 2 and 3 contain the results.

**Table 2**  
**Standard Error of Mean Difference in the Responses Related to Two Boards**

Parameters	Board	N	Mean	Std. Deviation	Std. Error Mean
Aim and Objectives	BSER	15	3.4	0.82808	0.21381
	CBSE	15	3.2833	0.68051	0.17571
Design and Organisation	BSER	15	3.64E+00	0.555562	0.143446
	CBSE	15	3.42E+00	0.677559	0.174945
Content	BSER	15	3.37E+00	0.741456	0.191443
	CBSE	15	3.12E+00	0.597455	0.154262
Additional Teaching aids	BSER	15	2.97E+00	0.845624	0.218339
	CBSE	15	2.77E+00	0.771002	0.199072

N= Number of respondents

**Table 3**  
**Significance of Difference in the Responses Related to Two Boards**

Levene's Test for Equality of Variances		t-test for Equality of Means					
F	Sig.	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower			
Aim and Objectives	Equal variances assumed	0.716	28	0.11667	0.27674	-0.45022	
	Equal variances not assumed		26.987	0.11667	0.27674	-0.45118	
Design and Organisation	Equal variances assumed	0.51	28	0.219048	0.226235	-0.24437	
	Equal variances not assumed		26.965	0.219048	0.226235	-0.24518	
Content	Equal variances assumed	0.455	28	0.248889	0.24586	-0.25473	
	Equal variances not assumed		26.789	0.248889	0.24586	-0.25576	
Additional Teaching aids	Equal variances assumed	0.913	28	0.2	0.295468	-0.40524	
	Equal variances not assumed		27.764	0.2	0.295468	-0.40547	

The results of Levene's Test used to compare the two groups' variances for all four categories indicate that alpha value (p) is greater than .05 for all the four categories. This indicates that there is no statistical significant difference between the two group of teachers' responses for all the four categories, which confirms the equality of variances for all the four categories. It can also be noted from the above analysis that more or less they have similar views regarding their satisfaction or dissatisfaction level on almost all items of the checklist. The major difference was observed between both groups' opinion for items 22, 28 and 32. Teachers from both groups were dissatisfied about lack of materials on pronunciation and audio-visual aids.

## Discussion

The study shows that most of the teachers of BSER affiliated schools were satisfied with the textbook prescribed for Class X in terms of fulfilling the aims and objectives of teaching English, audience specificity and meeting the individual differences. However they also felt that the textbook did not specify the communicative aims and objectives of teaching a particular unit.

The teachers of BSER affiliated schools were quite satisfied with language proficiency and communicative activities dealt in the textbook. They were also satisfied with content and language presentation in the textbook. However the respondents felt that the integration of all the four basic language skills has not been achieved. They also opined that the visuals used in the textbook lacked good and attractive production. Majority of them were of the view that the textbook did not provide list of new vocabulary items.

So far as the language content of the textbook was concerned, teachers of BSER affiliated schools were quite satisfied. However, they find the materials on pronunciation and the level of reading passages and the activities associated to those passages quite unsatisfactory. In case of additional teaching aids the satisfaction level of BSER affiliated school teachers' was quite low.

In case of CBSE affiliated schools, teachers were not fully satisfied with the textbook prescribed for Class X in terms of fulfilling the aims and objectives of teaching English, audience specificity and meeting the individual differences. Regarding aspects of design and organisation of the textbook, teachers of CBSE affiliated schools felt that language presentation and organisation of content is simple and right for learners and teachers. The content was appropriate to the learners' needs and also the basic language skills have been introduced in an integrative manner. The course book provided communicative activities. However, teachers have not been fully satisfied when it comes to the appropriateness of language proficiency and the list of new vocabulary items in the textbook prescribed.

In response to the language content, teachers expressed satisfaction that the subject matter used in the textbook was quite appropriate and they relate to the learners' knowledge. They also expressed that the textbook focused on the development of reading skills and strategies and the learning activities provided in the book helps learners to evaluate their performance. However, majority of

the respondents were of the view that the textbook did not cover all the four skills adequately.

Teachers of CBSE affiliated schools, like the teachers of BSER affiliated schools, showed their dissatisfaction over the additional teaching aids provided along with the main course book. No significant difference between the responses of the teachers of BSER affiliated schools and teachers of CBSE affiliated schools was observed in this study.

In addition, referring to the blurb of the textbooks it has been noticed that though both the boards prescribe the same aim and objectives of teaching English at the secondary level, they provided different teaching and learning materials. BSER has prescribed one main course book and one supplementary book whereas CBSE has prescribed one course book as Literature Reader and two supplementary books for practice which may affect the level of exposure and practice level. Though the CBSE has prescribed more books but it has been observed that the teachers leave it up to the students to use those additional materials on their own.

### **Conclusion**

To sum up, this paper reported the findings of the evaluation of textbooks prescribed for Class X by two different education boards in India, BSER and CBSE, based on teachers' responses in terms of their satisfaction level as well as opinion differences. The results have shown that teachers from both the groups have different level of satisfaction on various aspects of textbooks prescribed. The results also indicated the need for taking practising teachers' feedback and accordingly the books must be revised. It can also be said that involvement of larger group of practising teachers while preparing a textbook may help in overcoming such problems in the future. Based on the findings of this study following recommendations are made:

1. Communicative aims and objectives of a teaching unit may be clearly specified. Adequate coverage and integration of all four basic language skills need to be done. Sufficient materials on pronunciation practice may be provided.
2. Level of reading passages and the activities based on them should meet the learners' need. Additional teaching aids may be provided.
3. Teachers' feedback may be considered important in preparation of textbooks.

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# **Influence of School Environment on Mental Health of Students at Formal Operational Stage of Cognitive Development**

TARUNA MALHOTRA\*

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## **ABSTRACT**

*School is the miniature form of society. It is the place where a child spends half of the day and influence of school environment on personality, character and general well-being of student can't be evaded. The functioning and management style of school affect the overall development of the child, especially at the formal operational stage of the cognitive development. To understand the importance of school environment it becomes crucial to decipher the influence of school environment on the mental health of students at formal operational stage. The purpose of the present investigation was to study the influence of different dimensions of school environment on the mental health of students across gender. The sample comprised 200 students of formal operational stage selected from the district of Rohtak in the state of Haryana. School Education Inventory by Mishra (1989) and Mental Health Battery (MHB-ss) by Singh & Gupta (2000) were administered to ascertain the influence of school environment and mental health of students of formal operational stage. Descriptive statistics was used to analyse the data. The analysis revealed that creative stimulation (CRS), acceptance (ACC) and control (CON) positively influence the mental health whereas permissiveness (PER) affects the mental health of students of formal operational stage in negative direction.*

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## **Introduction**

Formal operational period is the fourth and final period of cognitive development in Piaget's theory. According to Piaget, it is during adolescence that cognitive development reaches its

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fullest potential—formal operational thought. Two major changes occur at this stage: Adolescents gradually develop the ability to use hypothetic-deductive reasoning, and they extend their logical thinking to concepts that are abstract (no longer solely to materials that are concrete and tangible). In this stage, the individual moves beyond formal experiences and begin to think abstractly, reason logically and draw conclusions from the information available as well as apply all these processes to hypothetical situations. The need for concrete examples is no longer necessary because abstract thinking can be used instead. In this stage, adolescents are also able to view themselves in the future and can picture that the ideal life they would like to pursue. Some theorists believe the formal operational stage can be divided into two sub-categories: early formal operational and late formal operation thought. Early formal operational thoughts may be just fantasies, but as adolescents advance to late formal operational thought, the life experiences, they have encountered, changes those fantasy thoughts to realistic thoughts (Broughton, 1983). Growing physically and mentally, at a fast speed at this stage, many factors like home environment, peer group, school environment, mental health and many others play crucial role in overall development of the child. So, it becomes important for teachers, parents, and other influential people in adolescents' lives to understand these different stages to be able to provide the appropriate environment at home and school for the development of good mental health. Without the apt mental health, adolescents are unable to lead the life happily and are unable to gain enough knowledge and experience to advance to the next developmental stage.

The environment of school shares an influential space in child's life. Next-to family, the school is the most important experience in the process of child development. When the child enters the school arena; he or she is presented with new opportunities in terms of socialisation and cognitive development. These opportunities are provided in different measures in different schools and may have direct impact on the cognitive and affective behaviours of the students. Schools could perfect the good person and at the same be creating a good society (Dewey, 1999).

The National School Climate Council (2007) defines school climate as “norms, values, and expectations that support people feeling socially, emotionally and physically safe” (p.4). School climate is a product of the interpersonal relationships among

students, families, teachers, support staff, and administrators. Positive school climate is fostered through a shared vision of respect and engagement across the educational system. Emphasis is also placed on the collective sense of safety and care for the school's physical environment. A related concept is school culture, which refers to the "unwritten rules and expectations" among the school staff (Gruenert, 2008). A good school climate has been found to predict not only superior academic achievement but also positive behaviour and high self-esteem (Hoge et al., 1990). A poor school climate, by contrast, has been reported to relate to pupils' stress and even psychopathology (Havlinová & Schneidrová, 1995; Kuperminc et al., 1997). Furthermore, a positive classroom climate facilitates pupils' learning and adjustment (Cheng, 1994; Baker et al., 1998), while a poor classroom climate is associated with psychological problems (Russel & Russel, 1996; Mooij, 1999).

In present scenario, due to manifold changes in various aspects of our civilisation such as population explosion, advancement in science and technology, knowledge expansion, urbanisation, mobilisation, IT revolution and influence of Western culture, the society has become highly dynamic. Modernisation process is accompanied with manifold problems, anxieties and worries to human life, adversely affecting the core human values such as honesty, sincerity, morality and humanity and as such there is a great transition in human society. In this age of increasing urbanisation and technology, man has lost his identity and has become a part of social machine (Dagar & Dull, 1994). But adolescents must learn how to cope with psychological stress, handle peer pressure, deal with their emotions, resolve conflicts, build bridges with friends, family and school, develop self-confidence, safeguard themselves from high pressure marketing strategies, particularly of the alcohol industry, as well as cope with other stresses like academic competition and a hankering for material gains and these all necessitate having good mental health (Malhotra & Gupta, 2014).

Mental health lies at the heart of adolescent's social, professional and personal development; yet formative years are particularly exposed to mental health problems. But it is the education which plays a paramount role in building the foundation of the mental health and well-being of students at formal operational stage of cognitive development. Mental health is defined by WHO as a state of well-being in which every individual realises his or her

own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community (WHO, 2010, p. 19). Mental health is perceived as a positive source contributing to asset development individually, socially, and economically (WHO, 2004). Bhatia (1982) considers mental health as the ability to balance feelings, desires, ambitions and ideals in one's daily living. It means the ability to face and accept the realities of life. Better mental health outcomes in adolescents are characterised by greater adaptation in family, society, and school environment, improved quality of life (USDHHS, 1999).

Schools are interactive social systems. During the last decades the climate in schools and classrooms has been an important focus of investigation. The quality of education and school life in general is important for children's adjustment (Ouston et al., 1980). Differences in achievements as well as pupil behaviour can be explained by school factors such as scholarly atmosphere and ethical and moral values being practised, teachers' behaviour and responsibilities given to children. Awareness of the importance of educational environment has increased. Moreover, in recent years, efforts have been directed at creating healthy environments in general, including promoting health and mental well-being of students at schools (Weare, 2000a, b). As the aim of education is to provide healthy personality for individuals, the role of mental health is of utmost importance in formal education. Various studies have been carried out in different parts of the world to identify factors that impact on students, mental health since poor mental health has been recognised as the leading cause of suicidal behaviour, a sense of helplessness (Kay, Li, Xiao, Nokkaew & Park, 2009) and lower academic achievements (Puskar & Bernardo, 2007). According to previous studies, factors that influence mental health are demographic backgrounds such as age and gender (Yen, Hsu, Liu, Huang, Ko, Yen & Cheng, 2006), personality traits (Goodwin & Friedman, 2006) and loneliness (Wang, Yuen & Slaney, 2009).

### ***Review of Related Literature***

Adolescence is a time when many of the substantive and persistent mental disorders including major depressive disorders, panic disorder, bipolar disorder, substance abuse, eating disorders, and schizophrenia first appear (American Psychiatric Association, 2000; Kirby, 2002). Mental health problems are common among

children and adolescents; approximately 25 percent of children experience a mental health disorder annually, and 40 percent of adolescents meet lifetime diagnostic criteria for multiple mental health disorders (Merikangas et al., 2010; Sturgeon & Orley, 2005; Juyal (2003)). Mental health promotion activities, such as mental health literacy programmes, may help to promote positive mental health, de-stigmatise mental illness, enhance early identification of mental disorders in young people, and encourage help-seeking behaviours (Pinfold, Stuart, Thornicroft, & Arboleda-Flórez, 2005; Santor et al., 2009).

School is the second home for a student and teacher. Every aspect of school affects the mental health of a child. Schools have an important function in nurturing children's social emotional development as well as their academic and cognitive development. As children grow older, the school becomes the main setting for promoting mental health. Sturm (2000) examined children's perceived support from teachers and highlighted the importance of the teacher-child relationship by reporting that teachers have an incredible task of instructing children and helping them grow and develop. Kasinath (2003) found that mental health has a significant determinant effect on academic achievement in all the school subjects. A school, by building coping and social skills, and by creating a positive, safe environment that fosters a sense of inclusion, identity and connectedness among students, results in improved adjustment to school, enhanced competence, self-esteem, increased control and problem-solving skills, improved school achievement, and decreases loneliness, learning problems, bullying, aggression, depression and anxiety (Jané-Llopis, Barry, Hosman, & Patel, 2005; Jané-Llopis, 2005). As children grow older and have the ability to make choices and spend more time away from their parents' supervision, they meet new challenges and face more peer pressure to engage in the risk-taking behaviours mentioned above, including sexual activity, all of which can result from and contribute to poor mental health. Building social and emotional skills is important to maintaining mental health in students in middle and high school, so programmes that address these new challenges often combine elements of both promotion and prevention to reduce the risk factors for poor mental health in adolescence (WHO, 2004). Since very little work has been done considering the formal operational stage, the present study was undertaken.



### ***Rationale of the Study***

The rise in mental health issues in adolescents is a growing concern in the school and for the community counsellors, and educators. Research has revealed an increasing incidence of depression and other mental health issues among youth (U.S. Department of Health and Human Services, 1999). School, an important developmental environment for children, is known to have an impact on children's psycho-social development (Ouston et al., 1980) and mental health (Kasen et al., 1990). School and mental health are interrelated with each other as both influence the cognitive development of the child. This paper elucidates children's emotional and behavioural problems in the school environment by studying adolescents' development of mental health and investigates the consequences of different dimensions of school environment affecting children's mental health. However, there is a dearth of studies which try to study the effect of school environment on mental health of students at formal operational stage. So, the present investigation visualised a need to study the influence of school environment on mental health of students at formal operational stage of cognitive development.

### ***Objectives***

Amidst the understanding of the importance of school environment, it becomes essential to make out whether the school environment really influences the mental health of the adolescents. The objectives of the study were:

1. To study the different dimensions of school environment of students at formal operational stage of cognitive development.
2. To study the difference in different dimensions of school environment viz, creative stimulation (CRS), cognitive encouragement (COE), acceptance (ACC), permissiveness (PER), rejection (REJ) and control (CON) of students on the basis of gender at formal operational stage of cognitive development.
3. To study the mental health of students at formal operational stage of cognitive development.
4. To study the difference in mental health viz. emotional stability (ES), overall adjustment (OA), autonomy (AY), security-insecurity (SI), self concept (SC) and intelligence (IG) of students on the basis of gender at formal operational stage of cognitive development.
5. To study the influence of school environment on mental health of students at formal operational stage of cognitive development.



### **Hypotheses**

1. There is no difference in different dimensions of school environment viz, creative stimulation (CRS), cognitive encouragement (COE), acceptance (ACC), permissiveness (PER), rejection (REJ) and control (CON) of students on the basis of gender at formal operational stage of cognitive development.
2. There is no difference in mental health viz. emotional stability (ES), overall adjustment (OA), autonomy (AY), security-insecurity (SI), self concept (SC) and intelligence (IG) of students on the basis of gender at formal operational stage of cognitive development.
3. There is no influence of school environment on mental health of students at formal operational stage of cognitive development.

### **Method**

The study employed a descriptive survey method; the details are given as under:

### **Sample**

The sample comprised of 200 students (100 boys and 100 girls) from the district of Rohtak. Five schools were selected from the district Rohtak by convenient sampling method. Further, from each school 40 students were identified based on random sampling. Among these students there were an equal number of boys and girls studying at formal operational stage of cognitive development. The students were selected from Classes IX and X.

### **Tools Used**

- School Environment Inventory by Mishra (1989): The SEI is an instrument designed to measure the psycho social climate of schools as perceived by the pupils. It provides a measure of the quality and quantity of cognitive, emotional and social support that has been available to the students during their school life in terms of teacher-pupil interactions. SEI has six dimensions of the school:
  - Creative stimulation (CRS): It refers to “teacher’s activities to provide conditions and opportunities to stimulate creative thinking.”
  - Cognitive encouragement (COE): It implies “teacher’s behaviour to stimulate cognitive development of student by encouraging his/ her actions or behaviours.”

- Permissiveness (PER): It indicates a school climate in which students are provided opportunities to express their views freely and act according to their desires with no interruption from teachers.”
- Acceptance (ACC): It implies “a measure of teacher’s unconditional love, recognising that students have the right to express feelings, to uniqueness and to be autonomous individuals. Teachers accept the feelings of students in a non threatening manner.”
- Rejection (REJ): It refers to “a school climate in which teachers do not accord recognition to student’s right to deviate, act freely and be autonomous person.”
- Control (CON): It indicates “autocratic atmosphere of school in which several restrictions are imposed on the students to discipline them.”
- *Mental Health Battery (MHB-ss) by Singh & Gupta (2000)*: The MHB intends to assess the status of mental health of persons in the age range of 13 to 22 yrs. The battery has 130 items, divided into six parts viz.:
  - Part I: Emotional Stability (ES) contains 15 items;
  - Part II: Overall Adjustment (OA) contains 40 items;
  - Part III: Autonomy (AY) contains 15 items;
  - Part IV: Security-Insecurity (SI) contains 15 items;
  - Part V: Self-Concept (SC) contains 15 items;
  - Part VI: Intelligence (IG) contains 30 items.

The scoring of MHB comprise of two sections – Section A and Section B. For Section-A, item nos. I to IV of preliminary information is given weightage to determine socio economic status of the examinee and for Section- B if the response is in accordance with scoring key, then a score of + 1 is given, and a score of zero if not given accordingly.

### **Data Analysis**

The data collected through school environment inventory and mental health battery were analysed employing inferential statistics. To identify the school environment of students of formal operational stage, manual of SEI was used, whereas to find the mental health of students’ formal operational stage, the manual of MHB was referred. To compare the school environment and mental health of students of formal operational stage, t-test was used and

to study the influence of school environment on mental health regression analysis was done.

## Results

The data were analysed in the light of hypothesis designed for the study and findings has been encapsulated in the following heads for better comprehensibility of the readers.

### ***Difference in School Environment of Students by Gender***

For understanding the difference in school environment of students on the basis of gender, mean, SD and t-value were calculated for every dimension (Table 1). Results showed that girls perceived school environment significantly better than boys, particularly on the dimensions of CRS, ACC and CON.

**Table 1**  
**Comparison of Dimensions of School Environment of Students**

Sr. No.	Variables	Gender	N	Mean	SD	t-value	Remarks
1.	CRS	Boys	100	51.96	4.56	8.83	P<.01
		Girls	100	57.72	4.66		
2.	COE	Boys	100	36.96	5.36	0.36	P>.01
		Girls	100	37.23	5.09		
3.	ACC	Boys	100	31.82	2.09	14.61	P<.01
		Girls	100	38.98	4.43		
4.	PER	Boys	100	21.92	2.04	2.54	P<.01
		Girls	100	22.66	2.08		
5.	REJ	Boys	100	13.74	2.17	1.17	P>.01
		Girls	100	13.44	1.33		
6.	CON	Boys	100	32.65	4.53	2.22	P<.01
		Girls	100	34.14	4.93		

### ***Mental Health of Students at Formal Operational Stage of Cognitive Development***

For understanding the mental health of students at formal operational stage of cognitive development the mean total score and overall MHB was calculated and it has been presented in Table 2.

**Table 2**  
**Mean Scores of Students on Dimensions of MHB**

SN	Dimensions	Desired Mean Scores	Actual Mean Score	Inference
1.	Emotional Stability (ES)	10.71	9.47	Low
2.	Over all Adjustment (OA)	28.55	30.63	Above Average
3.	Autonomy (AY)	10.71	10.78	Average
4.	Security-Insecurity (SI)	10.71	9.64	Low
5.	Self-Concept (SC)	10.71	10.88	Average
6.	Intelligence (IG )	21.41	21.99	Average
Total	Mental Health	92.8	92.78	Average

Table 2 depicts that the students of formal operational stage have an average mental health in total. Further, the students of formal operational stage, showed average mental health for the three dimensions viz. AY, SC and IG, and above average in OA but low in ES and SI.

### **Comparison of Mental Health of Students by Gender**

The means and standard deviations of mental health scores by gender were calculated and the difference was tested using t test (Table 3). In all of the six dimensions i.e. ES, OA, AY, SI, SC and IG

**Table 3**  
**Comparison of different Dimensions of Mental Health Battery by Gender**

Dimensions	Gender	N	Mean	SD	t-value	Remarks
Emotional Stability (ES)	Boys	100	9.85	1.06	5.31	P<.01
	Girls	100	9.09	0.96		
Over all Adjustment (OA)	Boys	100	31.65	1.66	10.8	P<.01
	Girls	100	29.6	0.92		
Autonomy (AY)	Boys	100	11.19	0.84	16.09	P<.01
	Girls	100	9.16	0.95		
Security-Insecurity (SI)	Boys	100	9.94	0.66	4.96	P<.01
	Girls	100	9.35	0.99		
Self-Concept (SC)	Boys	100	11.5	0.92	9.79	P<.01
	Girls	100	10.26	0.87		
Intelligence(IG)	Boys	100	23	1.19	8.89	P<.01
	Girls		20.97	1.95		

boys were found to have better mental health. Thus, it can be said that gender acts as one of the significant variable of differentiation on MHB.

Another way of analysis given by MHB is overall MHB score. The mean of overall MHB was calculated for male and female students and it was found that there was significant difference in the mean scores of male and female students of formal operational stage as reflected in Table 4

**Table 4**  
**Comparison of Overall Mental Health by Gender**

Gender	N	Mean	SD	t- Value	Remarks
Boys	100	97.13	2.54	22.83	P<.01
Girls	100	88.43	2.584		

### ***Influence of School Environment on Mental Health***

For studying the influence of school environment on mental health, regression analysis was carried out where all the six dimensions of school environment were taken as predictive or independent variables and mental health was dependent variable. Tables 5 and 6 contain the results.

**Table 5**  
**Means and SDs on Mental Health Battery and School Environment Inventory**

Variables	Mean	SD	N
Mental Health	92.78	5.12	200
Creative Stimulation(CRS)	54.74	5.49	200
Cognitive Encouragement (COE)	37.09	5.18	200
Acceptance (ACC)	35.4	4.98	200
Permissiveness (PER)	22.29	2.09	200
Rejection (REJ)	13.59	1.80	200
Control (CON)	33.39	4.78	200

Table 5 depicts the mean and Standard Deviation of Mental Health and different dimensions of school environment viz. CRS, COE, ACC, PER, REJ and CON.

**Table 6**  
**Correlations between Mental Health and Dimensions of School Environment**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728a	.530	.516	3.568

a. Predictors: (Constant), CON, COE, REJ, ACC, PER, CRS

Table 6 shows the multiple linear regression model summary and overall fit statistics. We find that adjusted  $R^2$  of our model is 0.516 with the  $R^2 = 0.530$ . This means that the linear regression model with the independent variables i.e. creative stimulation (CRS), cognitive encouragement (COE), acceptance (ACC), permissiveness (PER), rejection (REJ) and control (CON) is 53 per cent of variance of the mental health.

**Table 7**  
**Regression Analysis of Various Dimensions of School Environment**

Model		Unstandardised Coefficients		Standardised Coefficients	T	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	61.503	4.142		14.848	.000	53.333	69.673
	CRS	.301	.051	.323	5.948	.000	.201	.401
	COE	.035	.050	.035	.698	.486	-.064	.134
	ACC	.553	.056	.538	9.957	.000	.444	.663
	PER	-.370	.127	-.151	-2.916	.004	-.621	-.120
	REJ	.022	.143	.008	.155	.877	-.259	.304
	CON	.055	.054	.052	1.017	.310	-.052	.162

As there were multiple independent variables in the analysis, the Beta weights show the relative importance of each independent variable in standardised terms. It is revealed from the Table 7 that variable CRS and ACC of school environment have positive relationship whereas variable PER have negative relationship with mental health of students and also account for the mental health of students. Out of these three variables, ACC have B weights of .538 highest among the three, which means it is relatively of higher importance in explaining the mental health of students in comparison to other two. Thereafter, it is CRS and PER with B weights .323 and .151 which explains their relative importance in explaining the mental health of students. It is revealed that

creative stimulation, acceptance and control positively influence the mental health whereas permissiveness affects the mental health of students of formal operational stage in negative direction. Thus, we can conclude that the dimensions of school environment affect the mental health of students of formal operational stage.

### **Discussion**

An educational institute should not be just confined to teaching and learning but should be considered as a place where consciousness is aroused and illumined; soul is purified and strengthened. It is the place where the seeds of discipline, devotion and commitment are planted and fostered with deliberate efforts. The school has been identified as a vehicle of “direct instruction” (Pekausky, 1998), it is a social institution, in which is embedded rich norms, customs and ways of thinking of which the teacher is the conveyer. The schools are expected to create such environment where good mental health can cultivate. This study was aimed to explore the influence of school environment on the mental health of students at formal operational stage of cognitive development. The analysis revealed that creative stimulation (CRS), acceptance (ACC) and control (CON) positively influence the mental health whereas permissiveness (PER) affects the mental health of students of formal operational stage in negative direction. The results of the present study are in cohesion with that problems in school may cause mental health problems (Fletcher, Bonell, & Hargreaves, 2008, p. 218) and a positive school climate promotes achievement and good mental health (Maddox& Prinz, 2003, p. 32).

The study shows that school environment is of paramount importance in the development of mental development. Overall, providing creative stimulation, and accepting a child with a certain amount of control on the part of teacher is much more likely to promote internal self- control and mental health. Rejecting is not an effective antidote in the development of mental health. A good mental health involves a number of internal processes that are best developed through warm, caring teachers with clear and consistent expectations, emphasis on the reinforcement of positive behaviour. It is also suggested that future research studies be conducted considering school’s locality, management style, self-efficacy and ethos with mutual values and norms to study the relationship of school environment and mental health of students at formal operational stage of cognitive development.

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# **A Study of Classroom Behaviour of Prospective Teachers in Relation to Their Teaching Aptitude**

KUSUM LATA\*

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## **ABSTRACT**

*The present study examined the effect of teaching skills on classroom behaviour of prospective teachers in relation to their teaching aptitude. Two hundred prospective teachers were taken from two B.Ed colleges from Mohali district which were equally divided into experimental and control groups. Teacher Aptitude test was administered on both the groups to find out the relationship between classroom behaviour and teaching aptitude. The experimental group was exposed to treatment of teaching skills whereas control group received only theoretical explanation of micro teaching. Classroom behaviour of all the prospective teachers was observed before and after the treatment through- Flanders Interaction Analysis technique. Correlation and ANOVA were used to analyse the data. Results showed that there was no significant correlation between classroom behaviour and teaching aptitude of experimental and control groups prior to intervention. The study further revealed that all the groups (high and low teaching aptitude of experimental and control groups) showed significant differences in their mean scores after the treatment.*

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## **Introduction**

It is an accepted fact that education brings about the desired changes in the social and cultural life of a nation. The teacher plays a pivotal role in any system of education. The preparation of such an important functionary must conceivably get the highest priority. Teaching is, no doubt, a challenging profession and only those teachers can shoulder the responsibility of nation building, who are adequately prepared and have sound professional knowledge and aptitude. This requires development of adequate

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skills, dedication to teaching and a determination for continuous growth and learning among the teachers (Hussain, 2004).

Since independence, a large number of teacher training institutions and colleges of education were established with a view to produce effective teachers. However, in reality, they have failed to do so because of the faulty admission criteria and defective teaching strategies and devices used in these colleges (Dutt & Nanda, 2008). The success of teacher education programme depends on developing skills to identify and nurture diverse teaching objectives, attitude, teaching aptitude and patterns of teaching behaviour among the student teachers, who have been preparing to enter into the teaching profession. The success also depends on enabling the student teachers to perform certain teaching behaviour patterns, string them together into strategies of classroom instruction and compare among different patterns of their own teaching behaviours and strategies in terms of their consequences.

Teacher behaviour broadly refers to how a teacher behaves with the students in the classroom, outside the classroom, inside and outside the school/college campus. Different teachers behave differently in one or the same situation. Teacher behaviour in the classroom determines how she/he acts or reacts in different classroom situations. Her/his behaviour is the reflection of her/his many qualities, which are also modified with passage of time as she starts gaining experience. Her entry behaviour when she starts pre-service training is different and then it gets modified with time (Reddy, 2007). The educationist and psychologists have made it clear that the teaching process can be improved only when teacher education institutions would prepare effective teachers who are not born but can be prepared by the use of feedback devices. Ryan's theory of teacher behaviour says that teacher's behaviour can be modified by feedback and micro-teaching is one of the important feedback devices to modify the teacher trainee's behaviour. It is a training device which is used at various pre-service and in service stages in the professional development of teachers (Dutt & Nanda, 2008).

As every action of the teacher in the classroom has its influence upon the learner, whether it is verbal or nonverbal, teacher-pupil interaction in the classroom assumes significance. All actions of the teacher are observed and are modelled by the students. Analysis of classroom interaction is one of the most important

innovations of teaching behaviour. During pre-service training, the teacher's behaviour can be modified through classroom interaction techniques.

In the teaching-learning process, the teacher needs to possess three qualities: knowledge, the ability to pass it on to others (communication), and aptitude (Iyer, 2002). Aptitude refers to the quality of being fit for a purpose or position. Teacher aptitude is the quality of being fit for teaching profession. Hence, it is considered as the determinant factor of effective teaching. If the teachers are empowered with necessary skills and competencies, they can inculcate those skills in pupils (Dutt & Rao, 2001). Research indicates that everyone does not have the ability or the aptitude to take up teaching. Certain minimum requirements in terms of intelligence, temperament, and personality are observed to be highly critical. He who ceases to learn cannot adequately teach. Therefore, teachers, like other professionals, need good training. They cannot be expected to solve problems of student motivation by themselves. Training demands an awareness of teaching skills on behalf of every teacher called the knowledge of her teaching aptitude.

Various studies have been conducted to find out the effect of classroom verbal behaviour of teachers in respect of variables such as age, sex, personality, attitude towards teaching and training, experience, values, socioeconomic status and modernity etc. However, only a few studies have been conducted relating to classroom behaviour and teaching aptitude. Ifaera (1988) explored the relationship between factors of teaching aptitude and teacher classroom behaviour components (such as teacher talk ratio, pupil talk ratio and silence or confusion ratio) and found that the teacher talk ratio was significantly correlated with three of the teaching aptitude factors as well as the total teaching aptitude score. She also reported significant negative correlation between silence or confusion ratio with the three aptitude factors and the total aptitude score and positive significant correlation between teaching aptitude score and content cross ratio. The high-aptitude group and the low-aptitude group differed significantly with the high aptitude group showing high teacher talk, teacher response and content emphasis.

### **Objectives of the Study**

The objectives of the study included the followings.

1. To study the teaching aptitude of prospective teachers.

2. To study the relationship between classroom behaviour and teaching aptitude of prospective teachers.
3. To study the effect of teaching skills on classroom behaviour (namely, teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude.

### **Hypotheses**

The following hypotheses were formulated in the study.

1. There exists no significant correlation between classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers.
2. There exist no significant difference between the pre-test post-test scores of classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective secondary school teachers' teaching aptitude of all the groups of experimental and control group.
3. There exists no significant difference between the gain scores of classroom behaviour (dimensions viz., teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude of all the groups of experimental and control group.

### **Statement of the Problem**

The efficacy of teacher training programmes has been questioned by researchers, practitioners, and policy makers. The investigator during her tenure in a teacher training institute observed that the practical training provided to the student teachers in micro and mega teaching was not sufficient to become an effective and confident teacher. At present, in teacher training institutions, the student teachers are trained through traditional approach of teaching and the evaluation of the extent to which the trainee acquires a skill in particular and general teaching competence is vague and unscientific. There is a provision of providing practice in micro and mega teaching but no linkage between these two practices is there. They are provided training as a separate micro lessons and mega lessons. Even between these two practices very less importance is given to micro teaching. They just prepare

the micro lessons as per prescribed syllabus or minimal practice is provided to complete the formality. They complete the whole micro skills practice in 3-4 days with no consideration to develop effective teaching. This results in lack of confidence in facing the whole class for full time of 35-40 minutes and many are unable to adjust to the stipulated classroom environment and sometimes even fail in their profession. Many of them are afraid to face the class again. Mere insight and knowledge of teaching skill do not automatically guarantee its mastery. It is precisely microteaching that serves practising and mastering teaching skills and the ideal way to master teaching skills is to execute it in practice in natural settings.

## **Method**

### ***The Sample***

The sample for this study consisted of two hundred prospective teachers. They were drawn from two B.Ed training colleges of Mohali district (Punjab) which were selected by purposive sampling method. The sample was divided into experimental and control groups, each having 100 prospective teachers. It was ensured that sample came from the same social and academic background, and got admission on merit basis. Both the colleges were affiliated to the same university, had same syllabi and were recognised by NCTE and were approximately ten kilometres apart from each-other.

### ***Tools Used***

The following tools were used in the present study:

- Teaching aptitude test battery by Psy-Com Services (1996).
- Flanders Interaction analysis observation sheet developed by Flanders (1970) was used to encode the classroom behaviour of all prospective teachers, before and after the treatment.
- Flanders Interaction analysis decoding 10×10 matrix sheet developed by Flanders (1970) was used to decode the classroom behaviour of all prospective teachers.

### ***Design of the Study***

The study employed pre-post experimental design. The Teaching Aptitude Scale was administered on experimental and control groups and later the sample was divided into high teaching aptitude and low teaching aptitude taking the highest and lowest

27 per cent samples each from both the groups as per the Kelly criterion. Thus, the experimental and control group each contained high and low teaching aptitude respondents.

In the pre-test stage classroom observations were coded on 10×10 matrix response sheets by using Flanders Interaction Analysis Categories for all prospective teachers during the first teaching practice and then decoding was done on the basis of classroom observations through the technique of Flanders Interaction Analysis for each of Experimental and Control group. Interpretation and Analysis was done by calculating the classroom behaviour of prospective teachers in terms of Teachers Talk Ratio, Indirect teacher talk ratio, direct teacher talk ratio, Pupils Talk Ratio and Silence/Confusion ratio. Then sufficient training in two micro skills i.e. Skill of Probing Questions and Skill of Explanation was provided to all the prospective teachers of experimental group only. No such treatment or training was given to the Control group. After the completion of training session of micro skills, Classroom Observations were again encoded and further decoded by 10×10 interaction matrix table during Second Teaching Practice Session by using the same technique of Flanders interaction analysis. Data were analysed with the help of correlation

### **Results and Discussion**

Table 1 shows correlation between classroom behaviour (teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers. It is evident from Table 1 that none of the values of correlation is significant. Hence, Hypothesis 1 that there exists no significant correlation between classroom behaviour and teaching aptitude of prospective secondary school teachers is retained. By observing the results, it can be said that classroom behaviour is not related to teaching aptitude and a person can be trained as a teacher irrespective of his teaching aptitude.



**Table 1**  
**Correlation between Classroom Behaviour and Teaching Aptitude**

Classroom behaviour dimensions	Total Teaching Aptitude (Experimental Group)		Total Teaching Aptitude (Control Group)	
	Pearson Correlation	Sig. (2-Tailed)	Pearson Correlation	Sig. (2-Tailed)
Teacher Talk Ratio	-.051	.616	.063	.531
Indirect Teacher Talk Ratio	.030	.764	.069	.498
Direct Teacher Talk Ratio	-.082	.418	.012	.907
Pupil Talk Ratio	-.049	.626	-.096	.340
Silence Or Confusion Ratio	.090	.373	.025	.802

Table Value at 0.05 – 0.091 for df (N-2) =98

Table Value at 0.01 – 0.118 for df (N-2) =98

A one-way ANOVA was conducted to compare the effect of treatment of teaching skills on classroom behaviour of prospective secondary school teachers for teaching aptitude. Table 2 contains the results.

**Table 2**  
**ANOVA for all Groups of Teaching Aptitude**

Dimension	Sources of variation	PRE TEST				POST TEST			
		Sum of Squares	Mean Square	F	Sig.	Sum of Squares	Mean Square	F	Sig.
TTR (Teacher Talk Ratio)	Between Groups	145.88	48.63	0.187	0.905	1559.29	519.76	0.96	0.413
	Within Groups	26980.4	259.43			56047.6	538.92		
	Total	27126.3				57606.9			
PTR (Pupil Talk Ratio)	Between Groups	1515.63	505.21	2.302	0.081	9442.47	3147.49	7.95	0
	Within Groups	22824.4	219.47			41165.2	395.82		
	Total	24340.1				50607.7			
SIL/CON (Silence/ Confusion)	Between Groups	1450.41	483.47	1.1	0.353	29075	9691.67	29.2	0
	Within Groups	45696.4	439.39			34492.7	331.66		
	Total	47146.9				63567.7			

ITTR (Indirect Teacher Talk Ratio)	Between Groups	1164.32	388.11	2.153	0.098	10098	3366	16.5	0
	Within Groups	18743.9	180.23			21258.1	204.41		
	Total	19908.3				31356.1			
DTTR (Direct Teacher Talk Ratio)	Between Groups	824.778	274.93	0.789	0.503	2731.21	910.40	3.29	0.024
	Within Groups	36236.2	348.43			28764.7	276.58		
	Total	37061				31495.9			

Table 2 shows the output of classroom behaviour of prospective secondary school teachers (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of all the groups of teaching aptitude of experimental and control groups before and after the treatment. It is observed that the F value of all the dimensions of classroom behaviour before treatment is less than the critical value and p value is more than 0.05. This shows that there is no significance difference between the mean scores of all the groups (High and low teaching aptitude) of experiment and control groups. This analysis showed that all the groups were equivalent in their teaching aptitude before the treatment. There was homogeneity in their performance prior to the treatment.

On the other hand, F values of all the dimensions of classroom behaviour after treatment is more than the critical value (2.69) and p value is less than 0.05. It is .964 ( $p=.413$ ) for teacher talk ratio, 7.952 (.00) for pupil talk ratio, 29.22 (.00) for silence or confusion, 16.467 ( $p= .00$ ) for indirect teacher talk ratio and 3.292 ( $p=.024$ ) for direct teacher talk ratio. This results show that all the groups (High and low teaching aptitude) differed significantly showing the effect of treatment on their classroom behaviour.

Table 3 shows the results of the ANOVA computed to find out the significance of difference between the gain scores of classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective secondary school teachers' teaching aptitude of all the groups (High and low teaching aptitude) of experimental and control group ( $N= 108$ .  $df =3,104$ ).

**Table 3**  
**ANOVA of Gain Scores for all Groups having Teaching Aptitude**

Dimension	Sources of variation	Sum of Squares	Mean Square	F	Sig.
TTR gain (Teacher Talk Ratio)	Between Groups	1862	620.667	0.802	0.496
	Within Groups	80484.7	773.891		
	Total	82346.7			
PTR gain (Pupil Talk Ratio)	Between Groups	5417.21	1805.74	3.16	0.028
	Within Groups	59421	571.356		
	Total	64838.3			
ITTR gain (Indirect Teacher Talk Ratio)	Between Groups	16458.5	5486.16	16.423	0
	Within Groups	34741.2	334.05		
	Total	51199.7			
DTTR gain Direct Teacher Talk Ratio)	Between Groups	5494.77	1831.59	3.27	0.024
	Within Groups	58245.8	560.056		
	Total	63740.5			
SIL/CON gain (Silence/ Confusion)	Between Groups	22341.4	7447.14	10.732	0
	Within Groups	72168.2	693.925		
	Total	94509.6			

It is observed (Table 3) that the F value of all the dimensions of classroom behaviour before treatment is more than the critical value and p value is less than 0.05. It is .802 ( $p=.490$ ) for teacher talk ratio, 3.16 (.028) for pupil talk ratio, 10.732 (.00) for silence or confusion, 16.423 ( $p= .00$ ) for indirect teacher talk ratio and 3.27 ( $p=.024$ ) for direct teacher talk ratio.

Although the total teacher talk ratio is insignificant but its two dimensions i.e. indirect teacher talk ratio, direct teacher talk ratio are highly significant which illustrated the efficacy of treatment of teaching skills on their classroom behaviour because indirect teacher talk ratio improved much more than direct teacher talk ratio showing the improvement of democratic attitude towards students and decrease of teacher dominancy in classroom. Hence, the hypothesis that there exist no significant difference between the gain scores of classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective

secondary school teachers' teaching aptitude of all the groups (High and low teaching aptitude) of experimental and control group is rejected and one can say that all the groups differed significantly after the treatment.

### **Conclusion**

No significant correlation was found between classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) and teaching aptitude of prospective teachers which indicates that classroom behaviour is not significantly dependent on teaching aptitude. It might also suggest that irrespective of teaching aptitude, a person can be trained to be a good teacher. There was significant difference between classroom behaviour (w.r.t dimensions namely teacher talk ratio, indirect teacher talk ratio, direct teacher talk ratio, pupil talk ratio and silence or confusion ratio) of prospective teachers' teaching aptitude of all the groups of experimental and control group indicating all the groups differed significantly after the treatment.

### **Delimitations of the Study**

The present study had the following delimitations.

- Only two hundred prospective secondary schools teachers were selected for the present study.
- Only two Colleges of Education (B.Ed) in District Mohali were selected for the study.

The scope of present study was delimited in respect of sample used, the variables, tools employed to measure the variables and statistical techniques for analysis. The area of study was restricted to District Mohali of Punjab only.

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# Interactive Effect of Gender, Type of School and Mental Health on Social Adjustment of Adolescents

KAVITA VERMA\*

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## ABSTRACT

*This research examined the interactive effect of gender, type of school and mental health on social adjustment of higher secondary school students of Chhattisgarh. Adjustment inventory by Sinha and Singh (2009) and Mental Health Battery by Singh and Sengupta (2008) were administered on a sample of 480 higher secondary school students selected through disproportionate stratified random sampling technique from various government and private school of four districts of Chhattisgarh state, namely Durg, Raipur, Balod and Rajnandgoan. Data were analysed using 2×2 ×2 factorial design. Results revealed that gender, type of school and mental health do not influence the social adjustment of the students. It was further found that the main effect of gender was not significant whereas the main effects of type of school and mental health were significant. However, none of the interaction effects were found to be significant. The result has been explained in terms of the factors influencing social adjustment of adolescents. The study will pave way for implementing intervention programmes on mental health for improving social adjustment of adolescents, modification in teaching learning process and curriculum modification.*

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## Introduction

Adaptation of the person to the social environment or adjustment may take place by adapting the self to the environment or by changing the environment (Campbell, 1996). Social adjustment refers to the success with which people adjust with other people, in general and with the group with which they identify themselves, in particular. Social adjustment signifies how we interact with

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the society members and how do we carry forward our social responsibilities. It is the ability or skill by which an individual maintains order and system in his relations with other beings in his/her neighbourhood, besides adapting his/her behaviour to the demands of the society. Well-adjusted people have social skills such as the ability to deal diplomatically with others (both friends and strangers) so that others' attitudes towards them will be favourable. People who make good social adjustments usually develop favourable social attitudes, such as a willingness to help others, even if they are personally inconvenienced. They are not self-bound (Hurlock, 1997).

Mental health is the ability to face and balance the reality of life (Bhatia, 1982). Mental health is a complex phenomenon and depends on a set of personal, psychological and social variables. Mental health is as an important feature as is the physical health of a person. Good mental health depends on the good state of both mind and body. Each exerts a direct influence on the other, but owing to the power of matter, good mental health is of supreme importance. According to Hadfield (1952), mental health is the harmonious functioning of the whole personality. Khan (2003) observed that among the two principal agencies influencing the child's adjustment and mental health, home is the most important agency, responsible for the adjustment, maladjustment and promotion of mental health of the children. Next to home the school is found an effective agency in fostering mental health. Thus, to control the problem of mental health in the society, it is necessary to improve the mental health of the teachers and without a good role model, it is not possible to have a healthy society.

Adolescents are the future of our nation. It is our duty including those of psychologists, educationists and sociologists to develop the personality of adolescents in an effective manner. Social adjustment and mental health are important aspects in the development of personality.

When mental health problems of young people go untreated, it affects their development, school performance and relationships which lead to school failure, family conflicts, drugs abuse, violence and even suicide. The present study, therefore, examined the effect of gender, type of school and mental health on social adjustment of higher secondary students.

### **Objective**

The main objective of the study was to identify the main and interactive effect of gender, type of school and mental health on the social adjustment of higher secondary school students.

### **Hypothesis**

It was hypothesised that gender, type of school and mental health will not have significant effect on the social adjustment of higher secondary school students.

### **Method**

#### **Tools**

Adjustment inventory by A.K.P. Sinha and R.P. Singh (2009) was used for measuring social adjustment. The inventory consisted of 60 items related to three areas, emotional adjustment, social adjustment and educational adjustment. The inventory contained 20 items for each area. However, for the present study social adjustment consisting of 20 forced-choice items was used. The reliability of the test estimated by different methods was split half method (.93), test-retest method (.90) and K.R. formula (.92). The higher score on the test indicated poor adjustment. Mental health of students was measured by Mental Health Battery by A. K. Singh and A. Sengupta (2008, revised version). It consisted of 130 items belonging to six dimensions of mental health. Reliability of various dimensions of the battery varied between 0.72 and 0.87. It also had concurrent and construct validity.

#### **Sample**

A disproportionate stratified random sampling technique was employed. In the first phase, the investigator randomly selected four districts of Chhattisgarh state. In the second phase, the investigator selected three government and three private schools from each district on random basis. In the third phase, the investigator randomly selected 10 male and 10 female students from each school. Thus, data were collected from 24 schools (12 government and 12 private schools). All the schools selected resulted in the sample of 480 higher secondary school students (Only Chhattisgarh board affiliated schools were selected for the present study).



## Results

To examine the effect of gender, type of school and mental health on social adjustment, a  $2 \times 2 \times 2$  analysis of variance was carried out. Table 1 contains the results.

**Table 1**  
**Summary of Analysis of Variance**

Source of variance	Sum of Squares	Df	Mean sum square	F-ratio	Significance level
<b>Gender (A)</b>	15.290	1	15.290	3.075	.080 <sup>NS</sup>
<b>Types of school (B)</b>	34.689	1	34.689	6.976	.009**
<b>Mental health (C)</b>	1683.333	1	1683.333	338.526	.000**
<b>A × B</b>	2.237	1	2.237	.450	.503 <sup>NS</sup>
<b>A × C</b>	15.979	1	15.979	3.213	.074 <sup>NS</sup>
<b>B × C</b>	2.567	1	2.567	.516	.473 <sup>NS</sup>
<b>A × B × C</b>	1.372	1	1.372	.276	.600 <sup>NS</sup>
<b>Error</b>	1616.074	325	4.973		

\*\* = Significant at 0.01; NS = Insignificant.

Results showed that there was no significant difference in social adjustment among higher secondary school students across gender. Hence, the hypothesis that there will be no significant difference in social adjustment among higher secondary school students due to gender was retained. This result is in agreement with the findings of Adhiambo et al. (2011), Dutta et al. (1998), Gehlawat (2011), Gira (2012) and Gupta and Sadh (2012). The effect of school (government vs. private) on social adjustment was found to be significant. Table 2 shows that the private school students were relatively more socially adjusted than their government counterparts (lower score indicated high on social adjustment).

**Table 2**  
**Mean Values of type of School on Social Adjustment**

Type of school	Means
Government	14.375
Private	13.452

Hence, the hypothesis that there will be no main effect of type of school on social adjustment among secondary students was

rejected. Previously Gupta (1990) and Mangla and Satyaprakasha (2009) also reported that private school students showed better social adjustment than government school students.

Table 1 further revealed that F ratio for the main effect of mental health was significant, indicating the importance of mental health on social adjustment of higher secondary students. Hence, the hypothesis that there will be no main effect of mental health on social adjustment of higher secondary school students was rejected. The means of the social adjustment with respect to mental health of the students is shown in Table 3. It revealed that students having good mental health scored higher on social adjustment than those who were having poor mental health.

**Table 3**  
**Mean Values of Mental Health on Social Adjustment**

Mental health	Mean
Poor	17.131
Good	10.696

The results also revealed that none of the interaction effects were significant indicating that gender, type of school, and mental health influence, if any, social adjustment of the students independently.

### Discussion

The study showed that the social adjustment of the students studying in private school is significantly higher than that of the students studying in government schools. The probable reason may be the continuous support provided by the teachers of private school to the students for their overall development. Private schools organise different kinds of co-curricular activities compulsorily in which they arrange activities like news, prayer, thought for the day in which each child get chance to participate. Besides, in private schools various events and activities like dance competition, song competition, debate etc. are organised in which the participation of all students is almost compulsory. The students also get a chance to organise these activities which help to improve the level of their self-confidence, understanding and spirit of sports which help in social emotional and educational adjustment of the students.

In contrast, students of government schools do not have scope for co-curricular activities and students are also hesitant

to participate in such activities which retard their growth and development. The teachers also frequently employ traditional methods of teaching in government schools and do not encourage the students to ask questions. This type of behaviour on the part of the teachers leads to development of frustration and inferiority complex among the students. But in private school the student get more opportunities and exposure. The teachers of private schools also provide the report of educational progress and other activities of child to their parents from time to time in parents. During parent-teacher meeting, they try to extract the knowledge about the family background of the students which facilitate them in rapport building with the students, thus helping in students' social adjustment. In government schools, parents-teachers meetings are practically absent.

In the present study it was found that the students having high adjustment also had good mental health. The reason may be the students having good mental health have high level of self-concept, self-confidence, feeling of security, emotional stability and autonomy, and comparatively low anxiety level, stress, frustration and problems of adjustment which helps them to adjust properly at school, home and society; understand the feelings of others; and manage their emotions properly. They also present themselves in a proper manner. On the other hand, the students with poor mental health have higher level of fear, anxiety and frustration and are unable to control their emotions. Consequently they suffer from low self-concept and low self-confidence and, in turn, are maladjusted at their homes, school and society and are unable to solve their problems.

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## **Summary of ERIC Projects**

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# **Development of an Assessment Tool and Integrated Management Protocol for Children with Development Co-Ordination Disorder**

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Among the plethora of minor childhood disabilities is Development Coordination Disorder (DCD). It is a chronic neurological disorder which starts in childhood and manifests itself as marked impairments in motor coordination, interfering with the participation of the children in their home and academic activities. DCD is believed to affect 5-6 per cent of school-aged children (American Psychiatric Association, 2000) and tends to occur more frequently in boys. DCD can exist on its own or it may be present in a child who also has learning disabilities, speech/language difficulties, and/or attention deficit disorder. Educators and parents who are with the child every day may be the first to notice the difficulties that the child is experiencing. Children with DCD who are not recognised may experience failure and frustration, are often perceived to be lazy or unmotivated, and may develop additional physical, social, and behavioural problems.

The children with DCD require early intervention to help them learn strategies to compensate for their coordination difficulties, to feel better about themselves as individuals, and to prevent developing

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other secondary issues. Intervention for children with DCD may include referral to an occupational therapist or physiotherapist. An occupational therapist and/or physical therapist may help the child learn to perform daily tasks more successfully and will make recommendations to parents and educators regarding the participation of children with DCD at home, in the classroom, on the playground, and in leisure activities in the community. The, present study aimed to develop an assessment tool and management strategy for DCD in the school context along with the DCD questionnaire, which is a parent-report screening tool that asks parents to compare their child's performance in everyday tasks with that of their typically developing peers. The revised DCDQ'07 can be completed by parents of children aged 5 to 15 years (Wilson et al. 2009).

### **Objectives of the Study**

As the study was conducted in two parts, phase-wise objectives are given below.

Phase I objectives-

- Development of tool to diagnose low motor proficiency
- Validation with existing tools.
- Reliability testing.

### **Phase II Objectives**

- Development of a management strategy that will embed into the existing academic framework to integrate children with DCD into the mainstream.
- Effectiveness of the programme as indicated by improvement on the DCD tool as well as changes in academic performance.

### **Method**

Using a 3 round Delphi process, items were generated for the tool within each of the domains identified from literature that exhibit a deficit in children with DCD. Likewise, scoring criteria were formed and the tool was tested on 60 children initially and items removed and scoring criteria formalised. Thereafter, the tool was tested on 127 children and domains were identified and items reduced with Rasch analysis using Winsteps. The final tool has 20 items comprising of 3 constructs, and a short version comprising 12 items. These constructs are related to manipulation, motor diversity, and sensory motor coordination. Some of the items on the

tool included- cutting a figure, hopscotch with a cube, storytelling, reading a familiar paragraph etc.

This final tool was tested for test retest reliability to assess its stability ( $r=0.79$ ). Using the tool, children with possible DCD were identified. These children were given a remediation programme that was embedded in the school curriculum.

The following guidelines were given for the intervention strategy:

- Manual dexterity: change the writing instrument so as to enable penmanship which requires less pressure on the paper.
- Introduce craft work as per the child's interest that involves use of instruments, fine motor activity and in hand manipulation.
- Engage the child in play activities that require motor control and balance and cognitive processes like obstacle clearance, hurdles etc.

After the intervention was given for six weeks, children were retested. There was no measurable improvement in academic performance, as the duration may have been inadequate. Teachers were interviewed regarding their opinion on the feasibility of incorporating the testing and intervention in the school curriculum. Teachers commented that testing was time consuming and required special skills. But the intervention was easy to embed in the school curriculum. The tool items were validated against items on an existing tool of motor proficiency viz. Movement Assessment Battery for Children (MABC) and were found to be valid ( $r=0.55-0.9$ ).

### **Limitations and Strengths**

The developed tool has validity against existing tools of motor proficiency. Excellent correlations are not expected as existing tools are not specific to DCD. The final items on the tool are easy to replicate and can be completed in 30 minutes including instruction and setting up.

Despite the fact that the tool developed in present study is based on rigorous research in prescribed manner for tool development and adheres to theoretical constructs of DCD, the intervention period was not sufficient to effect changes in academic performance. Thus, further work must be done to decide on the optimum duration of intervention to bring about measurable changes in children with DCD with the embedded programme. To add another dimension to the tool, normative timings for urban and rural children separately must be calculated.

### **Conclusion**

This study met its objectives and the tool Assessment Battery for Children with Co-ordination Disorder is a valid and reliable tool to assess the capacity component of DCD. To improve its effectiveness it must be used in conjunction with Development Co-ordination Disorder Questionnaire (DCDQ) to identify children with DCD.

### **REFERENCE**

- WILSON, B.N., S.G. CRAWFORD, D. GREEN, G. ROBERTS, A. AYLOTT AND B.J. KAPLAN. 2009. Psychometric Properties of the Revised Developmental Coordination Disorder Questionnaire. *Physiological Occupational Therapy Paediatrics*. 29(2). pp. 182-202.



# **A Study of Dyscalculic Primary School Children from Salem District and Evaluation of Applicability of Innovative Strategies as Remedial Measures**

T. NAGAVALLI\*

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Mathematics is a universal language which comprises numbers, measurement, form, probability, and algorithms. It is meaningful and purposeful to all people as quantitative information. The mathematics learning difficulties which affects child's ability to understand basic number concepts and its application is called "Dyscalculia". It is another word for math disability, that is, a specific learning disability involving innate difficulty in learning or comprehending arithmetic. It is reported that other learning disorders, such as dyslexia, could go hand in hand with dyscalculia. About 5 – 8 per cent of school-age children experience difficulties that interfere with their acquisition of mathematical concepts or procedures. Lack in understanding of mathematics concepts at an early stage affects students' interest and confidence in learning new mathematics knowledge. The present study was undertaken with the aim to screen out the dyscalculic primary school children and find out remedial strategies for them.

The main objectives of the study included the followings.

- (a) To screen and identify the dyscalculic students studying in grade 5;
- (b) To examine the performance of dyscalculic students in visual perception and processing disability, sequencing disability, abstraction disability, memory disability, and motor disability;

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- (c) To find the correlations among screening test and mathematics achievement in the above stated components of dyscalculia;
- (d) To study the performance of dyscalculic grade 5 students in output as numerical difficulty, organisation/sequential difficulty, motor difficulty, language difficulty, cognition difficulty, visual and spatial difficulty, and multiple task;
- (e) To find out the correlations among screening test and mathematics achievement in the components of dyscalculia; and
- (f) To develop and implement suitable remedial measures.

### **Method**

*Design:* The study was conducted in three phases. First phase of the study was administration of screening and mathematics achievement test. Second phase of the study comprised screening test and mathematics achievement test to confirm that the sample consisted of dyscalculic students. Third phase of the study included the development and implementation of remedial intervention programme and post test results.

*Sample:* A total of 2180 students of 5th grade from 20 schools of Salem District initially participated in the study. On the basis of mathematics achievement test, 50 students were identified as dyscalculic and were then given remedial interventions.

*Tools used:* The investigator adopted the following tools from the internet and modified to suit to the Indian students. Reliability and validity of the modified tools were maintained.

- Screening tests
- Achievement tests
- Remediation strategies
- Observation
- Interview

*Procedure:* The present project was carried out in 3 phases. In the first phase, a screening test with 20 items was used to screen dyscalculic students. In the 2nd phase, a mathematical achievement test, which was constructed by the investigator, was used to confirm student's dyscalculic nature. And they were also formally confirmed by a clinical psychologist. The 3rd phase of the study included intervention programmes for dyscalculic students.

## Results and Discussion

The investigator used descriptive statistics for analysis of data.

*Phase 1* - Screening and mathematics tests were administered on different dimensions. The mean scores of the dyscalculic children in visual perception and processing is 3.2 which indicate 80 per cent of difficulty on this dimension. A mean score of 4.9 was obtained on abstraction indicating 100 per cent difficulty. Similarly, on mathematics achievement test, in sequencing process, the mean score was found to be 3.3 that shows 83 per cent of difficulty; 3.8 were the mean score on memory dimensions, which shows 72.4 per cent difficulty. In motor difficulties 2.6 was the mean score that indicates 93.3 per cent of difficulty.

*Phase 2* - Screening and mathematics tests were administered again, in order to confirm mathematical learning difficulty of the sample constituted for remedial interventions. The mean score of the dyscalculia children in verbal dyscalculia was 3.7 which indicate 98 per cent difficulty. In practognostic dyscalculia the mean score was found to be 5.6 that shows 94 per cent of difficulty; 3.8 was the mean score of benical dyscalculia indicating 96 per cent difficulty. The mean score of the dyscalculia children in operational dyscalculia was 3.6 which indicated 90 per cent difficulty.

An achievement pre-test was also administered that included items that test the said difficulties. After the difficulties were screened then the intervention programme for improving dyscalculic students were given for 140 days.

**Post-test I** was administered to the learners after the remedial strategies including worksheets, repeated drill and practice. Only 10 per cent and 20 per cent of students were observed showing numerical and visual spatial difficulty and sequential difficulty, respectively. Thus, the intervention programme was found to be effective with dyscalculia students.

**Post-test II** was administered to the learners after multimedia remediation. Numerical, motor, visuo-spatial, cognition and language difficulties were reduced to 7 per cent, 11 per cent, 5 per cent, 20 per cent, and 12 per cent, respectively.

The intervention programme, thus, showed positive results. It helped the students with mathematical learning difficulties, that if not attended can take a shape of severe difficulties. There are

many things in mathematics that the learner must learn to do, for example: the skills of counting, of adding and subtracting, of multiplication and division, visual perception, visual memory, and logical thinking (which makes problem solving possible) are the most important foundational skills of math. Sample selected for giving interventions, showed remarkable improvement on the pre-requisite skills needed to do maths. Scores indicated that dyscalculic children faced fewer difficulties on numerical dimension (10%), sequencing process (20%), cognition (34%), multi tasking dimension (20%) respectively, that seek for serious consideration during initial screening. Also, teachers' responses, collected during interviews, confirmed the effectiveness of interventions for numeracy, counting, visual, cognition and multiple tasks were energetic and impressive to the students. Both the multi-media and classroom interventions were found to be useful in treating dyscalculia. The study highlighted some of the specific mathematics learning disabilities faced by school children that are not actively attended by the authorities in Indian schools. Thus, it is necessary for schools to incorporate required steps to deal with this emerging problem.

### **Limitations of the Study**

One of the major limitations of the present study was that it was restricted to 20 schools only. In order to increase the generalisability of the findings, other districts of Tamil Nadu could also be included. However, owing to the constraints of time and other facilities available to the investigator, the study was limited to 50 students. Though, the sample was drawn randomly, but only 18 students from Government schools, 20 students from government aided schools and 12 students from private schools participated in the study. All other primary classes except 5th standard were exempted from the study. Also, ratio of boys and girls participated in the study was different (32 boys, 18 girls).

Despite of the shortcomings of the research, it can be concluded that maths learning difficulties need serious instructional attention and these difficulties manifest in variety of ways. However, it can be treated with effective remedial methods.

# Enhancing Performance of Disadvantaged Pupils through Motivation

K. N. TRIPATHI\*

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Human factors play an important role in the overall development of the individual. In a society like India, where opportunities and privileges are not equally distributed, it becomes necessary to discover the extent of psychological factors that could enhance the performance of individuals irrespective of class, culture, creed or economic status. In the recent past, the study of psychological consequences of poverty, social disadvantaged and deprivation has received considerable attention of researchers. Motivation has emerged as a highly crucial variable in boosting and directing, especially school children towards the achievement of their academic goals. Unlike, privileged individuals, pupils from disadvantaged background lag behind their counterparts in educational attainment. Poor self concept, low achievement motivation, high level of anxiety, high neuroticism, poor performance, and externalisation of success and internalisation of failures are frequently noted in these groups. Against this backdrop, present study aimed to understand certain important aspects of motivation among the socially and culturally disadvantaged and deprived groups of students. In particular the study focused on the question of motivation in the context of human learning and performance.

## Objectives

- a. To identify effective motivational strategies capable of enhancing learning and performance in the disadvantaged pupils.
- b. To investigate the contextual and personal constraints and facilitators of adaptive motivational strategies.

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### **Sample Selected for the Study**

The samples of pupils from advantaged and disadvantaged background were selected from the different Government Schools of the Bhopal City. On the basis of the prolonged Deprivation scale of Misra and Tripathi, a total no. of 320 students of both sexes studying in class IX, X, XI and XII were randomly selected and a equal number of males and female students was maintained.

### **Tools Used**

The present study adopted an exploratory approach since not much systematic work has been done and published. In order to achieve the objectives, following measures were developed and used in the course of study.

- (i) Adaptive Motivation Strategies.
- (ii) Measure of Self construal and Goal Preferences.
- (iii) Self-efficacy Measure.
- (iv) Task Involvement.
- (v) Family Environment and Peer Influence.
- (vi) Personal Investment.

### **Data Analysis**

The data collected from students was analysed with the help of Mean, SD and ANOVA.

### **Findings of the Study**

Participants of advantaged group indicated higher scores towards Adaptive Motivational Strategy (AMS) as compared to students of disadvantaged group. The mean scores reflect that female students showed higher preference as compared to male students. The interaction of gender with deprivation was also reported to be significant. Results obtained on self construal indicated that main effect of deprivation, gender and class were not significant. Similarly, the interaction effects were also not observed significant. Self-efficacy of students was not found to be affected by deprivation, gender and class. Also, Xth grade students took highest initiatives when tasks on academic, social and personal dimensions were given to them. A close look on the ANOVA results reveals that main effects of deprivation, gender and class were not significant. Similarly, effects were also not significant. Scores supported the

fact that advantaged students enjoyed higher personal investment as compared to disadvantaged students.

### **Interpretation and Discussion**

The present study made an attempt to examine the effective motivational patterns in the adolescents and young adults hailing from socially disadvantaged background.

Overall the findings of the study indicated that students from disadvantaged group were lagging behind as compared to the advantaged students. It has been observed that family and peers play an important role in developing positive attitudes and self-efficacy among the students. Hence, these agents of socialisation should be trained in an effective manner to deal with the disadvantaged students actively. It is also suggested that proper strategies should be chalked out to promote competitiveness among disadvantaged students. This will develop a sense of competence in them and they may feel themselves as more valuable member of the society. These practices will facilitate them to develop healthy habits and sense of competence. Findings of the study also suggest that educational institutions and policy makers should work jointly on gender issues; they can evolve policies to reduce gender differences and develop healthy growth. Participant's responses supported that disadvantaged students were more involved in social areas of task involvement. In other words, these students preferred more social work and showed concern for work at home, finding solutions to the home problem, completing domestic work and fulfilling the related responsibilities even if the nature of task is difficult and provide challenges. Deprivation was negatively related with motivational strategy and task involvement. This pattern of result indicates that disadvantaged students showed less orientation towards motivational strategy and personal investment dimension as compared to advantaged students.

### **Conclusion**

Present investigation somewhat succeeded to achieve its established goals. It basically highlighted the removable obstacle that is faced by students of disadvantaged groups. In a society like India, youth is considered as the future of the nation; thus with effective motivational measures and ample opportunities deprived groups can be made valuable asset of the country.

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**Book Review**

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***Developing Support Systems for Rural Teachers'  
Continuing Professional Development*****Edited by Yuchi Zhao, Jing Liu and Awol Endris****PUBLISHED BY SAGE PUBLICATION, DELHI, 2015****PRICE ₹ 995 PAGES 255**

Continuous professional development is an essential component for ensuring professionalism including teaching profession. Professional development enables teachers to continuously acquire, expand and extend their knowledge and to develop skills and abilities with the aim of improving the quality of both teaching and learning, as well as the achievements of all students. It also provides an opportunity to acquire knowledge and skills to ensure quality, to improve the relationship with colleagues, school management, parents and local communities. This helps the teachers to prepare for the acceptance of changes in the education system, successful implementation of the revised practices and active participation and initiative in carrying out these changes. Organising professional development programmes and reaching it to all teachers of the country is a biggest challenge of many of the developing and under developed nations.

The book under review presents five case studies, which highlights the successful practices in the area of Continuous Professional Development (CPD) for rural teachers working in different contexts and with various challenges. The objective of the book is to identify the fundamental similarities and features of successful rural teacher support systems in different countries and to provide a platform for replication, if possible. The book starts with an introductory chapter followed by five case studies and ends with a concluding chapter of summary along with the policy recommendations.

In the introductory chapter, F. Helen Drinan has excellently narrated a comprehensive picture of various theoretical as well as historical basis of Continuing Professional Development



Programmes for teachers especially those working in rural areas. The chapter begins with rationale of organising CPD in the context of Education for All (EFA) and UNESCO strategies for teachers 2012-15. Author reiterates the place of CPD in the development of professional competence and commitment among teachers in order to accomplish quality education and states that 'Continuing Professional Development is an on-going, life long process of enhancing the quality of teaching and learning by building the motivation, commitment, understanding, attitude, skills and knowledge of teachers and other educational staff'. The mention of building motivation and commitment has overriding importance as far as rural teachers are concerned since rest of the attributes mentioned in the definition are common to other teachers as well. Drinan narrates the various challenges faced by rural teachers in general and rationale for introducing a variety of CPD that could be implemented in order to overcome these challenges. The different CPD activities, that may be included in these programmes also has been given a place in the chapter. In the penultimate section the author discusses vital components of an effective Teacher Support System for rural teachers.

In the second chapter, Ana Maria Sandi illustrates mentoring system for teachers Professional Development implemented for rural teachers of Romania. The case study begins with a short background about the initiative and then elucidates the piloting of the project named Rural Education Progress (REP). Author explains how mentoring programmes were implemented as a part of REP, its processes like development of training curricula, training modules, and teaching learning materials for mentors. The systematic procedure used for selection, recruitment and training of mentors as described in this case study could be replicated in many of the similar contexts. The setting up of mobile as well as fixed resource centres for reaching mentoring to all teachers was really an excellent idea for 'reaching to unreach'. The effectiveness and outcome of the mentoring programme are illustrated with the help of the results of many other empirical studies conducted in this area. Some of the lessons learnt from this experience also will give the reader to think about the benefits of using the strategy in similar situations. The chapter gives a brief explanation about the future plan of action before giving the summary. As a whole the chapter gives a detailed report of a nationwide teacher development programme implemented in Romania aimed at improving the

knowledge and skills of rural school teachers. The highlight of the report is role played by the mentor in reaching at distant corner of the country in order to guide and support rural teachers with an objective of improving teaching and learning. The study also reveals how to tackle the challenges of selecting, recruiting and orienting right mentors and sending them to remote areas of the country where lots of challenges in transportation is existing.

The second case study in this book by Liu Jing is about the Southwest Basic Education Project (SBEP) implemented in China for supporting rural teachers' professional development from various counties. Author describes various components of the programme starting from government policies and an overview of SBEP and support mechanism for rural teachers before SBEP in place. The rationale of implementing SBEP based on the lesson learnt from the pre SBEP experience and modification of Teacher Support System (TSS) also has been provided by the author in a convincing manner. Author describes this initiative as a 'local support system, in which a local teacher training institutions and local education authorities play a decisive role in teaching and assisting teachers in remote areas to support rural teachers in an effective way'. This is very crucial as the quality dimension of education is concerned. The local authorities from county and township TLRC were used as a platform for sharing resources and best practices among teachers in remote areas, improve access to a wide range of professional development activities, to mediate various in-service teacher training providers and schools, and to manage education. While describing the effectiveness and outcome of the TSS under SBEP, the author mentions that 'most of SBEP teacher training courses were conducted at county and township TLRC, therefore teacher training and other CPD activities had been made accessible to teacher in the very remote schools who were normally neglected before because of limited logistic recourses'. This of course can be considered as an outstanding example of decentralisation of teachers' professional development programmes in order to reach at grass root level. Another significant contribution of this programme is the success of organising follow up programmes and its utilisation in various in-service and pre-service programmes, which is the area we usually neglect in CPD. Author describes that the follow up programmes implemented through SBEP, helped the teachers to reflect and internalise what they learnt in the training course. Practice the new methods/techniques in normal classroom,

share the experience with other teachers and ongoing support from mentors through doubt clearing, correcting misunderstanding etc are some of the follow up activities.

The next case study is from Cambodia, reported by F. Helen Drinan, about school cluster system for supporting teachers from rural area. The chapter begins with a brief description about policy and practices of Cambodian government specifically in relation to teacher education and continuing professional development of teachers. It is followed with historical, political and socio-economic background of Cambodia, and how these influenced the educational initiatives of the country. In the next section, author gives a clear and comprehensive picture about the evolution, piloting, organisation and functioning of school cluster system in Cambodia. A brief analysis of its effectiveness and outcomes are given in the next section and are followed with lesson learnt in terms of some challenges and future of school clustering.

Chapter 5 describes about Pedagogical Workshops (PW) as a means for helping rural teachers professional development, an initiative undertaken in Mozambique, coordinated by Ajuda de Desenvolvimento de Povo para Povo (Development Aid from People to People, (ADPP)). The case report includes a brief historical as well as political description of Mozambique, major constraints, problems and challenges faced by the nation in providing education to people and contribution of ADPP in providing and improving quality of education in Mozambique. It is followed by the description of Pedagogical Workshops (PW) in terms of its meaning, components, functions and purposes. The report mentions that 'Pedagogical workshops are part of a process that enables teachers, students and communities to gain life-skills that contribute to improve teaching skills and community developments'. The aim is to create better learning opportunities for children and adults, and enhance their capacities, and skills in order to involve whole heartedly in the social and economic development of their districts. This case study also speaks about involving community in the functioning of school. The section which details about the impact and outcomes of PWs share some theoretical descriptions of functions and benefits of PWs. It could be better, if author could give some evidence for the benefit of PWs either from some empirical studies or from their own experience with empirical support.

The focus in the sixth chapter is on the Rural Teacher CPD Support System Practised in Ethiopia. This case report did by T

S Belew gives a brief description of teacher education policy in Ethiopia, specifically the policy regarding continuing professional development of teachers. It contains a review of two studies conducted on the teacher's CPD and lists out the challenges and problems faced in general while organising CPD for rural teachers. Then Belew shifts to the need of developing a revised framework of CPD for teacher based on the challenges mentioned in the previous section. It is followed by a detailed explanation of two types of CPD initiatives viz, school-based CPD and cluster-based CPD. The components like teacher working together, peer observation and feedback, planning lessons together, and group action research are critical in the school based CPD. The framework mentions that teaching skill gaps, instructional problems, and other issues related to the quality of classroom instruction common to all teachers in the country (called National Priorities) are considered in the cluster based CPD. The salient feature of the revised framework is that, it has explicitly indicated the roles and responsibility of various CPD stakeholders like teachers, school leaders, cluster, etc. The author gives a brief explanation of three different models of clustering viz, hierarchical model, horizontal model and hybrid model and reported that Ethiopia has utilised hierarchical model of clustering in the initial stage due to various reasons and later on shifted to hybrid model. The section, which discussed the effectiveness of the programme has only given few general benefits of Cluster based CPD without having any empirical evidences. Author has cited some empirical study reports regarding the effectiveness of a pilot project on science and mathematics improvements programme. It would have been better if this section briefed the effectiveness culled out from some empirical studies. Even though author has mentioned about another type of programme, namely school based CPD, no such remarks have been made about its effectiveness or outcomes in this section.

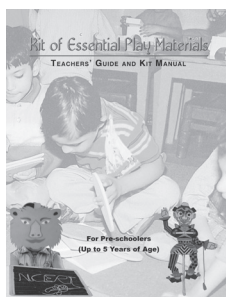
Last chapter describes a brief summary of the case studies followed with significant and meaningful policy recommendations that could be utilised by countries having similar challenges and with same contexts.

Definitely the various models, approaches and activities implemented and succeeded in these five cases have innumerable values and significance today. Most of the developing and under developed nations; some of the developed nations can replicate or can offer one or a combination of these models for supporting

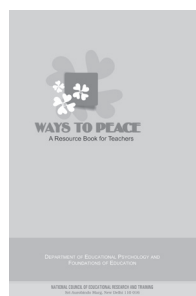
rural teachers for their professional development by adopting or adapting. No nation can expect development without having a coherent and excellent policy at education and its practice. Quality of education by and large depends on the quality of teachers. It is in this context, this book have high value since it gives a clear picture about upbringing of teachers through appropriate and practicable approaches. This book definitely will be an asset to anybody who thinks and works for quality education.

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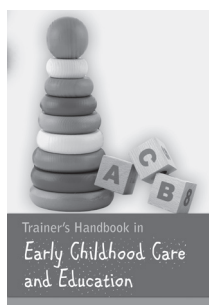
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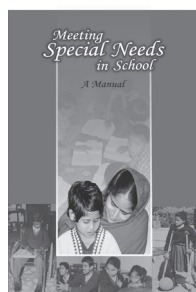
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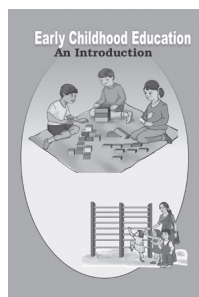
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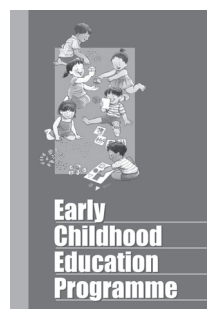
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