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RESEARCH PAPERS

Acculturation and Children's Education in a Rural
Adivasi Community

Adolescent Health Education in India: Demographic Travails
Contextual Influences and Emerging Health Concerns

Life Skills Paradigm Based Intervention on Decision Making
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Elementary Pre-service Teacher Education Programme
in the Context of National Curriculum Framework 2005:
A Study in Delhi

Attitude towards Information and Communication
Technology Use among University Teachers of different
Faculties in Relation to Computer Anxiety

Teacher Burnout at Secondary Level of Education in Haryana

विद्यया ऽ मृतमश्नुते



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BOOK REVIEW

Enriching Primary Schooling in India by L C Singh and Meenu Dev 101

N.K. GUPTA

EDITORIAL

This issue of *Indian Educational Review* contains papers focusing on education of tribal children, health education of adolescents, eating habits of adolescents, analysis of elementary teacher education programme, usage of ICT among university teachers, and the problem of burnout among school teachers. It also contains summaries of the research projects related to the engagement of students admitted through lateral entry under RTE Act, education of marginalised girls particularly those studying in KGBVs, and career aspirations of girls.

The first paper deals with the problems of education among the Kharwar Adivasi children in relation to acculturation taking place in the life of Kharwar people. The contextual influences and major concerns related to adolescent health education in India has been explicated in the second paper. The third paper is a study on the effect of life skills paradigm on the decision making skill for healthy eating habits among the adolescent girl students. The next paper focuses on the status of elementary teacher education programme in Delhi in the context of *National Curriculum Framework 2005*. The attitude of university teachers towards the usage of information and communication technology in teaching having different levels of computer anxiety has been studied in the fifth paper. The last paper assesses the level of burnout among secondary school teachers and the influence of personality, educational qualification, length of service and their various interactions on burnout.

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) A Study on Engagement of Students Enrolled through Lateral Entry under the Provisions of RTE Act, 2009, (2) Strategies Adopted for Enrolling Girls in Kasturba Gandhi Balika Vidyalayas Managed by Different Agencies in Andhra Pradesh, Bihar and Gujarat: An Exploratory Study, and (3) Career Aspirations for Girls in Rural and Urban vis-à-vis Vocational Education.

The issue also contains a review of a book “*Enriching Primary Schooling in India*”, a very relevant topic for the contemporary area of education.

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 view on improvement of the journal and research initiatives.

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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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Take up one idea. Make that one idea your life. Think of it, dream of it, live on that idea. Let the brain, muscles, nerves, every part of your body, be full of that idea, and just leave every other idea alone. That is the way to success.

– Swami Vivekananda

Acculturation and Children's Education in a Rural Adivasi Community*

RAMESH CHANDRA MISHRA** AND SHOBHNA JOSHI***

ABSTRACT

The study focuses on the problems of education of the Kharwar Adivasi children in relation to acculturation taking place in the life of Kharwar people. Assessment was made of the level of acculturation that has taken place in salient domains of people's life. Participants (N=400) were interviewed and were also asked to rate the importance of a number of factors, which they considered responsible for a variety of educational processes, such as children's attendance at school or their drop out, perceived value of education, needs beyond school education, perception of schooling and its contribution to the life of children, families and the community at large. The findings indicated family's economic and social resources as more important reasons for children's non-attendance of school relative to other factors, such as child's interest or the cultural tradition of not going to school. The benefits of schooling were regarded as confined to "personal" level. Absence of teachers and lack of discipline in schools were regarded as highly frustrating aspects of schooling. The participants did recognise the possibilities of economic gains/employment and social recognition through schooling, but they reported schooling not really contributing much to this end.

Introduction

The Adivasi People

Inspired by the idea of social justice, development of several underprivileged and Adivasi groups of the Indian society has been

* This paper was presented at the International Conference on "Social Justice and Human Development" at the Centre of Advanced Study in Psychology, University of Allahabad, December 12-14, 2011. Comments of Professor P.R. Dasen, Faculty of Psychology and Educational Sciences, University of Geneva, Switzerland, on an earlier version of the paper are gratefully acknowledged.

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the focus of policy planners, academicians and social workers for the last several decades. Psychologists have addressed this goal from a variety of perspectives, ranging from the analysis of individual through group to culture level processes. In this paper, we adopt the cross-cultural approach in which culture is taken as a context (a population level phenomenon) to understand human behaviour (individual level phenomenon). The study focuses on (a) acculturation taking place in the Kharwar Adivasi community living in Chanduli district of Uttar Pradesh, and (b) the response of the members of the Kharwar community to education being imparted in schools located in their villages.

The term 'Adivasi' literally means the first inhabitants on the land. In a common man's vocabulary, 'Adivasi' refers to a group of people who live a primitive life, usually in remote forest and hilly areas, many of which have quite difficult access even today. In the Constitution of India, the Adivasis are named as Scheduled Tribes (ST), which refer to groups of people who have been scheduled under the Constitution for grant of certain special privileges (e.g., quota in school admission or job) with the aim of enhancing their participation in the larger society and improving their socio-economic conditions.

In anthropological and sociological writings, the term 'Adivasi' or 'tribal' has been used interchangeably to refer to groups of people who (1) claim themselves as indigenous to the soil (2) generally inhabit in forest and hilly regions (3) largely pursue a subsistence level economy (4) have great regard for traditional religious and cultural practices (5) believe in a common ancestry, and (6) have strong in-group ties (Mishra, 2007). Since these characteristics do not strictly apply to all Adivasi people, for practical purposes, they represent a locally recognised and federally determined category of people in India. These groups have been subjected to several kinds of experiences, including those of the colonisation prior to the Independence of the country, and of developmental changes after the Independence.

Main Concerns for Education of Adivasi Groups

Adivasi People in India have undergone considerable changes during the last decades (Mishra, 2008; Mishra, Sinha & Berry, 1996) as a result of several planned activities initiated by the federal and state governments for their development. Formal education through schooling is one of these activities, which can

be claimed to have played a vital role in this process. As a social process, it has led to “capacity building” and nurtured the Adivasi society by preparing its members to function in different spheres of life more effectively than before. For generations, Adivasi people in India had been mostly concerned with the satisfaction of basic needs. They were mainly dependent on forest resources for livelihood. They had their traditional family or community based institutions, which imparted necessary knowledge and skills through which people's daily needs could be fulfilled. These institutions played an important role in the lives of Adivasi people by providing them with economically viable and culturally meaningful knowledge and life sustaining skills. During the last six decades, the picture has changed due to the introduction of formal education in Adivasi regions as part of social change and national development programs.

In spite of all efforts made at the national level, social inequalities in the case of Adivasi people still stand out clearly when we look at some basic indicators of human development. Most Adivasi people still represent groups, which are “weakest among the weak” (Sivanand, 2001). Government has recognized ST as the most deprived and marginalised section of the Indian society. Census data indicate an uneven level of educational achievement of Adivasi people in different states and across various Adivasi groups within the same states. Some states (e.g., Meghalaya, Mizoram, Nagaland) have done very well with respect to the literacy of the ST populations, while many states (e.g., Chhattisgarh, Jharkhand, Madhya Pradesh) are still struggling hard with the problem of literacy (Census of India, 2011). The long standing priority and urgency of education of Adivasi children have been reaffirmed in the policy document, “*Right of the Children to Free and Compulsory Education Act 2009*”. Intervention through *Sarva Shiksha Abhiyan* has resulted in positive trends in Adivasi children's enrolment at schools.

In spite of some statistical change in literacy rate, the state of affairs of ‘quality education’ for a huge population of children in remote rural Adivasi settings still remains an issue of serious concern. Mishra (1999) indicates that many schools lack even such basic infrastructure as classrooms, black boards, and safe drinking water. Teachers and their motivation to work with Adivasi children are other important concerns. Effective learning outcome for children in the face of these difficulties remains highly

questionable. Hence, it is not surprising to find a high percentage of children dropping school at some point of time during the primary years of education (i.e., between grades 1 and 5). Addressing these basic issues of school education, especially in remote rural Adivasi settings, is an essential step towards ensuring their development (Mishra, 2008; Sinha & Mishra, 1997).

This study examines some major issues related to children's education in the Kharwar Adivasi group residing in Chandauli district of UP. This group has escaped outside influences for a long period of time, but during the last three decades, it has taken part in various development programmes initiated by government and non-government organisations, including the programme of school education. Before presenting the state of affairs of education in this group, we will briefly introduce the eco-cultural setting and the life of Kharwar people in general.

The Kharwar

There are two different views about the origin of Kharwar. According to the first view, their origin is traced to Palamau region of Bihar (now Jharkhand). According to the second view, they initially resided in the Sone valley, but later on moved to many other places. The Kharwar people of Naugarh claim their origin from Palamau and dissent from Raja Harishchandra (a king of the family of Lord Rama). Their arrival in the Naugarh region is not well known, but according to legends, they settled there some 600 years ago.

Kharwar villages of the Naugarh region are situated within a distance of 10-25 kms from the Naugarh Block head quarter in Chandauli district. Although the members of *Yadav* and *Harijan* groups also live in the same villages, the Kharwar constitute the majority population almost in all villages. The Kharwar families generally occupy the central part of the village, while families of other groups are scattered on outer skirts of the villages. Due to the hilly landscape characterised by acute shortage of water, people of these villages, for a long time, have lived mainly on forest resources through hunting of animals and gathering of forest produce combined with a rudimentary form of agriculture. Dwindling forests during the last decades have forced the Kharwar to search for other economic options. Collection of leaves for making plates and *bidi* (indigenous cigarettes), and *mahua* flowers (all of these are sold out), constitute the major forest-related economic activities today. Cattle breeding, fishing, rudimentary agriculture, and periodical

wage earning also partly contribute to their livelihood. On the whole, the living conditions of the Kharwar of the Naugarh region are hard and challenging.

The Kharwar consider themselves to be Adivasi, but the government of Uttar Pradesh has granted them the status of a "Scheduled Caste" (SC). Despite being granted a caste status, they have great concerns about purity so much so that they would not accept food or water offered by the members of the *Musahar* or *Harijan* community (SC groups), who also live in the same villages. This feeling is reinforced by the fact that they consider them as *Kshatriya* (*Suryavanshi Rajput*, a high caste group of the Indian society) and nurture a strong Adivasi identity even today. The Kharwar families can be found spread in certain regions of Ballia, Chandauli, Deoria, Ghazipur and Sonbhadra districts of UP, but in none of these locations have they been given adequate attention. They still seem to be deprived of the privileges granted to other Adivasi.

The life style of Kharwar is very simple. They generally have mud houses with projected areas of roofs, which are covered with carvings. The walls are made of a mix of rice straw and mud. The roofs are often covered with locally made tiles. Each village has a headman (called *mahto*) and a priest (called *baiga*), who occupy a respectable place in the village and have strong say in several matters pertaining to villagers. Hunting is now almost non-existent (except for occasional traps), but gathering of forest products still constitutes a substantial part of economic activity. Forest provides people with fruits, flowers, timber, firewood, leaves, and herbal medicines. Rice is the main agricultural produce, which depends much on rainfall. Children also participate with their parents in forest-based and agricultural activities, and contribute substantially to the family economy.

The Present Study

For the last two decades the authors have been working with education and health related problems of Kharwar of the Naugarh region (Joshi, 2009; Mishra, 1997, 2005, 2009; Mishra & Vajpayee, 1996). The study reported here is concerned with educational issues, which are considered most crucial for human and social development. The study was carried out with 400 adults aged 24-45 years, displaying different levels of participation in the programmes of social and cultural change going on in their region.

The work started with discussion and informal interviews with villagers. At a later point of time, rating scales and standardised instruments were introduced, which primarily focused on what we now call the "value of education". The adults were asked a number of questions that probed into reasons for children's school non-attendance, reasons for children's drop out of school, significance of education for children, families, and the Kharwar community. The study also addressed issues related to children's future, children's needs beyond school education, perception of and satisfaction with school, positive aspects of schooling, negative aspects of schooling, and one most important gain from schooling.

Since the adults were mostly uneducated, we initially thought that questionnaires would provide more meaningful information than the standard instruments. Hence, we developed a number of questionnaires. Pilot study revealed that asking questions to people was not free from difficulties. The participants were quite hesitant in answering our questions. Those who answered, did it either in 'yes' or 'no', or occasionally spoke a lot, which apparently did not make much sense to us in the context of the problems we were trying to understand. Hence, we engaged in open dialogue, sometimes with individuals, and sometimes with people in groups. This brought about many important issues, which could be included in the study as the major points of inquiry.

There were also considerable individual differences in explaining the magnitude of the problem, suggesting that some sort of quantification was essential to capture participants' responses in precise terms. Hence, the questions were transformed into statements; each statement required rating on a five-point scale ranging from "do not agree at all" to "strongly agree". Unfortunately this procedure also did not succeed. It appeared that people needed some kind of probing to place their judgment into one of the five categories. It was also felt that the participants were not able to make sense of the category that denoted an "average level" of agreement.

Reflecting on various possibilities, the scale was converted into a four-point scale, which appeared more sensible to participants than the five-point scale. In order to ensure the accuracy of participants' judgment, a ladder-rating procedure (Sinha, 1969) was used. A model of wooden ladder (with which people were familiar) containing four-steps was placed in a vertical position. The

participants were asked to think of the degree to which they agreed to a given statement in terms of a particular step of the ladder. It was made clear that the bottom step of the ladder indicated "do not agree at all" and the successive steps indicated increasing levels of agreement with the statements. The participants were asked to render their judgments by touching a particular step of the ladder that was truly indicative of their opinion. This kind of anchoring was found to be very useful. Data collection was carried out with the help of local assistants, who were also very helpful in dealing with language problems that surfaced during testing.

The study was carried out in 18 villages all of which were relatively underdeveloped. All Kharwar families had their major economic dependence on agriculture and forest resources. During the field visits, we noted that people's participation in education and other development programmes was quite variable. There were families, which were enthusiastically participating in these programmes, while many others showed only a minimal level of participation. Thus, some families seemed to be much acculturated, while many others remained less acculturated.

A 'contact-acculturation scale' was used for measuring the level of participants' acculturation (Mishra, 1996). The scale is based on several indicators of contact, which include: knowledge of the Adivasi language, knowledge of Hindi (official language), knowledge of English and other languages, ownership of people (e.g., utensils, ornaments, furniture, etc.), dressing style, livelihood, technology use, travel experience and exposure to movies. A person is rated on each of these indices on 0-5 point scales, which are added up to derive an index of contact acculturation. The scale has been widely used for assessing the degree of contact acculturation of Adivasi people in India and Nepal. The median score obtained on the scale was used to distinguish between low acculturation and high acculturation groups. The analysis reported in the study is based on participants representing low acculturation (N=194) and high acculturation (N=206) categories.

Analysis of Results

Two major problems related to education of children of the Kharwar community in Naugarh region were (a) school non-attendance, and (b) school drop-out. While approximately 67 per cent of the Kharwar children did not go to school, of those who got enrolled in

a school, approximately 70 per cent left the school within a year or two. We wanted to understand the reasons underlying these problems. We addressed these problems from children's and parents' perspective. With respect to children, our question was: "Do children have the basic cognitive abilities required for success in school?" With respect to parents, we asked the question: "Do they perceive education valuable for children and support it?" Our assumption is that effective school education is an outcome of these two important factors, namely the cognitive abilities of children and the parental encouragement for education. We have quite interesting data with respect to children's cognitive abilities, but we focus in this paper only on parents' perspective.

Reasons for Not Attending School

We included economic, cultural, social, and psychological factors for understanding why children did not go to school. Parents rated nine different reasons considered as barriers of schooling for children.

The mean scores of high acculturation (HA) and low acculturation (LA) parents with respect to the perceived importance of these reasons were calculated (Table 1). Generally speaking, the HA parents laid greater emphasis on 'lack of family tradition', 'lack of parental interest', 'lack of school facilities', 'children's involvement in child care' and other 'economic activities' for children's non-attendance of school as compared to the LA parents, who considered 'lack of economic resources' as a more important reason. The HA parents also considered people's belief in 'no gains from school education' as responsible for children's non-attendance of schools more than did the LA parents. On the other hand, the two groups did not differ significantly in their ratings of 'lack of social tradition' and 'lack of child's interest' as reasons for non-attendance of school by children.

Reasons for Drop out of School

Included here were some physical, economic and psychological qualities of children, parents, teachers, and some features of schools as factors in analysing children's drop out of school.

The mean scores of the HA and LA parents on these aspects are given in Table 2. The findings revealed that the HA parents considered 'non-attractiveness of schools', 'irregularity of teachers',

'difficulties in children's adaptation to school climate', 'lack of parental interest', 'distance of schools from home' (accessibility), and 'children's engagement at home' as more important factors

Table 1
Mean Scores of Groups (Score Range 1-4)

Reasons	Acculturation	N	Mean	S.D	t values
Family tradition	Low	194	1.24	.754	
	High	206	1.50	.909	3.13**
Social tradition	Low	194	1.47	.822	
	High	206	1.50	.860	0.31ns
Child's interest	Low	194	1.81	.887	
	High	206	1.90	.958	1.01ns
Parental interest	Low	194	1.69	.869	
	High	206	1.98	.995	3.10**
Value of education	Low	194	1.80	1.054	
	High	206	2.07	1.245	2.32*
School facility	Low	194	1.60	.790	
	High	206	1.99	.902	4.50**
Child care	Low	194	2.05	.750	
	High	206	2.28	.801	3.02**
Economic pressure	Low	194	2.15	.743	
	High	206	2.51	.831	4.62**
Weak resources	Low	194	2.54	.821	
	High	206	2.16	.899	4.42**

** p <.01, * p <.05, ns = not significant

in children's drop out of school in comparison to the LA parents, who considered 'lack of money' as a more important reason. With respect to 'child's interest', there was no significant difference between the two groups.

Table 2
Mean Scores of Groups (Score Range 1-4)

Reasons	Acculturation	N	Mean	S.D.	t values
Child's interest	Low	194	1.64	.872	
	High	206	1.81	.884	1.90ns
School attractiveness	Low	194	1.57	.760	
	High	206	2.03	.888	5.51**
Irregular teacher	Low	194	1.75	.816	
	High	206	2.18	.856	5.16**
Child's school adaptation	Low	194	1.50	.790	
	High	206	1.85	.882	4.22**
Parental interest	Low	194	1.66	.953	
	High	206	2.00	.968	3.49**
School accessibility	Low	194	2.03	.881	
	High	206	2.35	.950	3.47**
Pressure of economy	Low	194	2.09	.721	
	High	206	2.27	.779	2.32**
Lack of resources	Low	194	2.54	.802	
	High	206	2.14	.958	4.51**

** p <.01, ns = not significant

Perceived Value of Education

This aspect of schooling was assessed with the help of an open-ended questionnaire consisting of 17 items. We will present our findings on different aspects separately. It may be noted that the parents were free to indicate any number of benefits they perceived as accruing from education of children. The questions were asked about benefits from school education to children, to the village, and to the Kharwar community.

(a) Benefits to Children

Parents were asked to tell the benefits of schooling for the concerned child and a variety of benefits were pointed out. A large number of parents (about 89%), almost equally from the HA and LA groups, indicated 'personal gains' from schooling, meaning 'better growth and development' of the child. About 7 per cent parents, mainly from the LA group, considered the possibility of better 'economic

opportunities or employment' as the next important gain from schooling. Other gains, such as 'developmental', 'social' or 'health/hygiene' were represented infrequently in parents' responses. Some parents of the HA group also indicated 'no gains' for children from schooling. Overall, there was no significant difference in the perception of the HA and LA parents with respect to the perceived benefit of schooling for the child.

(b) Benefits to the Village

Parents were asked to indicate the benefits that child's education might bring to the village. The analysis revealed that 56 per cent parents from the LA group (against 28% of the HA group) indicated 'developmental gains' (that their village would develop), whereas 42 per cent parents of the HA group (against 29% of the LA group) indicated 'personal gains' to some people in the village. These differences in percentages were statistically significant. A few parents pointed out other benefits (e.g., social, economic, health). There were also a few parents who perceived 'no gains' from schooling for the village, and of course, a few who did not give any response.

(c) Benefits to the Kharwar Community

When asked about the benefits of schooling for the Kharwar community, parents indicated a number of benefits. About 74 per cent parents (78% from the LA group and 70% from the HA group) again referred to 'personal benefits', again meaning that children of the community would certainly develop from schooling, but that development would not directly bring anything meaningful for the Kharwar community at large. While other benefits, such as 'economic', 'developmental', or 'social', were indicated by a few parents, many parents (11% from the LA and 17% from the HA) considered child's schooling as of 'no gain' for the community. The LA and HA parents did not differ significantly in terms of the perceived benefits of schooling for the community.

Other Aspects of Schooling

In addition to asking parents about the benefits of schooling, we also asked several other questions in relation to children's future with school education, children's needs beyond school education, parents' perception of school in terms of its adequacy, their satisfaction with school, positive and negative aspects of schools,

and one most important gain for children from schooling. The following pages present the findings on these aspects of schooling.

(a) Future of the Child

When asked, "What will be the future of your child after schooling", the parents pointed out a number of prospects, although about 32 per cent of the parents were 'uncertain' about the future of children with school education. Many parents of the LA group (47%, against 19% of the HA group) considered school education to provide children with options for 'new economic activities'. This indicates a relatively greater optimism with education among the LA as compared to the HA parents. On the other hand, many HA parents felt that school education would provide them with 'better life' (17%, against 13% of the LA group) and a sense of 'self-efficacy' (13%, against 7% of the LA group) so that they would be more confident in meeting and talking to outsiders, including the government officers.

(b) Needs Beyond School Education

We asked parents to tell whether there was a need to teach something else besides the usual basic curriculum prescribed in schools. We also asked them to tell us specifically what they would like to be added to the existing school curriculum. Analyses of responses showed that parents indicated 'additional tuition', knowledge about 'farming' and 'household activities', 'vocational education', and 'morals' as additional courses in school education. A sizable number of parents from LA group (51%, against 28% of the HA group) gave emphasis on 'additional tuition', while those from the HA group emphasized on 'morality' and 'vocational education'.

(c) Perception of Schools

Parents were asked to tell how they perceived the schools that were functioning in their villages/adjacent to villages in terms of their adequacy for education of children. The analysis suggested that a majority of parents (56%) perceived schools to be 'inadequate'. Difference between the LA and HA groups in terms of their perception of school adequacy (57% vs. 55%) was not significant.

(d) Satisfaction from School

Parents were asked to tell whether they were satisfied or not satisfied with the existing schools in their area. The findings indicated that

an absolute majority of parents (98%) was 'not satisfied' with schools. It was true for both the LA and HA parents.

(e) Positive Aspects of Schools

Parents were asked to tell the things, which they considered good and which they liked in schools. In general, four different kinds of responses were made. The most dominant response was 'education' (61%), which indicated that a majority of parents felt that schools were, at least, educating their children. A greater number of parents from the LA group (74%) than from the HA group (49%) considered this as an important positive aspect of schools. On the other hand, more of the HA parents (20%) considered 'company' of other children as another positive aspect of schooling in comparison to the LA parents (4%). Some parents also considered 'social/moral education' or 'hygiene education' as other good things in schools. Several HA parents (26%, against 14% of the LA group), however, did not speak out anything.

(f) Negative Aspects of Schools

We asked parents to tell the things, which they did not consider good, and which they did not like in schools. In general, five different kinds of responses were obtained. About 35 per cent of the parents did not point out anything negative about schools. Others indicated 'absence of teachers', 'ineffective teachers', 'lack of discipline in schools', and 'absence of incentives' as major negative aspects of schools. Parents of the LA group indicated 'absence of teachers' (35%), 'lack of discipline' (18%) and 'lack of incentives' (13%) more often as negative things in schools than did the parents of the HA group. The latter indicated 'ineffective teachers' as a negative aspect of schools more often (12%) than the former (8%). A few parents also indicated that 'schools often remained closed'. The analysis suggested that although the LA and HA parents considered the same factors as negative aspects of schools, the frequency with which they subscribed to these different factors differed significantly.

(g) One Most Important Gain from Schooling

Parents were asked to tell "one major gain" from schooling that they considered as most important. The analysis indicated two important categories of gains from schooling in the opinion of parents. The

first one was related to the 'prospects of new economic activities' (i.e., wage employment). Relatively more number of parents of the LA group (52%) considered this as a major gain from schooling than those of the HA group (36%). The second one was linked to 'social recognition of the family', which was suggested more often by parents of the HA group (42%) than those of the LA group (28%). This suggested that the value of perceived gains from schooling differed significantly between the LA and HA parents. Besides these two broad gains, parents also pointed out children's 'personal growth', 'development and progress', 'chances of better future', and 'reduced insecurity' as other important gains from schooling. These gains were indicated almost equally by the LA and HA parents

Discussion

Much has been written about education and its role in the development of individuals and groups all over the world. The goals, forms, contents, modes of delivery, and other aspects of education present considerable variation across as well as within many cultures (Dasen & Akkari, 2008). That schooling produces any new cognitive structures among individuals seems to be doubtful (Mishra & Dasen, 2004). On the other hand, schooling does increase the possibility of the existing cognitive abilities of children and adults to be applied to other situations. There is also evidence to suggest that in unfamiliar encounters, schooling makes people feel more at ease because of which educated people can control and manage the affairs of their life more effectively than those who have not been to school (Mishra & Dasen, 2004). It is in this sense that school education is believed to lead to general "empowerment" that gets manifested in individuals' functioning in personal, social, economic, work, and other important domains of life. These positive influences of education are also perceived and acknowledged to a considerable extent by parents and other members of the community whose children participate in schools (Mishra, 1996; Serpell, 1993).

The above-mentioned observations of researchers, who have worked with children of weaker, marginalised, rural, and Adivasi communities in different parts of the world, generally find support from the findings of our study. The Kharwar parents perceived several benefits of school-based education, but children's personal development was most important among them. With education parents clearly perceived better economic possibilities (i. e., wage employment) and a better future for children. They also visualised

a better life for children, including their movement away from home along with enhanced feelings of self-efficacy and empowerment. Thus, the idea that school education prepares future generations for change in any society gets resonated in the responses of the Kharwar parents in the study.

In psychological research, a distinction has been made between 'cognitive' and 'non-cognitive' effects of schooling (Mishra, 1996). The cognitive effects are observed in the form of specific knowledge and general reasoning skills that children acquire while they negotiate life in schools. The non-cognitive effects are observed in the form of changes in beliefs, attitudes and values towards work, society, and the life in general. Both these effects were found to be represented in parents' responses. That school education can impart knowledge and skills to enhance chances for wage employment and improve economic conditions of individuals, and that it can prepare children to accept many responsibilities as adults in the society are the facts deeply realised by the Kharwar parents. The parents perceived children, village, and their community as closely interlinked, and believed that development of children could be instrumental in ameliorating the conditions of their personal lives more than their family and the community.

The level of parents' optimism, however, was not without preconditions. Children's engagement in economic activities and child care responsibilities, possibly due to lack of resources available with families, were mentioned by parents as important barriers in children's attendance at schools. On the other hand, several factors were held responsible for children's drop out of schools. These factors included less attractiveness of schools, irregularity of teachers, children's difficulties in adapting to school environment (e.g., staying whole day in school surrounding) and inaccessibility of schools. It may indeed be difficult for educational planners and administrators to deal with economic conditions of people, but the latter set of factors are certainly modifiable. What the results of the study ask for are greater sensitivity, motivation, commitment and dedication on the part of school teachers. Research carried out with primary school students generally suggests that teacher motivation is a far more important factor in children's school achievement than children's abilities, capacities, or any other set of factors (Mishra, 1998).

In traditional societies, formal schools might be perceived as alien institutions and not openly welcome by many. Once rooted

and recognised in a community, however, people develop many expectations from such institutions. Especially in cities, much of the responsibility of child socialisation has now been shifted from family to school with which children negotiate a considerable part of their active day time. Studies often point to a gap between children's life in cultural contexts and life in schools. For example, Smith and Sobel (2009) indicate that school life deprives children of many rich experiences available to them in community environments. The gap is highly accentuated for children who attend schools in big cities. This happens mainly due to children's connection being almost completely severed from the life of natural environments, which is characterised by the richness of landscapes, streams, rivers, and a wide variety of flora and fauna. Knowledge provided in schools is in no way similar to the first-hand experiences available to children in community schools situated in natural environments.

A majority of the Kharwar parents in the study perceived schools as inadequate and school education as not satisfactory. The parents expressed some other needs besides the teaching of regular curriculum during school hours. These needs included provisions for additional tuition, knowledge about farming and household activities, vocational training and moral lessons. Such expectations of the community members suggest that schools have to fulfill many more obligations if education really aims at bringing about positive change in people's life. Whether teachers employed in the government schools can accept these responsibilities as a kind of social service to the 'weaker sections' of the population is not easy to answer. On the other hand, teachers working in schools run by non-government organisations in the Kharwar villages are doing a commendable job by addressing these 'other' needs of the community in addition to imparting routine school education. The effects of such organisations on the life of children are pervasive, and they receive greater acceptance, respect and recognition in the community than the teachers employed in the government schools.

Whether education is effective or not, inroads from schools have already been made into the life of the Kharwar of Naugarh area. The problems of children's enrolment and drop out of school, however, need careful attention. More or less similar experience has been recorded with regard to education of children of other Adivasi groups living in other regions of the country (Mishra, 2007). The findings offer support to the observations of Sinha and Mishra (1997) that only a culturally appropriate, locally meaningful, and

economically viable form of school education stands a chance of success in Adivasi communities. This kind of education is likely to keep children in place by providing all necessary skills needed for negotiation of life in most effective ways in their respective cultural environments. Many Kharwar parents indicated the need for education with respect to 'farming' and 'household activities'. This fact essentially requires some 'tailoring' of school curriculum in tune with the demands of the Kharwar life. Teachers can make valuable contribution in this respect by integrating education with agricultural and other local developmental needs of the Kharwar community. Lessons on horticulture, herbal farming, and cattle breeding along with some vocational education may be useful in generating income opportunities for the people locally.

The most crucial element of school is a motivated teacher. As Adivasi settlements are located in remote areas, which are poorly connected by means of transportation and devoid of many basic facilities of living, government teachers (often socialised in urban way of life) find these conditions highly frustrating. Their irregularity in schools can be partly accounted for by difficult physical working conditions. The option is to find a teacher locally, which has been a practice in majority of schools for quite some time. But this arrangement has its own limitations: a local teacher lacks many of the experiences and skills that can be helpful in connecting children with the realities of the global world (Mishra, 1999).

The study addresses an important goal of the government, i.e., 'education for all'. Parents' perspectives on school education brought out in this study may be helpful in lifting some of the barriers that block the progress of the Kharwar community on the path of educational development. The findings suggest that lack of resources and pressures of economy stand as two strong barriers in children's attendance at school. Findings also suggest a number of school-related factors, which work against a child's continuity in school. Both the set of factors require serious attention in order to facilitate education of the Kharwar children.

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Adolescent Health Education in India: Demographic Travails, Contextual Influences and Emerging Health Concerns

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ABSTRACT

In view of multiple socio-cultural changes, and rampant rise in exposure and use of information technology in last few decades, the state of adolescent health is marked by several vulnerabilities in different contexts. In order to develop a comprehensive understanding of issues and concerns of adolescent health education, there is a need to build up a framework that gives due recognition to cultural, social and economic contexts of adolescent lives in India. Against this backdrop, the present paper identifies contextual influences and explicates major concerns related to adolescent health education in India.

Introduction

The health-care of India's adolescent population, which is crossing over 21 percent of over 121 crore of Indian population, is an arduous task (UNICEF, 2012). Several changes in the topology of Indian adolescents compound any attempt to deal with their health concerns (Saraswathi & Oke, 2013). Liberalised economy is radically changing familial role of mothers and importance of kinship networks in urban and metro settings (Derne, 2005). Urbanisation and industrialisation are eroding traditional upbringing in those parts of country where rural-urban divide are narrowing. The homogenising pressures of globalisation have sharpened focus on becoming affluent, adopting modern sexual mores, consumption

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and particular body image preferences through different sources of mass media and market in some settings (Archana, 2004; Dalal & Misra, 2006; Lukose, 2005; WHO, 2004). Sexual violence and gender inequality pose constrained choices for female adolescents (Singh & Misra, 2012). In addition, several other macro-level changes, including demographic trends, widening economic disparities etc. are differentially upsetting lives at homes, work settings, schools, and local communities (Brown, Larson & Saraswathi, 2002; Saraswathi & Oke, 2013).

Inconcomitant, these changes are affecting choices, opportunities, and preferences of Indian adolescents in different settings (Kapur, 2001; Singh & Misra, 2012). Moreover, the continuance of belief in inscription of maturity through religious rituals and early marriage in some contexts complicate the scenario of adolescent health variably in different contexts. Therefore, issues and challenges of adolescent health differ markedly across residential settings, social classes, and between boys and girls in rural contexts (Brown, Larson & Saraswati, 2002). The understanding of these specific issues and challenges may help to carve contextually-relevant adolescent health education policy. It can not only spell out health-care priorities in different sections of adolescents but also help to reduce the health-related expenditure during adulthood (Spear & Kulbok, 2001). Moreover, the potential of schools to maximise their utility for developing healthy, responsible and meaningful adolescence can be realised. Therefore, present review work was planned to understand key issues and challenges for adolescent health education in different contexts. In first section, it delineates demographic travails of health care of adolescent population. The commonalities and particularity of adolescent health issues in different contexts are elaborated in second section. In third section, it attempts to provide an understanding of summarized view of particular health challenges within and between contexts in which Indian adolescents develop.

Demographic Travails

Indian adolescence is characterised by varied demographic features. In urban context, average age of puberty is 12.5 years but in rural context, it varies between 15 to 16 years (Khadilkar, Stanhope & Khadilkar, 2006). The ratio of females to males has increased from 933 females per 1000 in 2001 to 940 in 2011 (Ministry of Statistics and Programme Implementation, 2011). Of the millions of

adolescents in India, an unknown number is without parental care (Indian Alliance for Child Rights, 2005). Child marriage continues to thrive in economically disadvantaged sections in India. According to a survey by UNICEF, 5 percent of boys and 30 percent of girls get married before age 18 (UNICEF, 2012). The mean age of marriage is about 2½ years lower in rural areas than in the urban areas for both males and females. In traditional areas, due to stigma associated with infertility, female adolescents are compelled to become mothers early after their marriage and thus resulting into early pregnancy. It has been found that one third of total fertility in India is due to adolescent mothers and further leading to miscarriage, unwanted pregnancies, illegal abortions, and gynecological problems (UNICEF, 2012). In the 10-19 age groups, 86 per cent of boys and 72 per cent of girls are literate (Census of India, 2011). Enrollment of rural girls in schools is lower and dropout rates higher as compared to their urban counterparts (NUEPA, 2011). Among the dropouts, majority is from lower socioeconomic class. Moreover, largest number of child labourer under the age of 14 is found in India (Census of India, 2011). The above demographic picture indicates immense diversity among Indian adolescents as a result of wide ranging disparities in socio-economic class, caste, educational level and geographical location.

Contextual Influences

Adolescent development is influenced by the ecology in which it occurs (Bronfenbrenner, 1979). An adolescent has to negotiate and invent his life course in the context of constraints imposed by social norms and institutions (Elder, 1998; Mayer, 1986). In particular, adolescent health is influenced not only by immediate physical environment but also by roles, norms, and exposure. Therefore, present section deliberates on identifying relevant influences of socio-economic fluctuations and eco-cultural variations.

Socio-economic Fluctuations

Adolescent health-related vulnerabilities are accentuated in different ways by fluctuations in socio-economic conditions (Jain, Kumar & Khanna, 2013). While, middle and upper socio-economic status (SES) adolescents have easy access to sedentary social experiences, longer education, access to advanced health care and use of ICT; adolescents from poorer sections are deprived of basic necessities of life resulting into lack of awareness and underdevelopment (Sibal,

1997). In lower SES impoverishment may be further augmented by lack of parental care, child labor, child trafficking, commercial sexual exploitation and other forms of violence and abuse. These conditions worsen among casual daily wage or landless laborers, or due to problem of alcoholism, domestic violence and the burden of debt-inducing traditional social expenditures. In lower middle class families, discrimination, social exclusion, unemployment, and lack of quality education create hassles. In middle and upper middle class families, distinctive characteristics of adolescence can be easily observed. Adolescents from higher socio-economic class may be often confronted by higher expectations, loss of family support, and acculturation which may result into different life style problems (Sivagurunathan, Umadevi, Rama & Gopalkrishnan, 2015).

Eco-cultural Variations

The psychosocial and health related problems characterizing adolescents are aggravated by eco-cultural contexts which offer sometimes distinctive or overlapping opportunities, exposure and choices. Although interdependence, respect for elders, ritualism and gender inequality are still emphasised in some remote areas, rural communities no longer tend to be homogeneous in gender roles, cultural rules and standards of behaviour (Misra & Broota, 1997; Singh & Misra, 2012). Extended households are converting into nuclear families resulting into decrease in family support. The reach of information and communication technology (ICT) in rural areas is expanding but deprivation and poverty continue to hold on (Singh, 2011). The growing of female adolescent still carries a connotation of inferior status and less privilege than males leading to early marriage and discrimination in dietary care (UNFPA, 2006). They are often deprived of adequate health care, proper nutrition, quality schooling and get to suffer with anemia, apathy, and discrimination (UNFPA, 2006). Due to lasting predominance of patriarchal set up, ideology of son preference, incidence of early marriages and high rates of maternal mortality, a strong focus on rural adolescent girl's health is warranted (Jain, Kumar & Khanna, 2013).

In tribal India, the scenario of adolescence is somehow different. After childhood the tribal children are initiated into adulthood (Mathew, 1996). Tribal adolescent girls are married at an early age and assigned labour tasks. The adolescent boys are often compelled

to earn at an early age to support family and curtail their childhood (Shah, Nair, Shah, Modi, Desai, & Desai, 2013). Tribal adolescent health status is characterised by inadequate hygiene (as brushing teeth, bathing, etc.) and gender inequality with regard to food, education, parental love and affection (Mathew, 1996; Shah et al., 2013).

Due to the exposure to modern ways of living, extended demands of education, dearth of role models to emulate, preparation for specialised employment and consequent delayed age of marriage, adolescence is distinctly perceptible in urban setting (Singh, 2011). They are often trapped between two social realities: one they are provided by their family (authoritarian, traditional, value based, etc.) and popularly acceptable (e.g. permissive, imbalanced parenting style, modern, individualistic, etc.) resulting into conflicts in identity, choices and values which may further lead to aggression, perception of self as failure, depression and suicides in extreme circumstances (Manhas, 2003).

Under the aegis of globalisation and modernisation, market and media offer plethora of choices for food, recreation and social relationships in metro regions (Singh, 2011). With multi-cultural identities getting subsumed, sense of alienation may be getting enhanced in metro adolescents. Uncertain financial opportunities in globalised market in metro settings heighten anxiety in older adolescents. Phenomenal increase in access to new media and internet, make them vulnerable to health-compromising leisure and life style habits (Singh & Misra, 2015). Moreover, due to decrease in resources for explorations of nature and increasing pollutions, particular types of health problems are eminent in metro adolescents.

Emerging Adolescent Health Concerns

Across the sections of population, adolescents are suffering with a range of problems which contribute to several constraints in their daily functioning, capacities, abilities, competence, and relationships. Key concerns for adolescent health education are elaborated as following:

- *Dietary Habits:* While dietary pattern of rural, female and low SES segments of adolescents is often characterised by malnutrition and low hygienic conditions, food consumption in urban and metro adolescents is marked by over consumption of fast food, skipping meals, not drinking sufficient amount of water and

low intake of green vegetables, seasonal fruits and milk (Larsen, Harris, Ward, & Popkin, 2003; Saraswathi & Oke, 2013; Sofia Centre for Women's Studies and Development, 2003). Based on three large national surveys in India, Kalaivani (2009) estimated that over 70 per cent of the adolescent girls suffer from mild, moderate or severe anemia with greater incidence and severity in lower socio-economic strata. Overconsumption of fast foods makes adolescents vulnerable to obesity, chronic diseases and several digestive psychological disorders (Kapil et al., 1993).

- *Physical Activity and Leisure:* The prevalence of physical activity is dismal in urban and metro adolescents. Use of labour-saving devices, quicker transport services and sedentary modes of living has reduced hours of physical labour in urban and metro adolescents. Moreover, they get engaged in many unhealthy leisure activities (Khanna & Singh, 2000; Sandhu & Mehrotra, 1999). Remaining couched in front of T.V. or surfing on computers is becoming a habitual mode of living by to-day's urban adolescents (Archana, 2004; Khanna & Singh, 2000; Singh & Misra, 2012). Few of them practise relaxing, physically demanding, and religious leisure. Persistence of engagements such as dancing, sports and games among boys and girls across residential settings with certain exceptions in metro schools is reducing (Goel, Roy, Rasania & Bachania, 2014; Khanna & Singh, 2000; Larson & Verma, 1999; Lloyd, Grant & Ritchi, 2008; Sandhu & Mehrotra, 1999). Several cognitive and emotive concerns among Indian adolescents may be differentially ensuing in these different segments of adolescents (Strasburger, Jordan & Donnerstein, 2010). Urban and metro adolescents may have opportunity for viewing/downloading pornographic and violent materials or sending explicit sexual photographs or messages which can lead to harassment or experience of being bullied and permissive sexual norms (Brown & L' Engle, 2009; Ybarra & Mitchell, 2007; Ybarra et al., 2008). They also may be prone to invading the privacy and indulging in cyber-crimes (DiMaggio, Hargittai, Neuman & Robinson, 2001).
- *Sleep Problems:* In a recent study, irregular sleep was noted in a majority of adolescents (Singh & Misra, 2012). Sleep problems such as snoring, tiredness or fatigue during the day, and taking excessive time to fall asleep and disturbed sleep have been found to be common among adolescents. A number of adjustive disorders, relational problems, difficulties in school learning,

low academic performance, and suicidal ideation, anxiety, and mood disorders have been found to be associated with it (Bailly et al., 2004).

- *Body Image*: There is an increase in the desire for muscle building, for which adolescents increase use of food supplements and steroids. This carries with itself risks including permanent injury, growth stunting, heart irregularities and death (Cafri et al., 2005; Dixit, Agarwal, Singh, Kant, & Singh, 2011). Increasing body shape preferences and body dissatisfaction are giving rise to restrictive dieting, and disordered eating (Dixit et al., 2011; Harrison & Hefner, 2008).
- *Sexual Behaviours and Reproductive Health*: There is spate of work in the area of sexuality and reproductive health which indicate that sexual activity begins much earlier during adolescence resulting into steep rise in incidence of STDs and clinical abortions (Singh & Misra, 2012; Verma & Sarawathi, 2002). According to a recent report, AIDS-related deaths amongst adolescents between the ages of 10 and 19 increased by 50 per cent between 2005 and 2012, rising from 71,000 to 110,000 and that many adolescents were unaware that they were infected. Few (35% boys and 19% girls) use contraceptives and are ill informed about their use and about HIV AIDS (UNICEF, 2012). The decrease in age for sexual intercourse involves higher risk for unintended pregnancy, reduction in educational performance, unsafe abortion resulting into maternal mortality, anemia, high blood pressure, toxemia, hemorrhage, and obstructed labor for young women, and premature birth, low birth weight, and death for infants/newborns (Maharaja & Munthre, 2007). Further, in social milieu early sexual activity is likely to yield negative consequences for later development (Maharaja & Munthre, 2007). Some other sexuality-related concerns among adolescents, (i.e., dysmenorrheal and nocturnal emissions) which create immense turmoil, discontinuities and incongruence with their developmental needs such as freedom, autonomy, self-expression, identity and sexuality (Rangnathan, 2003) are least considered by the health planners and researchers.
- *Aggression and Violence*: Aggression and crime among adolescents is scaling up. In a recent study, more than 90 per cent of adolescents reported having experiences of some form of physical fight (Singh & Misra, 2012) than an earlier finding which reported that about only 60 per cent of adolescents

were involved in aggressive acts during 90s (Verma & Singh, 1998). The National Crime Research Bureau (2010) reported that 30,303 young people below 18 years were booked (Males: 28,763 (95 %); and females: 1540 (5 %). Majority of the juvenile crimes were committed by those between 16-18 years (63.3%), followed by those between 12-15 years (34%). These major criminal activities include physical and sexual abuse, rape, and human trafficking both within the country and across the borders. Increased incidence of aggressive behaviour may lead to a host of negative outcomes, including school dropout, peers rejection, juvenile delinquency, and even adult criminality and psychopathology (Mohan & Kataria, 1998; Sen, 1993; Singh & Singh, 1989).

- *Substance Abuse:* There is higher risk for substance abuse during early adolescence. In urban areas, there are reports of initiation into drugs from marijuana to harder ones. The average age at which young adolescents start smoking could be as early as 12 years. In 1989, an exhaustive survey in India covering 33 cities reported that a large number of drug addicts came from a wider variety of settings (Tripathi & Lal, 1999). In another study conducted among 416 students, it was found that 52 (12.5%) used or abused any one of the substances irrespective of time and frequency in lifetime; 26 (15.1%) being the urban students and 26 (10.7%) rural (Tsering, Pal & Dasgupta, 2010). In the case of substance abuse, the majority of adolescents experiment with alcohol, tobacco and marijuana. The burden of diseases attributable to smoking is greater than those for all other health behaviours. Cigarette smoking during adolescence leads to short term health complications such as respiratory tract infections and decline in physical fitness and long term health problems (i.e., increased risk of Coronary Heart Diseases (CHD), cancers of lung, larynx, esophagus, mouth, bladder and cervix, stroke) in adulthood (Williams, Holmbeck, & Greenley, 2002).
- *Social Relationships:* Because of increased migration and sedentary life styles, community support has been reduced in urban and metro adolescents (Bhogle, 1991). With the increased pace of nuclearisation and emergence of single-parent family, there is blurring of adolescent's traditional interaction-pattern as evident in dilution of hierarchy of communication channels such as conflict with parents and teachers (Verma & Singh, 1998).

Also, a larger segment of urban adolescents participate in and create youth cultures, which in turn reinforces the meanings and values of peer world involving transient romantic relationships, dating with the opposite sex and chatting with the friends on the internet.

- *Mental Health:* Studies reviewed by Kapur (2001) indicate dramatic increase in prevalence rates of psychiatric problems from 6 to 20 percent, particularly higher among older and male populations than other counterparts. Notable concerns in urban areas include concerns about their appearance, disagreement with parents about restrictions on their activities, high incidence of suicide, school dropout, violence and risk behaviour (e.g. drug addiction, smoking, unsafe sex) and increased stress and anxiety concomitant to physical and psychological changes around puberty (Verma & Sarawathi, 2002).
- *Academic Difficulties:* The adolescents' academic competence is plagued by greater emphasis on cognitive performance and far less on optimum emotional functioning resulting into soaring of examination anxiety, depression, anger, hostility/aggression/violence, substance abuse and negative school related behaviors (Sharma, 2006). The reviewed literature indicates that adolescents face maximum problems in the area of academic adjustment, followed by concerns regarding educational and vocational achievements, and personal adjustment (Verma & Sarawathi, 2002).

Thus, it seems that the most significant threats to the health of adolescents are behavioural in nature and are significantly associated with psychosocial risks (Singh & Misra, 2012; Verma & Singh, 1998). Unlike children and adults, adolescents are less vulnerable to chronic and genetic diseases and are more vulnerable to lifestyle related maladjustment (e.g., lack of self-esteem, depression, anxiety), diseases (obesity, nutritional disorders, gastric ulcers etc.) and death from injury, homicide and suicide than any other age group.

Conclusion

This review has documented multiple issues and challenges which impact adolescent's self, social functioning as well as mental health. A majority of these, produced by environmental constraints, exposure and opportunity for consumerist ethos in their surroundings, is worthy of both research and public policy

attention. Increased attention to preventive efforts by researchers, government agencies, policies and health professionals is a welcome phenomenon, but these initiatives rather than being focused only on segmental issues (i.e., use of contraceptives, condom and some life skills etc.) will have to encompass issues related to changing dietary pattern, leisure, daily routine, physical activity and risk behaviours among adolescents.

There is requirement for culture-specific endeavours in health education for addressing concerns related to adolescent health. In particular, we need unique educational programmes for tribal, minorities and rural female and disadvantaged sections of adolescents. We also need to design theoretically relevant and culturally sensitive education programmes for addressing trauma resulting from sexual harassment; sufferings created by economic factors such as poverty and deprivation. In essence, there is need for comprehensive efforts for developing adolescent health education which can be meant for enabling adolescents to live in a physically and psychologically healthy life, acquire knowledge and education, experience justice, and gain access to live a successful and meaningful life.

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Life Skills Paradigm Based Intervention on Decision Making Skill for Healthy Eating Habits of Adolescent Girl Students

MEENA* AND RIDHI SOOD**

ABSTRACT

The present study employed the pre-test, post-test control group design on ninety adolescent girl students to examine the effect of Life Skills Paradigm (intervention) on their decision making skill for healthy eating habits. The major findings of the study indicated: (i) significant differences in the mean scores of decision making skill in Life Skills Paradigm interventional and non-interventional group, (ii) significant difference in pre-post mean scores of decision making skill in life skills paradigm interventional group, (iii) no significant difference in pre-post mean scores of decision making skill in non-interventional group, and (iv) significant effect of life skills paradigm based intervention on decision making skill by taking pre-decision making skill scores as covariate.

Introduction

The sudden growth during adolescent period is not only concerned with the rate of physical growth but also with the hormonal, cognitive, and emotional changes that affect the adolescents' eating behaviour (Laura, 2003). The eating patterns of adolescents now-a-days include snacking, skipping breakfast, dieting, adoption of specific diets (such as vegetarian diet), confectionery, and fast food consumption (Shepherd & Dennison, 1996). Other factors which contribute to their poor eating habits include, but are not limited to, easy availability of low cost, high-fat and/or high-sugar, low nutrient food, limited access to healthy food that appeals to teen at

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home and when they are away from home (Higdon, 2005) and peer influence. Idealised media images of the female (and male) body also influences food choices of the adolescents.

Women are often responsible for producing and preparing food for the household, so their knowledge or lack thereof about nutrition can affect the health and nutritional status of the entire family. Hence, promoting greater gender equality, including increasing women's control over resources and their ability to make decisions is crucial (Ransom & Elder, 2003). According to World Health Organisation (WHO, 1993), *decision-making* is a process which occurs during problem-solving. It is, therefore, presented as a separate thinking skill. This process contains a few well defined stages, including describing, prescribing and controlling the problem. Each decision makes the one successful, as the decision becomes rules, which afterwards serves to make decisions towards appropriate food choices, to read food labels, to shop rationally, to evaluate their own diets and to evaluate dietary and nutritional information.

Life Skills Paradigm

Life Skills Paradigm (LSP) identifies significant life skills that can be used in a specific way to overcome the different problems of life and various critical issues found among youth. For example, on the issue of health education, the life skills to be used include decision-making, refusal skills, identifying personal preferences among nutritious foods and snacks. The steps of LSP can be understood from the following Figure no. 1:

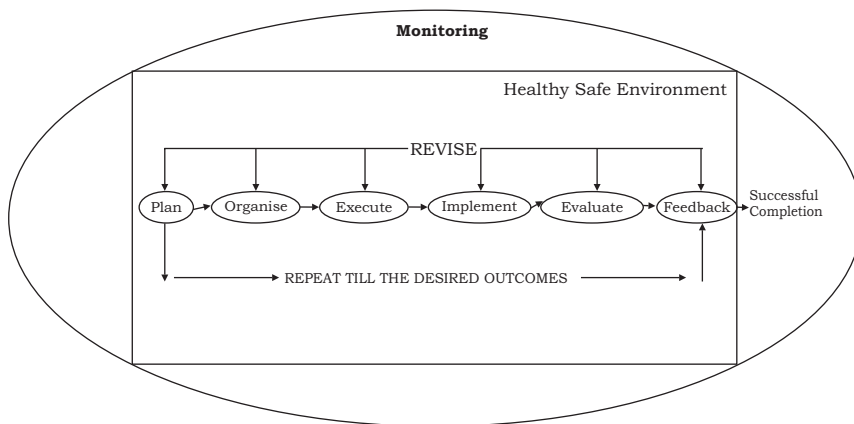


Figure : Life Skills Paradigm

Various checklists, inventories, simulation, exercises, training sessions or workshops etc. based on life skills training programme can be used under LSP for enhancing the different life skills (Meena, 2010).

Significance of the Study

The LSP can be utilised to facilitate healthy eating habits of adolescent girl students in collaboration with their decision making skill. This means that instead of coaxing the adolescents about healthy eating habits they must be given an opportunity with conviction to explore themselves about their unresolved issues in this context. The present study considered 'adolescents' as people in the 10-19 years age range as defined by WHO.

Objectives of the Study

- To develop the interventional modules based on LSP for healthy eating habits of adolescent girl students.
- To study the Decision Making Skill (DMS) for healthy eating habits of the adolescent girl students.
- To study the effectiveness of LSP on DMS for healthy eating habits of adolescent girl students as compared.

Hypotheses

- Ho.1** : LSP interventional and non-interventional group will yield equal level of mean scores for DMS.
- Ho.1(a)** : There will be no significant difference in pre-post mean scores of DMS in LSP interventional group.
- Ho.1(b)** : There will be no significant difference in pre-post mean scores of DMS in non-interventional group.
- Ho.2** : There will be no significant effect of LSP based intervention on DMS by taking pre-decision making skill scores as covariate.

Method

Design of the Study

The present study employed the quasi-experimental design (i.e. pre-test, post-test control group design), where LSP was an independent variable and DMS was a dependent variable. The schematic layout of the design has been given in Table 1.

Table 1
Pre-test, Post-test Control Group Design

	Pre-Test	Intervention	Post-Test
Experimental Group	DMSQ	LSP Based	DMSQ
Control Group	DMSQ	Not LSP Based	DMSQ

LSP= Life Skills Paradigm

DMSQ= Decision Making Skill Questionnaire

Sample

There exist only three Government Model Girls Senior Secondary Schools in the Union Territory of Chandigarh. These three schools had almost the same classroom climate; physical facilities; teacher-taught ratio; single sex (girls) etc. Out of these three schools, one school was randomly selected for the present study. The selected school i.e., Government Model Girls' Senior Secondary School, Sector-20 B, Chandigarh has four sections at Class XI, each comprising 45 students. The investigators then randomly selected two sections (out of four sections of Class XI) as intact groups for the experimental and the control group. Thus the study followed the non-randomised pre-test post-test control group design with a purposive sample in the form of intact sections. The structure of the two groups has been shown in the Table 2.

Table 2
Details of the Sample

Name of the school	Nature of the group	Number of girl students
Government Model Girls' Senior Secondary School, Sector-20 B, Chandigarh	Experimental Group	45
	Control Group	45
	Total	90

Tools Used

Tool I:

Modules based on LSP for healthy eating habits of adolescent girl students (developed and validated by the investigators themselves) were used in the study. The LSP based Interventional Modules contains six modules which address the key concepts concerned with healthy eating habits (Table 3). Each module stands alone but follows the similar format and specifications. Each module

required two days and duration per day was approximately 35-40 minutes for administration. The validation of the interventional programme was done at Government Girls' Higher Secondary School, Sector-23, Chandigarh. Thirty students (adolescent girls in the age group of 16-17 years) were taught through Interventional Modules based on LSP. This school was not considered under the sample for the study. On the basis of experts' observation and feedback from students the ambiguous terms found in two of the sessions were identified and were modified accordingly.

Table 3
Brief Description of Interventional Modules Based on Life Skills Paradigm

Modules	[Objectives + Module Content + Learning Outcomes] revolve around
<i>Module No.1</i> Health	Meaning of Health; Dimensions of Health: Mental Well-being, Physical Well-being and Social Well-being. Relationship among dimensions of health, Importance of good health.
<i>Module No.2</i> Eating Wisely	Meaning of Food; Functions of Food-Group I- Cereals; Group II- Fats and Oils; Group III -Pulses and Legumes, Nuts and oil seeds; Group IV-Milk and Meat products; Group V-Vegetables and Fruits. Nutritious food-Meaning, Healthy food need not be always expensive, Dietary Recommendations for adolescent girls as according to ICMR.
<i>Module No.3</i> Junk Foods	Meaning of Junk Food; Harmful effect of excessive eating of junk food, Health problems/ concern due to Junk Food: Obesity, Cardio-vascular disorders.
<i>Module No.4</i> Balanced Diet	Meaning of balanced Diet, Important nutrients: Carbohydrates, Proteins, Fats. Over-nutrition, Under-nutrition.
<i>Module No.5</i> Ways to Enhance the Nutritive value of Food	Need to enhance nutritive value of food, Ways of enhancing nutritive value of food: Sprouting, Fermentation and Mixing. Ways of preventing nutrient loss while cooking.
<i>Module No.6</i> Body Image	Meaning of Body Image; What decides our body image; Harmful effects of poor body image; Meaning of poor body image; Common body image concerns of girls; Tackling poor body image; Role of Body Mass Index; Harmful impact of excessive weight control.

Module Specifications	
Target group	Adolescent girl students
Objectives considered for each module	Knowledge, Understanding, Application, Skill, Attitude-Formation
Steps of Life Skills Paradigm	Planning, organising, execution, implementation and feedback.
Life Skills used	Decision Making
Activities	Ice breaking session, individual activity, group activity, interactive-activity, brainstorming, and PowerPoint presentations, opinion-seeking activity depends upon the specific objectives of each session.

Tool II.

DMS questionnaire for healthy eating habits of adolescent girl students (developed and validated by the investigators) was used. The face validity and content validity of the items were ensured from the experts. The reliability of each item of the questionnaire was ensured through *Chi-square* value. On the basis of the calculated *chi-square* values, all the 55 items of the questionnaire were found to be significant at 0.01 level of confidence (Table 4).

Table 4
Chi-Square Values and Significance of the items of the Questionnaire

Item No.	Calculated Chi-square value	Item No.	Calculated Chi-square value	Item No.	Calculated Chi-square value	Item No.	Calculated Chi-square value	Item No.	Calculated Chi-square value
1.	62.11*	12.	59.67*	23.	49.25*	34.	56.52*	45.	72.34*
2.	43.33*	13.	75.35*	24.	37.55*	35.	46.77*	46.	55.32*
3.	23.03*	14.	30.72*	25.	51.95*	36.	70.55*	47.	36.78*
4.	31.15*	15.	125.05*	26.	60.37*	37.	78.36*	48.	76.23*
5.	50.55*	16.	41.20*	27.	72.25*	38.	32.33*	49.	56.77*
6.	58.62*	17.	60.65*	28.	92.13*	39.	29.34*	50.	87.34*
7.	42.02*	18.	75.35*	29.	105.76*	40.	56.71*	51.	46.39*
8.	25.79*	19.	71.37*	30.	70.37*	41.	66.44*	52.	19.87*
9.	52.71*	20.	47.15*	31.	18.56*	42.	101.46*	53.	87.55*
10.	66.44*	21.	54.22*	32.	45.36*	43.	34.89*	54.	92.43*
11.	37.36*	22.	65.36*	33.	32.33*	44.	105.67*	55.	78.56*

P < .01

Procedure

The experiment was conducted in three phases as stated below:-

Phase I: Administration of the DMS Questionnaire for Healthy Eating Habits for adolescent girl students (Pre-test):

Both the experimental and control groups were administered the questionnaire before implementing the intervention to the experimental group. The scoring was done according to the prescribed procedure for both the groups to get an insight about the knowledge and understanding of the adolescent girls’ students’ healthy eating habits and their ability to make valid decisions in this regard.

Phase II: Implementing the Interventional Module based on LSP to the experimental group:

The experimental group was given the intervention modules for 15 days. The content of the interventional modules were prepared and validated by the investigators themselves. The control group on the other hand was not given any interventional modules based on LSP.

Phase III: Administration of the DMS Questionnaire for Healthy Eating Habits for adolescent girl students (Post-test):

The experimental as well as the control groups were administered the post test to determine the effect of the intervention.

Results

Table 5 shows the post-test mean scores, standard deviation (S.D.) and t-ratio of the two groups. It is evident that the mean of the post- test scores of the experimental group was significantly higher than that of the control group. Thus, we reject the null hypothesis Ho.1 that LSP interventional and non-interventional group will yield equal level of mean scores for DMS.

Table 5
Post-test Mean scores of Decision Making Skill

Groups	N	Mean	S.D.	t value
Experimental Group	45	221.44	29.68	10.36*
Control Group	45	162.77	24.19	

*P<.01

Table 6 shows that pre-post mean scores difference was significant for the experimental group as compared to the control group. It may be concluded that after effects of the intervention based on LSP caused significant changes in the mean scores of the experimental group. Our null hypothesis that Ho.1 (a) there will be no significant difference in pre-post mean scores of DMS in LSP interventional group stands rejected. On the other hand, hypothesis Ho.1 (b) that there will be no significant difference

Table 6
Pre-test and Post-test mean scores on Decision Making Skill

Group		N	Mean	S.D.	t-ratio
Experimental Group	Pre-test	45	167.08	22.27	11.35**
	Post-test		221.44	29.68	
Control Group	Pre-test	45	163.82	24.28	0.45
	Post-test		162.77	24.19	

**P<.01

in pre-post mean scores of DMS of LSP in non-interventional group stands accepted. It was inferred from the comparisons of experimental and control group in respect of the pre-post mean scores of DMS that these were not equal. To ascertain whether these differences were significant or not, a one-way ANCOVA was employed.

Analysis of Covariance on Scores of Skill of Decision Making

The one-way ANCOVA was used to study the effect of LSP based interventional approach on DMS for healthy eating habits of adolescent girl students by taking the pre-experimental scores on DMS as a covariate. To achieve this, the final (post-test scores on DMS) scores were corrected for differences in the initial (pre-test scores on DMS) scores. For that, SS_y has been adjusted to any variability in the 'Y' contributed by 'X'. The adjusted sum of the squares of 'Y' i.e., SS_{yx} (means that the sum of square for y have been adjusted for any variability in Y contributed by X or that the variability in X is held constant) were computed and the F ratio (F_{yx}) was calculated. The summary of analysis of covariance of pre-test and post-test scores of DMS of the experimental and control groups have been given in Table 7.

Table 7
Summary of ANCOVA of pre-test and post-test scores on Decision Making Skill

Source of variation	df	SS _x	SS _y	SS _{xy}	SS _{yx}	MS _{yx}	SD _{yx}
Among means	1	240	77440	4312	71478.24	71478.24	12.91
Within groups	87	20472.33	21964.89	12370.45	14490	166.55	
TOTAL	88	20712.33	99404.89	16682.45	85968.24		

Where, MS_{yx} = Adjusted sum of square from the variances

SD_{yx} = Adjusted Standard Deviation

$F_x = 1.03$ $F_y = 310.26$ For $df=1/88$ (before adjustment of mean scores)

The obtained value of F_x and F_y ratios were tested for significance. The calculated value of F_x was 1.03, which was not significant even at 0.05 level of confidence. The value of F_y obtained ($F_y = 310.26$) was significant at 0.01 level of confidence. This indicates that there was significant difference in post-test mean scores of DMS of the adolescent girl students in experimental group ($F_{yx} = 429.17$, $df=1/87$, $P<.01$) as compared to the control group. It is clear from the significant F_{yx} ratio that the two final means of the experimental and control group differ after they have been adjusted for initial difference in the pre-test scores of DMS. The adjusted means for post-test scores ('Y' means) of adolescent girl students in the experimental and control groups were computed using correlation and regression. The difference between the adjusted 'Y' means of post-test scores of pupils in experimental and control groups have been given in Table 8.

Table 8
Group-wise Comparison of data for Adjusted Means of Post-test scores of Decision Making Skill

Groups	M_x	M_y	M_{yx} (Adjusted)
Experimental Group	167.08	221.44	220.42
Control Group	163.82	162.77	163.75
Grand Means	$GM_x=164.45$	384.17	384.17

Adjusted means for the post-test scores were tested for significance. The obtained value of the difference between adjusted means value 56.27 was significant at 0.01 level. This implies that the experimental group and control group differed significantly in their effect of LSP on DMS for healthy eating habits of adolescent girl students. The t -ratio for the difference in means of experimental

and control group was found to be significant at 0.01 level of confidence, suggesting that differences were not due to chance. The hypothesis Ho.2 that there will be no significant effect of LSP based intervention on DMS by taking Pre-Decision Making Skill scores as covariate was rejected at the specified level. An examination of the mean score of the adjusted post test scores of two groups suggested that experimental group yielded higher means (M=220.42) than the control group (M=163.75). It may be concluded that experimental group yielded higher mean scores for effect of LSP on DMS for healthy eating habits of adolescent girl students.

The within-group correlation of 0.60 is a better measure of the relationship between pre and post scores than is the total correlation of 0.37, as systematic differences in means have been eliminated from the within r. The relationship between pre (initial) and post test (final) scores for the total sample was found out using the Pearson's product moment method. It is this correlation between X and Y which accounts for the marked significance among Y means when the variability in X is held constant.

Discussion

The analysis of the data led to the rejection of the hypotheses Ho.1: LSP interventional and non-interventional group will yield equal level of mean scores for skill of decision making skill and Ho.1 (a) that there will be no significant difference in pre-post mean scores of DMS in LSP interventional group, and Ho.2 that there will be no significant effect of LSP based intervention on DMS by taking Pre-Decision Making Skill scores as covariate. This suggested that LSP based intervention yielded higher scores in DMS in the experimental group than their control group counterparts.

These results do get a support from studies done by Story and Resnick (1986), and Paglia (2008), where the role of more effective nutrition interventional models were considered in strengthening internal locus of control about health and nutrition, that is, improving the individual's sense of mastery over diet and the ability to effect change could, in turn, promote better food and health behaviour among adolescents. Also, studies done by Ellis (2007) and Harrison (2008) strongly supported this notion and added that the programme can be beneficial for assisting health care providers in assessing students at risk for obesity, metabolic syndrome, and diet-related diseases as well as in positively affecting eating behaviours and body mass index percentages. Wilson et al. (2012)

study suggested that participating in related intervention showed improved dietary habits in those with Binge Eating Disorders (BED). The intervention programs are effective in reducing binge eating symptoms through increases in self-esteem and positive mood. A report released after a one- year monitoring and evaluation of the programme clubbed under *Nestle Healthy Kids Programme* (2014) also concluded that when parents were involved in educating children on good nutrition to help them make choices in relation to eating healthy diets, the programme became effective in improving the overall nutrition knowledge of pupils in some cocoa growing areas of the country (Ghana).

Other null hypothesis that Ho.1 (b) that there will be no significant difference in pre-post mean scores of DMS of LSP in non-interventional group stands accepted leading to a conclusion that without LSP the students DMS yielded lower scores than their counterparts, which were non-significant. These results also get a support from studies done by Bauer's (2010) who suggested that school-based interventions offer an opportunity to decrease the risk of obesity among all adolescent girls as compared to those who receive less support and resources for healthful behaviour from their families.

In sum, it can be said that LSP based intervention has a significant effect on the DMS of the adolescent girl students. Further, after effects of the intervention caused significant changes in the mean scores of the experimental group. There was significant difference in post-test mean scores of DMS of the adolescent girl students in experimental group as compared to the control group.

Educational implications

While imparting LSP interventional approaches or activities or programmes to the school students, the teachers, the counsellors, experts and educationists must have positive and rational attitude towards the following issues:

- Implementation of interventional modules requires pre-planning and facilitation skills.
- It demands thorough understanding of various steps involved in the LSP and the related strategies on the part of teachers, to be effective.
- The results of LSP based intervention-based studies can be utilised by the policy-makers while drafting policies related to health and development of children or adolescents.

- The results of such studies can also be utilised by the clinicians while planning programme such as obesity-control, weight-management, etc.
- The adolescents need guidance and direction in developing healthy eating habits and decision-making skills when dealing with health issues.
- The results of such studies can be utilised for maintaining the health of any age group of people by appropriately modifying the environmental conditions leading to desirable behaviour modification pertaining to healthy eating habits and healthy lifestyle.

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Elementary Pre-service Teacher Education Programme in the Context of National Curriculum Framework–2005 A Study in Delhi

PRAJNYA PARAMITA JENA*

ABSTRACT

The study focused on examining the status of elementary teacher education programme in Delhi in the context of National Curriculum Framework 2005. The objectives were to analyse the curriculum, to identify the infrastructure and learning activities of the teacher education institutions, to study the opinion of teacher educators, and to identify the problems (if any) faced by them in transacting the curriculum. Following the mixed methods approach, data were collected employing tools like categorisation matrix for content analysis, check list, and questionnaire. Results showed that the elementary pre-service education curriculum in Delhi has not been modified in accordance with NCF 2005. The availability of infrastructure in institutions was insufficient and learning activities were mechanical and formal as per syllabus. Various problems relating to transaction of curriculum were identified by the teacher educators.

Introduction

One of the major weaknesses of the attempts to bring about curricular reforms in the past has been the lack of a comprehensive plan to link curricular changes with the process of teaching learning, teacher training and the evaluation reforms (Bradley, 2002). It is argued that school curriculum reforms will be seriously constrained if the practice of teacher education and reform in the current teacher education curriculum is not immediately attended to (Batra, 2009). Therefore, reforms in school education

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system need to be ideally accompanied by reforms in teacher education programmes. Historically, four attempts have been made to reform school education curriculum in India. The recent reform in school education was brought out with the publication of *National Curriculum Framework (NCF) 2005*, which proposed a new paradigm for schooling to support child-centric education. The NCF-2005 advocated for connecting knowledge to life outside the school, de-emphasising rote learning, focusing on overall development of children, and making examinations more flexible. The NCF-2005 gave a new vision to the education by expecting a teacher to be the facilitator of students' learning and shifting the whole pedagogical approach of teacher education programme from traditional teacher-centric to learner-centric discourses. Taking the perspectives of NCF-2005, the *National Curriculum Framework for Teacher Education (NCFTE) 2009* was developed by the National Council of Teacher Education (NCTE), which tries to ensure that teacher education courses are reoriented to cope with the epistemological shift envisaged in NCF-2005. Considering the importance of reciprocal relationship between school education and teacher education, there is a need to analyse and review the teacher education programmes in the light of school curriculum renewal.

Review of Literature

Teacher Education has become a more responsive activity in terms of what is needed and desired in elementary, middle and high schools as well as remaining a potentially powerful lever for change in schools (Griffin, 1999). It is argued that schools will not change unless there is change in the ways in which teachers are educated (Bransford, Darling-Hammond & LePage, 2005). It is, however, reported (Gupta & Gupta, 2003) that the objectives of teacher education did not keep pace with the objectives of school education and the socio-cultural contexts and concerns had not been reflected fully in the objectives of teacher education programmes. Yadav (2011) found many variations in implementation of NCF-2005 in terms of structure, working hours, recess periods, teaching of different subjects, evaluation pattern etc. at primary, upper primary and secondary stages in different States/UTs. Goel (2009) analysed elementary teacher education curriculum in terms of its scope for the development of evaluation competencies in pupil teachers and found that there was narrow understanding of

concept of evaluation in pupil teachers which may be because the sub-components related with concept of evaluation have not been stated explicitly in ETE curriculum. In another study, Yadav (2012) examined the status of implementation of pre-service teacher education curriculum at elementary stage in various States and union territories in India. He (Yadav, 2012) reported that academic subjects were given considerably more weightage in comparison to the co-scholastic areas and the integration of theory and practice, content and methods and use of ICT in teaching learning process were not reflected clearly in these courses. Kamath (2011) mentioned that *National Curriculum Framework* 2005, the syllabus and the textbooks are already in the school system and they are being followed by the existing teachers. Though teachers have been oriented towards the new textbooks, there is a need to bring changes in the teacher education system itself especially in the pre-service education. Yadav (2012), while assessing the in-service training (INSET) training packages used by different states, in terms of quality and relevance to the school curriculum, especially NCF-2005, in the States, found that constructivist approach to teaching as advocated in NCF-2005 was not addressed in the training packages.

As regards in-service training, it has been reported to be less effective in enabling teachers for constructivist teaching-learning, which seemed to arise from organisational issues and motivation of teachers (Sen Sharma & Sharma, 2009). It was also found (Yadav, 2012) that constructivist approach to teaching as advocated in NCF-2005 and SSA Framework 2008 was not reflected in in-service training packages.

Rationale of the Study

As school education has witnessed reforms in curriculum, the introduction of new syllabi and textbooks necessitates consequent restructuring in the teacher education programmes. It is argued that radical change in the school curriculum without changing the central reality of teachers in Indian classrooms through teacher education programmes can do little to alter educational processes and outcomes (Batra, 2005). The emphasis on pre-service education of teachers has been further intensified by its inclusion in the *Right of Children to Free and Compulsory Education Act (RTE Act) 2009*, as the act mandates the presence of trained teachers (those who have undergone pre-service education). The Act also describes the

way teachers are expected to encourage learning through activities, discovery and exploration in a child friendly and child-centred manner and make the child free of fear, trauma and anxiety, and help the child to express views freely. Thus, the need arises to study in detail the pre-service teacher education programme in order to know how far the initiatives have been taken by the pre-service teacher education programme for adopting the ideas of construction and contextualisation embedded in NCF 2005. In this context the following issues arise in the area of teacher education:

- Whether the present teacher education programme is adequate to meet the challenges of school curriculum reforms?
- Whether adequate linkage has been established between school education curriculum and pre-service teacher education curriculum?

The present research makes an attempt to address the above issues taking sample from Delhi, as 'the Delhi based DIETs, has begun their curriculum revision process in 2008' (Farooqui & Kaur, 2012) in accordance with NCF 2005. It was one of the felt needs to know the existing status of curriculum transaction process as well as problems in the implementation of the elementary teacher education programme. It attempted to answer the question as to what extent the elementary pre-service teacher education programme in Delhi reflect the ideas of *National Curriculum Framework 2005*? The main objectives of the study included the followings.

- To analyse the pre-service teacher education curriculum in light of the ideas contained in NCF 2005 regarding the teacher education programme.
- To identify the infrastructure and learning activities of the teacher education institutions for facilitating the training of student teachers.
- To study the opinion of teacher educators and to identify the problems (if any) faced by them in transacting the teacher education curriculum.
- To seek suggestions from the teacher educators regarding the improvement of teacher education programme.

Method

The study employed the mixed methods research design, integrating both quantitative and qualitative techniques of data collection.

Population and Sample

The population comprised of all 32 teacher training institutions of Delhi including nine District Institutes of Education and Training (DIETs), 22 self-financed institutes under SCERT, and IASE of Jamia Millia Islamia (JMI) that provided diploma in elementary teacher education (ETE) in Delhi in the academic session of 2012-2014.

Stratified random sampling was used for selecting the teacher education institutions on the basis of management (university based, DIETs and self-financed) and criterion sampling was used for selecting teacher educators. The selected institutions were IASE of JMI; DIET (South) Moti Bagh; and Institute of Vocational Studies, Sheikh Sarai. Using the criterion sampling, all the elementary teacher educators and students teachers of the sampled teacher training institutes were covered in the study.

Tools

The data were collected using both qualitative (content analysis) and quantitative (survey) methods. The qualitative content analysis with a deductive form was used for analysis of syllabi in the light of NCF- 2005. The following tools were used.

- Categorisation Matrix for content analysis of syllabus.
- Check list of educational facilities
- Questionnaire for teacher educators

The categorisation matrix contained the main categories as Learner-centric learning, Facilitation in learning, Knowledge as a continuum, Education in wider social context, and Continuous and multifarious evaluation. The main categories were again categorised into generic categories and sub categories. Coding agenda was attached for further clarification of sub category. The check-list consisted of items regarding facilities available aiming at identifying the status of material and physical resources and other facilities in the selected institutions. The questionnaire for teacher educators comprised the components like professional involvement, curriculum transaction process, problems of curriculum transaction process, positive and negative aspects and suggestions. The reliability and validity of the tools were established.

Data Collection

The ETE syllabus used in IASE, JMI was collected from the department office. As self-financed institutes and DIETs follow the syllabus prepared by the SCERT, only one syllabus was collected on behalf of these institutions. The researcher filled the checklist herself by asking the questions/statements to the programme coordinators. The researcher herself contacted all teacher educators and requested them to fill up the questionnaire.

Data Analysis

The descriptive statistics (percentages and means) was used to report the responses for surveys. The syllabi were content analysed independently by the researcher, followed by the review consensus on whether or not every elements in the syllabus were evident. The quantitative data and qualitative data collected from different levels were analysed separately by level.

Results

Pre-service Teacher Education Curriculum in the light of NCF 2005

Results showed that that the concerns of NCF 2005 were reflected to a very little extent in the syllabi. Since the syllabus of JMI was not revised since 2001, the new concepts and ideas developed in NCF 2005, RTE Act 2009 and NCFTE 2009 were totally missed in the syllabus. In case of SCERT, the revised syllabus was not implemented in the session 2012-2014; resulting in missing the ideas of NCF 2005 on teacher education programme in existing syllabus.

With reference to 'Learner centred learning', the generic categories of 'Child and development', 'Child and Health' were reflected to a little extent and 'Art appreciation and Art education' to a very little extent in both the syllabi whereas 'Learner and learning process' were reflected to little extent in syllabus of JMI and a very little extent in syllabus of SCERT.

With reference to the main category 'Facilitation in learning' the generic categories of 'Teacher identity' in school was not reflected in the curriculum; Teaching-learning process was reflected to a little extent in the curriculum; 'Understanding pedagogy' and 'Pedagogic practices' were reflected to some extent in both the syllabi.

- With reference to 'Knowledge as continuum' the generic categories of 'Interlinking Education, Society and Curriculum'

was reflected to a little extent in both the syllabi. 'School Culture, Leadership and Change' was reflected to a little extent in syllabus of JMI but was reflected to a very little extent in syllabus of SCERT.

- Pertaining to the main category 'Education in wider social context', the generic categories of 'Social context of education' and 'Inclusion in Education' were reflected to a very little extent in both the syllabi. 'Exposure to community' was reflected to some extent in both the syllabi. 'Context of child' was reflected to a little extent in the syllabus of JMI, but was reflected to a very little extent in syllabus of SCERT.
- With regard to 'Continuous and multifarious evaluation' the generic category of 'Evaluation in pedagogy courses' was reflected to a very little extent in both the syllabi. 'Basic ideas on evaluation' was reflected to some extent in the syllabus of JMI but was reflected to a little extent in the syllabus of SCERT, Delhi.

From the content analysis, it was found that both the syllabi were not updated. No aspect of constructivism approach was present in any of the syllabi. However some basic aspects of the contents reflect the ideas of NCF 2005 in a very mechanical form. Further the question arises relating to the extent of its transaction and learning activities in teacher training institutions.

Infrastructure and Learning Activities in the Teacher Education Institutions

The data relating to the availability of infrastructure and learning activities revealed that there were minimum infrastructure facilities, i.e. physical infrastructure like Principal's room, classrooms, multipurpose hall, computer room, furniture and equipment, games facility, arrangements for maintenance of physical infrastructure, separate rooms for faculties, office room, toilets and library; other instructional facilities like educational technology laboratory, instructional materials and science laboratory, and human resources like teaching and non-teaching staffs in all the selected institutions. The infrastructure facilities were insufficient in regard to the number of students. Although all the selected institutions conducted various activities like orientation programme for new entrants, extension lectures on educational issues and educational excursion to places of educational importance in addition to curriculum transaction, the learning activities conducted as per their syllabi were very mechanical and formal. The activities conducted had no base of constructivism and reflective practice.

From the personal contact of researcher with student teachers it was found that there were inadequate library facilities, canteen facilities and computer lab facilities in all the selected institutions. There is need of more and improved infrastructure facilities in all the institutions.

Teacher Educators' Perception in Transacting the Teacher Education Curriculum

- Regarding the professional involvement of teacher educators, majority of teacher educators were involved in developing curriculum/syllabus and preparation of question papers and evaluation of answer scripts. Majority of teacher educators were involved in participation of professional training; contribution of articles to professional journals and participation in faculty meetings. However, no teacher educator has experience in teaching elementary school students.
- With reference to the classroom transaction process, lecturing and discussions were frequently used for transaction of theory papers. Regarding use of the technological devices (ICT) for classroom transaction, personal computer, internet and power-point presentations were used randomly and interactive whiteboards, audio equipment and digital video cameras were never used. As regards the academic climate of the institution, openness and cooperativeness, pedagogical competencies, work culture and transparent evaluation system were rated as average. ETE curriculum was rated as adequate in promoting learner-centric training experience; providing for facilitating role of teachers; providing for active participation of learners; establishing integration between theory and practice; providing multiple exposures to student teachers and providing scope for continuous and comprehensive evaluation, whereas it was rated as weak in reflecting knowledge in wider social context. About practice teaching aspect of the programme, majority of teacher educators had rated organisation of demonstration lessons, micro teaching approach to initiate teaching, number of student teachers assigned to teacher educators, evaluation of practice teaching, feedback mechanism and co-operation of school authorities as average; whereas they rated lesson planning-guidance and supervision and reflective analysis of practice teaching as below average. Majority of teacher educators positively responded to adequacy of prescribed period of school experience programme (SEP).

- The difficulties encountered by the teacher educators in transacting theory papers were non-availability of reference materials, heavy load of work and lack of revision of curriculum. The difficulties in supervising student teachers during SEP were lack of sufficient time and overload with duty of supervising large student teachers. The difficulties in organising practical activities for student teachers were inadequate infrastructure facilities and more emphasis on teaching of theory courses. The problems in evaluating student teachers in various activities were non-availability of adequate parameters for evaluation, amount of teaching load being on the higher side, and shortage of teachers for evaluation of students in various activities. The weaknesses in current evaluation system in the teacher education were verbalised as going more importance on term end examination, use of outdated and traditional techniques for evaluation, and tendency of inflated marking by some teachers. The student teachers faced organisational problems and classroom problems during school experience programme.
- The strengths/positive aspects of present teacher education programme as identified by teacher educators were the curriculum providing basic concepts of teaching profession; theory and practical works being helpful in preparing primary teachers; courses according to the cognitive ability of students; preparing teachers to understand learners and making efficient in classroom management and time management; providing all round development of student teachers. The weaknesses/negative aspects of the present ETE programme as identified by the teacher educators were not-updated curriculum; prevalence of traditional evaluation pattern; no specification/parameter on evaluation in practice teaching and work experience; shortage of teachers; no appropriate mention of practical component in each paper; lack of orientation/training on new teaching methods; no importance on application of ICT in learning.

Suggestions of Teacher Educators for Improvement of Teacher Education Programme

- The suggestions of teacher educators regarding curriculum included revision of syllabus in case of JMI and implementation of revised curriculum in case of SCERT; inclusion of inclusive education and ICT in teaching learning as compulsory subjects; involvement of experienced teacher educators in preparation

and revision of syllabus; practice of new methods of teaching; discussion on the current issues in education; improvement in practice teaching and preparation of modern teaching learning aids to be the focus area; presence of flexibility and avoidance of behaviourist paradigm.

- As regards classroom transaction, the teacher educators suggested to include practice of new strategies of teaching; improvement in the application of ICT; practice of open discussions and promotion of collaborative and co-operative learning.
- Their suggestions regarding practice teaching included having longer period of practice teaching; preparation of daily plans and unit plans; maintenance of reflective journal; incentive to practicing schools for more co-operations; in-campus teaching; fixed number of students to be assigned to teacher educators; mentoring practice of co-operating teachers; more organised; proper evaluation and feedback; involvement of student teachers in all school related activities; counselling sessions after practice teaching; identification of parameters for lesson plan as well as proper evaluation scale for observation of practice teaching and exposure to teaching-learning process of different types of schools.
- The teacher educators wanted to have more number workshops; more facilities for practical work; proper sketch of practical work in each subject; specification of proper working hours for conducting practical work; linkage between theory and practical work; well distribution throughout the session.
- The teacher educators wanted that evaluation of theory papers should have scope for flexibility; evaluation to be related to application level; inclusion of objective type question; practice of formative evaluation.
- The evaluation of practice teaching should have proper parameters for evaluation; focus on constructive teaching practice of student teachers and provision of proper feedback; having proper observation schedule for observation of practice teaching; introduction of internal and external evaluation; involvement of school teachers in evaluation of practice teaching.
- Their suggestions regarding evaluation of practical work included introduction of grading system, proper parameters for evaluation of practical work and introduction of internal and external evaluation.

- The teacher educators wanted instituting school as a part of teacher education institution; encouragement for more practical work and field work; focus on development of positive attitude among student teacher for children and teaching; frequent interaction among teacher educators from different institutions; organisation of seminars and workshops on latest teaching methods and techniques for teaching.

Discussion

The central objective of this study was to study the elementary pre-service teacher education programme in Delhi in the context of NCF-2005. The content analysis of ETE curriculum of both the organisations indicated that no aspect of constructivist approach was present in either of the syllabi. This is in support of previous findings as the PSTE curriculum has not been revised in Bihar, Madhya Pradesh and Goa for more than fifteen years (Yadav, 2011). There was no dearth for infrastructure facilities in teacher education institutions. Although library and computers were available in the institutions, their usage was grossly inadequate as evident from the interviews with students. This is in support of previous findings (Government of Karnataka, 2011). Lecturing and discussion methods dominated the classroom transaction process. The use of the technological devices (ICT) for classroom transaction was scarce. In case of practice teaching, the guidance and supervision of lesson planning and reflective analysis of practice teaching were weak. The teacher educators felt difficulties like non-availability of reference materials for reading, heavy work load and lack of revision of curriculum. Similarly, in supervising student teachers during SEP, the difficulties faced were lack of sufficient time and overload with duty of supervising large student teachers. In organising practical activities for student teachers the difficulties were inadequate infrastructure facilities and more emphasis on teaching of theory courses. The problems related with evaluation of student teachers were non-availability of adequate parameters for evaluation, heavy work load and shortage of teachers. The weaknesses in current evaluation system in the teacher education institution were importance on term end examination, use of outdated and traditional techniques for evaluation and tendency of inflated marking by some teachers. The problems that student teachers face during SEP were organisational problems and classroom problems. The weaknesses/negative aspects of the

present ETE programme as identified by the teacher educators were not updated curriculum; prevalence of traditional evaluation pattern; no specification/parameter on evaluation in practice teaching and work experience; shortage of teachers; no appropriate mention of practical component in each paper; lack of orientation/training on new teaching methods; no importance on application of ICT in learning. The findings were commensurate with the previous findings by Goel (2009), NCERT (2009), Yadav (2012), and Govt. of Karnataka (2011).

There is a need for complete reform in the teacher education sub sector. Reforms in teacher education are needed in accordance with the school curriculum reform in order to realise its objectives. The modifications are needed through the processes of both pre-service & in-service teacher education (Figure 1).

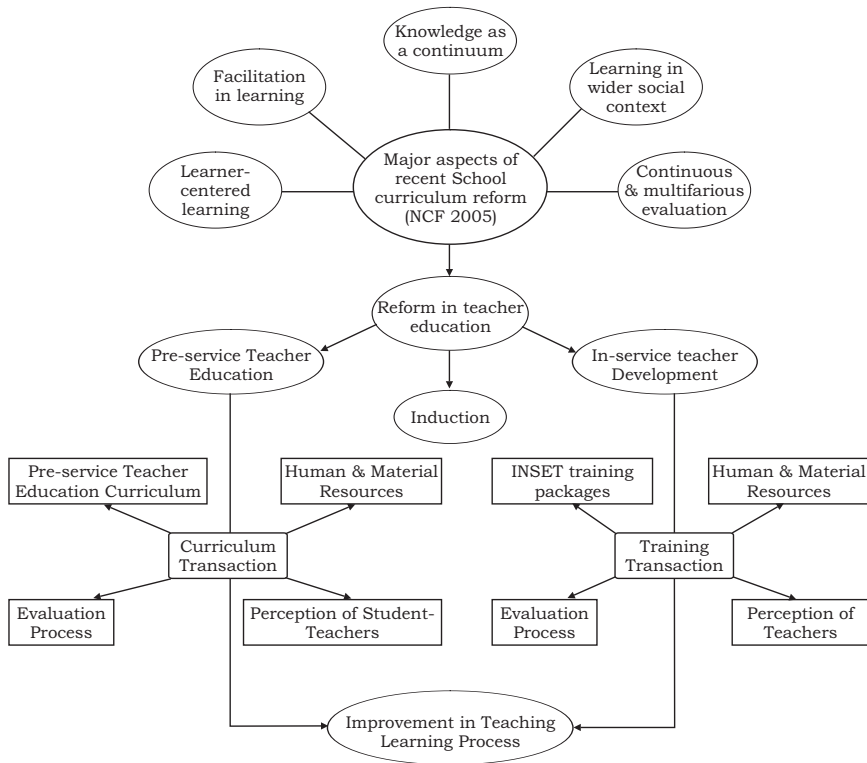


Figure 1: Teacher Education Supporting Major Aspects of Recent School Curriculum Reform

Suggestions for Future Research

A longitudinal study that compares status of pre-service teacher education and school curriculum reforms over a long period of time is warranted. Other types of teacher education programmes that prepare professional teachers should also be examined. A broader study could also compare status of pre-service teacher education in different states and their conformity to NCF 2005. Additionally, future studies could focus on the different types of pre-service teacher education programmes. These types of studies will expand information on the overall responsiveness of pre-service teacher education programmes to school curriculum reforms.

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Attitude towards Information and Communication Technology Use among University Teachers of different Faculties in Relation to Computer Anxiety

VANDANA MEHRA* AND ZIBA NIKKAH FAR**

ABSTRACT

The rapid growth in computer-based Information and Communication Technology (ICT) has created new opportunities for universities to manage teaching and training differently and more effectively. The present study was conducted on 200 university teachers' attitude towards ICT use belonging to different faculties and at different levels of computer anxiety. Two tools were used for data collection, viz., Scale of Attitude towards Information and Communication Technology use and Computer Anxiety Scale. The main findings of the study were: (i) There was no difference between attitude towards Information and Communication Technology use among university teachers of different faculties, and (ii) Teachers with low, moderate and high computer anxiety exhibited difference in their attitude towards Information and Communication Technology use. Teachers with low computer anxiety exhibited better attitude towards Information and Communication Technology use as compared to those with moderate and high levels of computer anxiety.

Introduction

Information and Communication Technology (ICT) is an umbrella term that includes all technologies for the manipulation and communication of information; it is the overlap of computer information and telecommunication technologies, and their

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applications. Therefore, ICT offers more than just computers, but any technology involved in communicating such as software, CD-ROMs, the Internet, television and radio, image capturing devices including still and video cameras, sending, data logging and control apparatus, and other equipment for example even using a video recorder (Alsop & Hicks, 2001). The ICT can be used to access global knowledge and communicate with other people since it is an electronic based system of information transmission, reception, processing and retrieval, which has drastically changed the way people think, the way people live and the environment in which people live (Ogunsola, 2005).

The rapid growth in ICT has afforded opportunities for universities to manage teaching and training differently. In order for societies to be economically and socially successful in the new knowledge-based world, a highly skilled and well-trained population is required. The advances in digital technologies that are faster, more capable and easier to use have made it possible for university teachers to rethink the pedagogical assumptions related to teaching strategies (Li, 1998). Information technologies offer new opportunities to teachers to enhance the quality and accessibility of their instructional material. Tools such as electronic mail, computers and the World Wide Web are assumed to strengthen communication and collaboration between students and university teachers.

Today universities face a huge challenge to increase access to higher education and improve the quality of higher education. Universities are compelled to be innovative and provide academic leadership to the education system of the country. ICT's in higher education can be of great help for developing course materials, delivering and sharing, communication between the learners and the teachers and for conducting research.

Studies have indicated that ICT has made little impact in university classrooms and majority of the teachers are still using traditional expository pedagogy. We know that teachers are the agents of change within the classroom. But in the absence of positive attitude towards ICT, teachers will not use ICT in the classroom whole heartedly. Other research studies have also indicated that many teachers feel uneasy and fear while using computer technology. So, attitude towards ICT and computer anxiety are important variables that influence ICT integration in education.

Attitude towards Information and Communication Technology (ICT)

Attitude towards ICT is defined as the degree of favour or disfavour towards ICT. It is a person's general evaluation or feeling of favour or antipathy towards computer technologies and specific computer related activities (Palaiageorgion, Siozos, Konstantakis & Tsoukalas, 2005). This assessment usually encompasses statements that examine users' interaction with computer hardware, computer software, other people relating to computers and activities that necessitate computer use (Roussos, 2004). Information and Communication Technology attitude is the predisposition of a person to respond positively or negatively towards computers and related technologies.

Research reveals that Greek secondary education teachers exhibited variation in attitude towards ICT in education, viz., strongly positive, positive and negative or neutral beliefs (Jimoyiannis & Korris, 2006). Government and private secondary school teachers of Nepal exhibited comparable attitude towards ICT. Also teacher's attitude towards ICT was not found to be different for teachers with different academic streams (Newa, 2007). Turkish science teachers exhibited positive attitude towards ICT (Cavas, Cavas, Karaoglan & Kisla, 2009). Although teachers had the basic necessary knowledge and skills related to ICT, but focused training on ICT in instruction was needed (Abu Qudais, Al-Adhaileh & Al-Omani, 2010). Malaysian secondary school teachers perceived ICT positively and had moderate basic ICT knowledge and skills (Mahmud & Arif, 2010). School teachers of Cyprus (Paparionnpou & Charalambous, 2011), Turkish EFL teachers (Kizil, 2011) and Spanish teachers (Sanchez, Marcos, Gozales & Gnanlin, 2012) and Indian teachers (Mhetre & Suryawanshi, 2013) exhibited positive attitude towards ICT, but they need to have more training to acquire ICT skills.

Computer Anxiety

Computer anxiety is an emotional fear, apprehension, and phobia felt by individuals towards interactions with computers or when they think about using computers (Herdman, 1983). Selwyn (1997) stated that computer anxiety is a feeling of unease or apprehension an individual experiences in anticipation of or while using computer technology that is disproportionate to the threat the technology presents resulting in computer avoidance, excessive caution with computers, and minimising the use of computers

and related technology. Rovai and Childress (2003) noted that the more knowledge individuals have of computers, the less computer anxiety they experience, and the higher the likelihood of increased performance. Computer anxiety is not only a stumbling block for teachers in integrating emerging educational technology into education programmes, but is also one of the main reasons for limited technology acceptance by teachers.

Studies indicate that university teachers had low levels of computer anxiety and high levels of computer self-efficacy (Ball, 2008; Embi, 2007). Turkish female students had higher computer anxiety levels than Dutch female and Dutch male students. With increasing computer experience, computer anxiety decreases (Tikinarshan, 2008). Male teachers exhibited lower computer anxiety as compared to female in-service secondary school teachers. Trainees from Science Faculty exhibited lower computer anxiety than those from Humanities Faculty (Halder & Chaudhari, 2011). Further, Indian students exhibited more computer anxiety as compared to Iranian University students. But science students were less anxious about computers than arts students (Mehra & Omidian, 2011). Primary school teachers exhibited more computer anxiety as compared to secondary school teachers. Science and Mathematics stream teachers exhibited less computer anxiety as compared to Social Science and Language stream teachers (Arya, 2012).

Rationale of the Study

Research has indicated that, despite support through policy and resources provision, ICT has made little impact in the classroom practices and teachers are still using traditional expository pedagogy. Today, India actively promotes the use of ICT in education sector, the country's decision-makers, at both the central and state levels, have chosen to explore the use of newer computer and internet-based ICTs for education, along with broadcast ICT. An important key element in application of ICT tool is attitude of teachers as the end-users and the real agents of change within the classroom arena. Another equally important element is existence of computer anxiety among teachers. So, the present study was conducted to investigate attitude towards ICT of university teachers with different levels of computer anxiety.

Objectives

- To study university teachers' attitude towards ICT use belonging to different faculties with regard to computer anxiety.
- To study university teachers' attitude towards ICT use at different levels of computer anxiety.
- To study interaction between type of faculty and levels of computer anxiety with regard to university teacher's attitude towards ICT use.

Hypotheses

- H₀1:** There is no significant difference between attitudes towards ICT use scores of teachers of different faculties.
- H₀2:** There is no significant difference between attitudes towards ICT use scores of teachers with different levels of computer anxiety.
- H₀3:** There is no significant interaction between faculty type and different levels of computer anxiety with regard to teachers' attitude towards ICT use scores.

Method

Descriptive method of research was employed in the present study to compare university teachers of different faculties with respect to attitude towards ICT use and computer anxiety. 2x3 ANOVA design was employed and the dependent variable was university teachers' attitude towards ICT use belonging to different faculties. Computer anxiety was studied at 3 levels, viz., low, moderate and high.

Sample

Employing stratified random sampling technique 200 teachers of Panjab University, Chandigarh were selected at two levels in the present investigation. Firstly, 4 faculties were selected by lottery method from 10 faculties: Arts + Education, and Science + Engineering and Technology. Next, five departments were selected each from Arts/Education and Science/Engineering and Technology faculties.

Table 1
Sample Distribution

Faculty	Department	Sample
Arts/Education	Education	20
	Public Administration	20
	Economics	20
	Geography	20
	Political Science	20
Science/ Engineering and Technology	Botany	20
	Physics	20
	Computer Science and Technology	20
	Mechanical Engineering	20
	Electronics & Communication Electronics	20
Total		200

Tools

The following tools were used in the study.

1. Scale of attitude towards ICT use (developed by the authors). The scale comprised 74 items in eight domains, viz., ICT use in instructional setting, confidence in ICT use, encouragement from colleagues, ICT and health problems, ICT and socialisation, ICT relative advantage, ICT complexity, and barriers to ICT use. Reliability of the scale was found to be 0.85. Content validity of the scale was also established.
2. Computer Anxiety Scale (Embi, 2007). The scale comprised 18 items divided into four domains, viz., general anxiety about ability to use computers, confidence in ability to learn about computers, power and control of computers. Reliability of the scale was found to be 0.79.

Data Collection and Analysis

The scales were administered to the participants, i.e. 200 university teachers of different faculties. Next, scales were collected and scoring was done in accordance with instructions given in the manual of each tool. 2×3 ANOVA was employed for analysing university teachers' attitude towards ICT use with respect to different levels of computer anxiety.

Results

Table 2 contains the means and standard deviations of computer anxiety for different sub-groups.

Table 2
Mean and S.D.s of sub-samples of attitude towards ICT use scores at different levels of computer anxiety

Type of Faculty	Level of Computer Anxiety	Mean	Std. Deviation	N
Arts/ Education	Low	256.00	-	1
	Moderate	255.26	20.339	77
	High	249.64	15.668	22
	Total	254.03	19.369	100
Science/ Engineering & Technology	Low	270.67	4.933	3
	Moderate	261.22	21.434	86
	High	243.64	19.304	11
	Total	259.57	21.607	100
Total	Low	267.00	8.367	4
	Moderate	258.40	21.072	163
	High	247.64	16.906	33
	Total	256.80	20.654	200

Table 3 shows that the F ratio for the differences in the mean of university teachers' attitude scores towards ICT use at different faculties was not significant. It may be inferred that the means of different faculties on university teachers' attitude scores may be considered equal. The null hypothesis (H_01) of equality was therefore retained. However, the F-ratio for the differences among the means of attitude scores of university teachers with low, moderate and high computer anxiety scores was significant at the level 0.01 of confidence. This suggested that the university teachers were significantly different beyond chance, on their attitude towards ICT use when they had low, moderate and high computer anxiety. Therefore, H_02 was rejected at the specified level. An examination of the means of teachers' attitude scores at different faculties (Table 2) clearly indicated that the means of university teachers' attitude scores at Arts/ Education faculty with regard to high computer anxiety (mean= 249.64) were less than teachers' anxiety under moderate (mean=255.26) and low (mean=256.00) levels of computer anxiety. Similarly, the means of university teachers'

attitude scores at Science/Engineering & Technology faculty with regard to high computer anxiety (mean=243.64) were less than teachers' attitude scores under moderate (mean=261.22) and low (mean=270.67) levels of computer anxiety.

Table 3
ANOVA for university teachers' attitude towards ICT use scores at different levels of computer anxiety

Source	Type III Sum of Squares	df	Mean Square	F
Faculty	143.192	1	143.192	0.350
Different levels of computer anxiety	3485.143	2	1742.572	4.257**
Faculty * Different levels of computer anxiety	970.702	2	485.351	1.186

** P < .01

F-ratio for the interaction between the two variables viz., type of faculty and different levels of computer anxiety (Table 3) was not found to be significant even at 0.05 level of confidence. Hence H_0 was retained. University teachers of different faculties with low, moderate and high levels of computer anxiety exhibited comparable attitude towards ICT use.

Discussion

Hypothesis 1, "There is no significant difference between attitude towards ICT use scores of teachers of different faculties" was retained as the university teachers belonging to different faculties exhibited comparable attitude towards ICT use. Similar findings were reported by Abu Qudais, Al-Adhaileh and Al-Omari (2010), Newa (2007), and Yapici and Hevedanli (2012). They also discovered that there was no significant difference between faculty members' attitude towards using technology and colleges or classes. But, Turkish Science teachers exhibited better attitude towards ICT as compared to Arts teachers (Cavas, Cavas, Karaoglan and Kisla, 2009).

Hypothesis 2, "There is no significant difference between attitude towards ICT use scores of teachers with different level of computer anxiety" was rejected as the means of university teachers attitude scores with regard to high computer anxiety were less than university teachers' attitude scores under moderate and low computer anxiety scores.

Hypothesis 3, “There is no significant interaction between faculty type and different levels of computer anxiety with regard to teachers’ attitude towards ICT use scores” was retained as all the teachers of different faculties exhibited comparable attitude towards ICT use under low, moderate and high computer anxiety. Further studies have shown that Science Faculty exhibited lower computer anxiety than those from Humanities Faculty (Halder & Chaudhari, 2011). Science and Mathematics streams teachers exhibited less computer anxiety as compared to Social Science and Language stream teachers (Arya, 2012).

Conclusion

Technology implementation in the classroom should become an integral part of the core mission for the institution, with its primary focus rooted in the paradigm shift from teaching to learning. To cope with computer anxiety among teachers and enhance teachers’ attitude towards ICT, university authorities should organize Professional Development Programmes, with special emphasis on ICT training. This will enable university teachers to integrate ICT in instructional settings. Programmes that foster the use of information and communication technology in the classroom increase familiarisation with technology and lead to improvement in technology as well as teaching. Future generations would be computer literate and would expect technology implementation in the classroom. University administrators should place emphasis on building teachers’ perception of their ability to use ICT with a view to transform classroom practice.

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Teacher Burnout at Secondary Level of Education in Haryana

MADHU SAHNI* AND ANJU SHARMA**

ABSTRACT

The purpose of the present investigation was to assess the level of burnout and to study the influence of personality, educational qualification, length of service and their various interactions on burnout among secondary school teachers. The sample comprised 480 secondary school teachers selected randomly from 24 secondary schools of Haryana. Data were analysed using three way ANOVA (2×2×2 factorial design) and t-test. Results indicated that (i) the secondary school teachers experienced high level of burnout; (ii) there is significant independent effect of variables viz. personality, educational qualification and length of experience on burnout among secondary school teachers; and (iii) there is significant two factor and three factor interactive effect of variables on burnout among secondary school teachers.

Introduction

Job stress is experienced by people working in a number of helping professions (Brookings, Bolton, Brown, & McEvoy, 1985; Maslach & Pines, 1977) including education (Blase, 1986; Kyriacou & Sutcliffe, 1978). If an employee is under stress for a long period of time, he or she may finally come to a situation that he or she can no longer cope with it. According to Maslach and colleagues (Maslach, 1978; Maslach & Jackson, 1981; Maslach & Pines, 1977), such an employee is unable to maintain the care and commitment that he/she brings initially to the job. This results into the feelings of burnout, a syndrome, which has three components: depersonalisation (a detached, callous attitude toward those with whom one works); emotional exhaustion (feeling emotionally drained, exhausted); and a lack of a sense of personal accomplishment (a pervasive sense

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of not having attained significant accomplishment in one's work) (Maslach & Jackson, 1981).

Maslach et al. (1996) reported that for many teachers, the filling force behind their choice to remain in teaching is the personal triumph they feel in teaching students. As a result, teachers are highly prone to burnout when their perception of personal triumph is diminished by organisational and social factors. Maslach et al. (1996) notes that the teaching profession is relatively flat with little opening for hierarchical advancement, and regardless of how many hours teachers work; there is very little chance for additional pay. The Demand-Control Model proposed by Karasek and Theorell (1990) identified the ability to make decisions in a challenging work environment as most likely to cause job strain. Hall and Savery (1987) further found that stress at work is due to the result of this lack of decision-making authority. Therefore, it can be predicted that teaching in an environment with heavy workloads and low decision making autonomy leads to burnout (Stoner & Wankel, 1986). It is not necessarily the intensity of stressful events that causes burnout. It is, in part, the result of the constant thrashing of stress on the individual's psyche (Hobfall & Shirom, 1993).

Teaching is a profession where everyday radical changes occur in the educational system. These changes are likely to augment rather than lessen the level of stress in teachers. Even though significant improvements have been made in student achievement, society continues to expect more and more from its teachers. As the gap widens between the public's expectations from education and the teacher's ability to deliver that education, burnout is bound to be prevalent (National School Boards Association, 2002).

In the educational process, a teacher is the medium through which objectives and plans are actualised. In Other countries, teacher burnout is considered one reason for increasing number of competent teachers who are leaving the classroom for alternative careers (Cunningham, 1982; Farber and Miller, 1982). There is considerable evidence indicating that schools make a difference in terms of student achievement, and the significant factor in that difference is attributable to competent teachers. Along with the design and execution of an intelligent curriculum, its effective implementation requires competent teachers who can sense the slightest changes in the class- room and can maneuver the teaching strategies accordingly.

Burnout in teaching profession has frequently been investigated and the phenomenon has been well organised as being problematic for teachers globally (Cherniss, 1995; Guglielmi & Tatrow, 1998). Teacher burnout affects individuals, family life, and work environment (students, parents, school). Negative aspects of the job such as disciplinary problems, student apathy, overcrowded classrooms, involuntary transfer, inadequate salaries, demanding or supportive parents and lack of administrative supports are the popular stressors that confront teachers. As a result of these stressful aspects of teaching, burnout among teachers is reflected as physical (e.g. headache, peptic ulcers, hypertension, diabetes), psychological (depression, anger, anxiety), and behavioural (e.g. deterioration in work performance, absenteeism) symptoms. Teachers suffering from burnout usually experience an increasing number of problems including decreased mental and physical well-being and deteriorating relationships with students and colleagues (Schaufeli, 1990b).

Maslach et al. (2001) divided the main factors that cause burnout into two groups. In the first group, conditional factors such as characteristics of the job and occupation and/or features of the organisation take place. The second group included personal characteristics such as demographic, personal and attitude towards job. In this study, emphasis was given to individual factors that lead to burnout but organisational factors were kept out of the scope of the research.

Personality Characteristics

According to Schaufeli and Enzmann (1998), personality characteristics of employees can moderate the effect of stressful situations on burnout, such that certain traits may buffer or enhance negative outcomes. Thus, personality and situational variables interact in complex ways. Some studies have focused on the relationships between personality characteristics and burnout (Grundy, 2000; Huebner & Mills, 1994; Mills & Huebner, 1998; Sandoval, 1993; Zellars et. al, 2000). Most studies have found that neuroticism was positively related to burnout (Deary et al., 1996; Hills & Norvell, 1991; Mills & Huebner, 1998). This kind of research involves the question of whether some personality types experience burnout more than other types especially in teachers because teachers who experience burnout become ineffective and less responsible for student achievement (Haberman, 2004).

Length of Service

Studies report variable effects of length of service on burnout in different professions. While some studies claim that length of service has no effect on burnout level (Kurçer, 2005; Sahin et al., 2008; Sünter et al., 2006), others suggest that burnout is much more higher in the first years of occupation (Maslach et al., 2001; Özçınar, 2005). Similar results were obtained in studies carried out with instructors (Dworkin, 2001; Lackritz, 2004; Özcan, 2009), public personnel (Günes et al., 2009) and nurses (Basim & Sesen, 2010). It is considered that as individuals' grow in one's profession; they can much more adapt to their jobs and be beneficial to the organisation for prolonged period. Such people also experience less exhaustion.

Educational Qualification

It is thought that person's occupational expectations, responsibilities and stress will increase as his/her education level increases. The investigator noticed that teachers recruited on a particular post were having higher qualification than prescribed for the post. So the need was felt to examine the variable educational qualification in relation to burnout among teachers.

The study focused on burnout in secondary school teachers as secondary school teachers experience higher level of stress due to demanding situation while dealing with adolescent students. Overcrowded classes, heavy syllabus and inadequate facilities in government schools make teachers' work more complex. They remain constantly in pressure to get satisfactory results from their students which is related to their annual salary increments. Keeping the above background in view the present study was taken up. Only female teachers were included in the sample in view of the reported sex differences in burnout in some studies (Günes et al., 2009; Lackritz, 2004; Öztürk et al., 2008; Sünter et al., 2006; Ünal et al., 2001).

Objectives

1. To find out the extent to which secondary school teachers experience burnout in their work, and
2. To study the influence of personality, educational level and length of service on burnout among secondary school teachers.

Method

The present study followed descriptive survey method and is an ex-post facto type of research.

Tools Used

The following tools were used in the study.

1. Maslach Burnout Inventory- Educator's Survey (MBI-ES).
2. Introversion-Extroversion Inventory (IEI) by Dr P F Aziz and Dr Rekha Gupta.
3. Personal Information form. It included questions about the participating teachers' name, gender, age, length of service, educational level/Qualifications.

Sample and Procedure

The study was conducted on 480 female teachers teaching class VII- IX who were randomly selected from various secondary schools of state Haryana. For sampling purpose, the state was divided into four zones viz. North, East, South and West. Then using lottery method one district was selected from each zone. A list of secondary schools located in these four districts was obtained from office of the concerned District Education Officer. Out of that list, twenty four schools (six from each district) were randomly selected for collection of data. The investigators personally visited the schools one by one. A list of all regular female teachers teaching class VII-IX was prepared with the help of headmaster/ headmistress of the concerned school. After rapport formation, investigators administered the tools to all those listed teachers present on the day. Initially, 750 secondary teachers of Haryana state were chosen. Out of this, the responses of only 480 teachers could be taken for analysis, as only two levels in case of independent variables (Graduates or post graduates/M.Phil. /Ph.D. in case of educational qualification, service less than and equal to 5 years or service more than 5 years and equal to 10 years in case of length of service), and Introversion or extroversion in case of personality) were taken into consideration. Then, the extrovert and introvert female teachers were divided in to 4 parallel groups-graduate teachers having service of less than and equal to 5 years, graduate teachers having service of more than 5 and equal to 10 years, post graduate teachers having service of less than and equal to 5 years, post graduate teachers having service of more than 5 and

equal to 10 years. From each of these groups 60 teachers from each combination group were selected randomly, that is 60 from each combination group. In this way final sample comprised 480 teachers as given in the following Table 1:

Table 1
Distribution of Sample (N=480)

Personality	Educational Qualification	Experience	
Extrovert (240)	Graduate (120)	Less than and equal to 5 (60)	More than 5 and equal to 10 (60)
	Postgraduate/ M.Phil./Ph.D (120)	Less than and equal to 5 (60)	More than 5 and equal to 10 (60)
Introvert (240)	Graduate (120)	Less than and equal to 5 (60)	More than 5 and equal to 10 (60)
	Postgraduate (120)	Less than and equal to 5 (60)	More than 5 and equal to 10 (60)

The collected data was analysed keeping in view the objectives of the study. Descriptive statistics were generated on the demographic data and each item on the survey instrument. A univariate analysis of variance (three-way anova) was performed to determine if differences exist between the scores of participants in the study with respect to selected demographic characteristics. The individual teacher characteristics such as educational level, length of service and personality were the independent variables. The three burnout scales of Emotional Exhaustion, Depersonalisation and Personal Accomplishment were the dependent variables.

Analysis and Interpretation

Level of Burnout among Secondary School Teachers

Table 2 contains the mean scores on three subscales of burnout. Results show that the teachers experience high degrees of emotional exhaustion and depersonalisation and moderate degree of personal accomplishment.

Table 2
Mean scores on Burnout Dimensions

Burnout Dimensions	Mean Score	Level of Burnout
Emotional Exhaustion	28.49	High
Depersonalization	16.84	High
Personal Accomplishment	33.42	Moderate

Note: Emotional Exhaustion: 0-16= Low, 17-26=Moderate, >27= High; Depersonalization: 0-8=Low, 9-13=Moderate, >14=High, Personal Accomplishment: >37=Low, 31-36=Moderate, <30=High.

Influence of Personality, Educational Qualification, Length of Service and their various Interactions on burnout among Teachers

The summary of ANOVA (2×2×2) is given in Table 3. It can be seen that the effect of personality educational qualification and length of service were significant. Some of the interaction effects were also significant.

Table 3
Summary of 2×2×2 Factorial Design ANOVA of Burn Out (N=480)

Source of Variance	df	f values		
		EE	DP	PA
A	1	158.60*	27.46*	67.99*
B	1	13.85*	134.27*	40.07*
C	1	96.91*	104.24*	31.54*
A*B	1	1.377 (NS)	11.86*	0.92 (NS)
A*C	1	19.68*	0.073 (NS)	10.32* (NS)
B*C	1	2.27 (NS)	16.83*	0.43 (NS)
A*B*C	1	0.19 (NS)	1.82 (NS)	4.67*

* Significant at .01 level, ** significant at .05 level, NS-not significant even at .05 level of significance.

A-Personality, B-Educational Qualification, C-Length of Service, EE-Emotional Exhaustion, DP-Depersonalization, PA-Personal Accomplishment

Teachers' burnout by Personality

Table 4 shows higher mean scores of introvert teachers on emotional exhaustion, depersonalisation and personal accomplishment. This indicates that introvert teachers are more emotionally

exhausted than extrovert teachers; introvert teachers experience comparatively more depersonalisation and they experience lower personal accomplishment as compared to their counterparts.

Table 4
Means, SDs and t-value of burnout among teachers by Introversion and Extroversion

Burnout	Group	N	Mean	SD	t-value
Emotional Exhaustion	A1	240	19.79	4.68	2.98*
	A2	240	21.18	5.52	
Depersonalisation	A1	240	10.03	1.88	10.05*
	A2	240	11.64	1.62	
Personal Accomplishment	A1	240	32.71	2.80	5.56*
	A2	240	34.11	2.62	

A1=Extrovert; A2= Introvert; *significant at .01 level of significance

Teachers' Burnout by Educational Qualification

From Table 5 it is clear mean scores of post graduate/M.Phil/ Ph.D. teachers and graduate teachers on emotional exhaustion, depersonalisation and personal accomplishment differ significantly. Further, since mean scores of post graduate/M.Phil/Ph.D. teachers are higher than that of graduate teachers it could be concluded that post graduate/M.Phil. /Ph.D. teachers experience more emotional exhaustion and depersonalisation and less personal accomplishment as compared to their counterparts.

Table 5
Means, SDs and t-value of Burnout among Teachers by Educational Qualification

Burnout	Qualification	N	Mean	SD	t-value
Emotional Exhaustion	B1	240	22.83	4.43	11.16*
	B2	240	18.14	4.77	
Depersonalisation	B1	240	11.20	1.73	4.42*
	B2	240	10.47	2.05	
Personal Accomplishment	B1	240	34.33	2.43	7.58*
	B2	240	32.50	2.84	

B1. = PG/M.Phil./Ph.D; .B2= Graduate; *significant at .01 level of significance

Teachers' Burnout by Length of Service

The mean scores of more experienced teachers and less experienced teachers on emotional exhaustion, depersonalisation and personal

accomplishment differed significantly (Table 6). Further, since mean scores of less experienced teachers are higher than that of more experienced teachers, it may be said that less experienced teachers experience more emotional exhaustion and depersonalisation and less personal accomplishment as compared to their counterparts.

Table 6
Means, SDs and t-value of Burnout among Teachers by Experience

Burnout	Experience	N	Mean	SD	t-value
Emotional Exhaustion	C1	240	18.65	5.13	8.32*
	C2	240	22.32	4.51	
Depersonalisation	C1	240	32.79	1.85	7.48*
	C2	240	34.03	1.78	
Personal Accomplishment	C1	240	10.13	2.87	5.68*
	C2	240	11.55	2.60	

C1=.More experienced, C2=.Less experienced; *significant at .01 level of significance

Interaction Effect

The *F*-value for the double interaction between Personality and Educational Qualification, between Personality and Length of Service, between Personality and Educational Qualification, between Personality and Length of Service were significant on the subscale of depersonalisation, emotional exhaustion, depersonalisation and personal accomplishment respectively leading to inference that the two variables interact with each other on the respective dimension. To further investigate the interaction between variables, the *t*-ratios were computed. Results showed that graduate extrovert teachers had maximum depersonalisation scores ($M=11.77$) and post graduate/ M.Phil/Ph.D. Introvert teachers had lowest depersonalisation scores ($M=9.43$). Less experienced introvert teachers had maximum emotional exhaustion scores ($M=23.84$) and more experienced introvert teachers had lowest emotional exhaustion scores ($M=18.52$). It was also found that less experienced introvert teachers (A_2C_2) experience minimum personal accomplishment ($M=35.09$) and more experienced extrovert teachers (A_1C_1) experience maximum personal accomplishment ($M=32.44$).

Discussion

The results reveal that teachers have higher emotional burnout and depersonalisation levels and medium personal accomplishment levels. It can be said that burnout level is high in the sample of

the study. Generally, the more emotionally fatigued teachers become, the more likely their teaching performance is going to suffer (Brouwers & Tomic, 2000). Teachers in this study had medium levels of personal accomplishment. If they had been able to maintain high degree of self-efficacy, the effects of emotional exhaustion would have not been probably been a cause of concern.

From the results it is clearly evident that burnout is more in introverts in comparison to extroverts. This may be due to the reason that introvert individuals appear quiet or reserved, whereas those high in extraversion are cheerful, optimistic and energetic possibly because they are more likely to engage in more activities to overcome stressful conditions. Similar findings have been previously reported by Iverson, Oleklans, & Erwin (1998) who reported that workers higher in positive affectivity (a component of extraversion) experience less burnout. It is found that as level of education increased, emotional burnout and depersonalisation levels were also elevated. However, personal accomplishment levels of post graduates/M.Phil./Ph.Ds teachers were low than of those holding bachelor's degree. It is believed that as level of education increased, individuals' occupational expectations, responsibilities and stress will also increase and in this case coping with stress will become much harder and burnout will occur (Maslach et al., 2001), as has been found in the current study.

The results further revealed that teachers who have less teaching experience reported a higher degree of burnout than their counterparts who have more teaching experience. Probably a new recruit teacher may get involved in a set of role conflicts in the beginning years and have difficulty in adapting to their work and organisation easily and do not know their roles completely, thereby they experience burnout more intensively. As teachers get more experienced, they may develop coping skills that alleviate work stress and the tendency to treat students in an impersonal manner.

Regarding interactional effects, the joint effect of factors viz.,
i) personality and educational qualification on depersonalisation
ii) personality and length of service on emotional exhaustion and personal accomplishment
iii) educational qualification and length of service on depersonalisation, and
iv) personality, educational qualification and length of service on personal accomplishment was significant. This joint effect of various interactions on dependent variables may be significant due to the reason that factors such as personality, educational qualification and length of service

exert significant independent contributing effect in determining the emotional exhaustion, personal accomplishment and depersonalisation scores. Another probable reason for significant various interaction effects may be due to the two different ways in which each factor is varying viz. extrovert and introvert teachers i.e. PG/M.Phil./Ph.Ds and graduates teachers, more experienced and less experienced teachers.

Educational Implications

In the study personality, educational qualification and teaching experience were found to be associated with burnout dimensions. So in order to better understand the process of burnout, we should take into account variables like personality, teaching experience and educational qualifications. Practices to prevent burnout should start during the employment process and can be provided through certain procedures such as orientation programmes, providing on-the-job trainings, job enrichment, improving cooperation and coordination, enabling organisational commitment and organisational justice. By increasing teachers' awareness on the process of burning out, and providing them with opportunities for reflection on personal variables such as coping resources, together with discussions of alternative coping strategies, may be of great assistance in reducing the use of maladaptive or dysfunctional coping. The intervention strategies that focus on job engagement, by providing teachers with experiences that foster professional growth, self-efficacy and perceived success in their career, through the enhancement of their organisational life, appears for many burnout researchers (e.g. Maslach, 2003, Kelchtermans & Strittmatter, 1999) as the key to combat work-related stress. Since teacher educators train future teachers, so there is potential to steer the course of education toward a system where the teacher has more autonomy and decision-making responsibilities. In teacher education classes, there is need to instruct the students about the potential for burnout in the profession. They should be provided with the suggestions and strategies for coping with stress.

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Summary of the ERIC Projects

A Study on Engagement of Students Enrolled through Lateral Entry under the Provisions of RTE Act, 2009

Principal Investigators

SUSHMITA CHAKRABORTY* AND DEEPMALA**

The paradigm shift in school education as emphasised in the National Curriculum Framework (NCF), 2005 has reinforced that the students in the school need to be perceived as a dynamic participant in the construction of her/his knowledge. With the emphasis on 'Education for All' and after the implementation of the Right of Children to Free and Compulsory Education Act (RTE), 2009, 'all' children are entitled to have access to and opportunity for completion of elementary education. To achieve these goals, the importance of making learning environment adequately engaging has gained importance. The RTE mandates to ensure that not only every child has access to school, but also completes elementary education. It also expects the school to become 'the enabling and conducive environment' which facilitates and motivates a child to complete his/her education. Besides the extrinsic support through special training provision, it is necessary to ensure that students become intrinsically motivated and feel engaged with their school and with learning. This research attempted to identify factors influencing engagement of students who have been admitted to grades appropriate to their age in the schools in the light of RTE Act 2009.

The study was carried out in two states (Uttarakhand and Madhya Pradesh). In collaboration with the State Project Offices of the respective States and Project Coordinators (special training), districts were selected which had high density of the sample population. Two such districts from each State was included, namely Udhamasinghnagar and Nainital districts of Uttarakhand,

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and Khargone and Dhar districts of Madhya Pradesh. The sample consisted of 380 students from classes III to VIII admitted through age-appropriate admission under RTE Act 2009.

Data were collected from students and teachers using semi-structured interview schedules developed by the investigators. Parameters under each engagement dimension included: a) behavioural engagement such as participation in school activities, classroom and presence on task, b) emotional engagement such as positive and negative reactions to teachers, classmates, academic activity and school; interest and enjoyment towards activities of classroom and school, sense of belongingness with school, and c) cognitive engagement such as volition learning, self regulation measure like planning, goal setting, persistence, resiliency, self-monitoring, self-evaluation, and application of knowledge. The tool items were tried out on similar target population in a few government schools of Delhi. Responses of students were analysed based on the parameters of the following dimensions of engagement accompanied with a contextual grounding.

Perceptions of students enrolled through lateral entry towards their teachers

The students in both Uttarakhand and Madhya Pradesh perceived teachers as someone whom they 'should' like, as according to them, it is the teachers who make it possible for them to read and write. The students' perception of a teacher as the 'knowledge provider' and a role model of a righteous person led to their liking certain teachers and disliking few other teachers in the same school. Linked with their perception about the teachers the students were found to participate in activities of the class and school, and also perceived the school as 'belonging' to them.

Perceptions of students enrolled through lateral entry towards their peers and self

In both the States, peers who were cooperative, collaborated in learning and other activities, were caring and shared similar purpose of coming to school, i.e. 'to read-write' and learn something 'meaningful', were perceived as peers who are worthy of being liked. Use of foul language by peers in school premises, teasing and fighting were behaviours that were disliked by majority of the students interviewed in the study.

Psychological needs of students enrolled through lateral entry

The need to feel competent, being useful to significant stakeholders of the school (i.e. teachers, peers/classmates in school), need to feel 'belongingness', 'being part of a group' (affiliation with a group), need to share positive interpersonal relationship with teachers and peers and the 'need for a friendly and harmonious environment' were some of the psychological needs that emerged from analysis of the students' responses in both Uttarakhand and Madhya Pradesh.

Predominance of behavioural, emotional and cognitive dimensions in students' engagement

The analysis revealed that majority of the students was behaviourally and emotionally engaged with the school at the time of interview. Students who displayed active behavioural and emotional engagements were found to make efforts towards engaging on cognitive dimensions as well.

Teachers' perceptions towards the lateral entry students enrolled in the school

Teachers in both the States perceived that students from the sample population were largely interested in coming to school and were involved in studies. Teachers also perceived that majority of the students was at par with 'regular students', though there were some who needed more time than regular students in understanding concepts. The teachers' responses revealed that they did understand the students' family problems/responsibilities due to which attending school regularly was a problem and also the students lacked a favorable environment to study at home.

Factors facilitating/impeding lateral entry students' engagement with school

The factors impeding engagement in the sample population were poor conduct and using foul language by peers/classmates, by the teachers and by themselves, being made to feel 'separate' in the class/playground etc. by the teachers and/or the classmates, lack of appreciation of efforts made by the student, perceived lack of understanding of their family/home conditions by the teachers, non-comprehensibility of subject matter, and lack of adequate number of teachers in school that resulted into many classes going without any teacher and thus leaving scope for 'free-time' for the students during which they fought and quarreled with each other.

The findings have implication for designing suitable intervention programmes to facilitate learning and retention in school as well as for policy interventions. The study highlights that the engagement of lateral entry students with school is a collaborative endeavour between teachers and students as a team. This would have implications for designing interventions for engaging the targeted population by including strategies on fulfilling the psychological needs with an understanding of how the population perceives their teachers, peers as well as themselves as effective stakeholders.

Strategies Adopted for Enrolling Girls in Kasturba Gandhi Balika Vidyalayas Managed by Different Agencies in Andhra Pradesh, Bihar and Gujarat An Exploratory Study

Principal Investigator

GOURI SRIVASTAVA*

The nation is committed to promote gender equality and education to all children up to the age of 14. The Right of Children to Free and Compulsory Education Act, 2009 has made Universalisation of Elementary Education justifiable. Further, for promoting equity and equality to all, the Constitution empowers the States to adopt measures of affirmative discrimination in favour of women and imposes a fundamental duty on every citizen to renounce practices derogatory to the dignity of women. The government has initiated several schemes and programmes to increase accessibility to education even among the marginalised communities. With an objective to bridge gender disparities in education with a special focus on girls from the most marginalised communities, the country has launched popular programmes, such as District Primary Education Programme (DPEP), 1994; the Sarva Shiksha Abhiyan (SSA), 2001; and the latest being the Rashtriya Madhyamik Shiksha Abhiyan (RMSA), 2010. The two promising programmes conceptualised under SSA for addressing gender disparity in education at the elementary stage are National Programme for Education of Girls at Elementary Level (NPEGEL) 2003, and the Kasturba Gandhi Balika Vidyalaya (KGBV) 2004, which became an integral part of SSA in 2007. KGBV is a unique formal intervention of providing residential cum schooling facilities at the elementary stage to cover a large section of out of school girls across the country.

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The scheme has inbuilt provisions for holistic development of girls by building up their capacity to exit from persistent intergenerational poverty and illiteracy. It focuses on providing academic and other related skills designed for aesthetic development, self protection, and self reliance. The scheme is meant to enable girls to complete elementary education, i.e. classes VI to VIII. National Evaluation of the Scheme in 2007 and in 2013 and research studies on the scheme undertaken by NCERT (2010-2013) have highlighted that all provisions in KGBVs have stimulated greater demand for enrolment of marginalised girls in Educationally Backward Blocks (EBBs) and in all catchment areas of their locations. In this backdrop, the present evaluation study examined the realistic picture of enrolments of girls in KGBVs and the strategies adopted by different agencies to identify the most needy and educationally deprived girls. The states selected for the study were Gujarat, Andhra Pradesh and Bihar. In these states, the KGBVs managed by different agencies were covered in the study.

The data for this qualitative study was collected using interviews and focus group discussion. In each state (Gujarat, Andhra Pradesh and Bihar), two KGBVs run by different agencies were selected. Focus group discussions were organised with parents, community members, teachers and the beneficiaries of the scheme in each KGBV. Interview schedules were canvassed to senior level State officials to get an in-depth understanding of the procedures adopted for enrolling girls. Structured interview schedules were given to teachers, wardens and girls to know their perceptions about different mobilisation strategies and limitations for enrolment of girls. Efforts were also made to elicit from them whether the selection procedure adopted by the State covered the most needy and educationally deprived girls as per the norms of the RTE Act.

The results revealed that KGBVs have succeeded in generating demand for education among girls from the most deprived sections of the society in the states of Andhra Pradesh, Bihar and Gujarat. Multiple strategies have been adopted by the States for enrolling girls in the scheme. Some of the strategies identified by stakeholders, but are not limited to community mobilisation, included involvement of the local media, door to door campaign, interpersonal contact of teachers with parents, success stories of pass out girls and girls becoming agency of mobilisation for their peers. The other initiatives for enrolling the girls included

the pro-active role of State officers, panchayat members and other senior citizens of the block and the district. In these States the SSA, Mahila Samakhya and different government societies are managing the scheme of KGVB. The results highlighted the need for the implementing agencies to come together on a common platform to share their strengths and limitations. No documents were available relating to the methodology adopted for enrolling girls in the visited KGBVs. The girls, as well as the stakeholders, reported that sometime written, oral assessment or both methods was adopted to know the learning levels of girls. Once the learning level of girls was identified they were grouped accordingly and bridging was done for them to be admitted to Class VI. The period of bridging varied between KGBVs in a State. The bridge courses were developed by Andhra Pradesh in Telugu and the other states mentioned the use of State textbooks for concept clarification and better understanding of subjects related to languages, mathematics, environmental studies, social sciences and science.

The transition of girls from elementary to secondary level was ensured in Gujarat by providing transport allowance and hostel facilities. In Andhra Pradesh, girls continued their education up to the Class IX. The findings revealed that in Bihar a register was maintained to track the girls who graduated from the KGBV.

All the stakeholders expressed that the KGBV Scheme should be scaled up to Higher Secondary Stage to enable girls to complete their schooling. Since the scheme had existed for more than five years in all the States, there was demand for increasing the intake capacity of girls. Also, there is a need to promote unconventional skills in KGBVs. The financial outlay for various parameters of the scheme needs to keep current cost of index in mind. Teachers' availability and their capacity building need to be addressed for concepts clarification and better understanding of different curricular areas.

Career Aspirations for Girls in Rural and Urban vis-à-vis Vocational Education

Principal Investigator

POONAM AGRAWAL*

Vocational and technical education and training systems are viewed as key indicators of youth preparedness for employment as they can provide young girls and boys with the right competencies and equip them for the world of work, thus facilitating smooth school-to-work transition. Post independence, the major recommendation of the first Education Commission (1964-66), popularly known as Kothari Commission, was integrating work experience with education to ensure productivity. The policy document on Vocationalisation of Secondary Education (1976) is a landmark in the history of vocational education in India. The National Working Group on Vocationalisation of Education reviewed the Vocational Education Programme (VEP) extensively and developed guidelines for the expansion of the programme. The National Policy on Education (1968), for the first time, recommended bifurcation of secondary stage of school education into vocational and academic streams. It recommended introducing work education from Classes I to VIII, prevocational education in Classes IX and X, and vocational education as a distinct stream in XI and XII. Its recommendations led to the initiation of the centrally sponsored scheme on Vocationalisation of Secondary Education. The main objectives of the scheme were to enhance individual employability, reduce the mismatch between demand and supply of skilled human resource and provide an alternative for those pursuing higher education without particular interest or purpose. It further emphasised on increasing access to vocational education among the girls.

However, even today there has been no significant achievement in this direction. The enrolment statistics continue to reflect strong

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gender bias in vocational courses. Against this backdrop, this qualitative study examined the aspirations of parents, teachers and girls themselves for girls as career women and studies them in relation to participation of girls in vocational education as compared to that of the boys.

The sample consisted of girl students from standard X, XI, and XII, and their respective parents from a few schools of Chandigarh and Goa. It also included teachers of secondary level as well as vocational teachers. To get a national representative sample, initially one state from each region, north, south, east and west, was selected, but later due to operational difficulties, only Chandigarh and Goa were purposively selected as these states had Vocational Education Programmes. Following stratified random sampling (the strata being rural and urban), from each State two schools, each from rural and urban areas, were randomly selected. Schedules for collecting the data from the State/UT Directorate of Education were prepared in order to assess as to how the VEP is being implemented, in how many and which schools, which schools are in rural/urban areas, which schools are coeducation schools or single sex schools, etc. Based on the information from the concerned Directorate, sampling of schools was done. Further, information was collected from the girl students (Class X and XI-XII) studying in both vocational as well as general streams, and their parents and teachers. The sample of X standard girls was randomly selected to elicit opinion on their selection of vocational or general stream after giving them an orientation about the vocational stream and the vocational courses. To assess teachers' attitudes, 20 teachers from secondary stage were randomly selected, while all the 10+2 teachers from vocational stream of selected schools were included. For data triangulation, some of the questions were common to all. The schedules were pilot tested before using for data collection.

Results revealed that majority of the respondents believed that the goal of education for girls is to make them economically independent, to increase their chances of employment, and to widen their knowledge and skills. Hence, they viewed vocational courses from employment perspective and its merit lay in securing employment in the job market. These choices supersede the traditional narratives (e.g., to make them a better homemaker, to make them better mother and/or to increase their prospects of marriage with a great margin). On the whole, while a majority of the

parents in both the States did not have problem with co-educational schools and did not prefer schools only for girls, about 13.5 per cent respondents did not like co-education and 22.5 per cent gave preference to girls' schools. As regards the choice of streams, the subject choices of girls, by and large, matched with their parental choices, wherein, the top three choices were vocational course, science and commerce while the last three choices were arts, home science and agriculture. Surprisingly, none of the parents wanted their daughters to study vocational courses on agriculture. The parents further opined that current vocational courses were not suitable for girls and hence advocated for a major restructuring in the current vocational courses, which can accommodate girls also and add to their employment perspective in the job market.

The findings of the study have implications for increasing the participation of girls in vocational courses, especially in rural areas. The study will help in restructuring vocational education to match societal and individual (girls) aspirations. To attract sizeable segment of female population to vocational courses, a non-restrictive policy need be adopted. A non-restrictive policy will encourage widespread participation of girls so that girls get access to a wider range of vocational courses enhancing their productivity, economic independence and individual prosperity. To meet the huge targets of skill development in the country, a plurality of models of implementation of vocational education should be given preference. As both the parents and the girls expressed their choice towards self employment, the policies need to be suitably modified to facilitate this in the form of making the soft loans available, developing marketing channels, etc.

Book Review

Enriching Primary Schooling in India

by Singh, L.C., and Meenu Dev

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The present book, that addresses the issues of primary schooling for the teachers and teacher educators, is altogether different from other books on the subject. The preface of the book itself sets a tone for the whole composition and describes how it is different in terms of its approach, novelty and cogency of thoughts, and touches the core issues and problems that coexist with the teaching learning process at the elementary level. The book seeks to posit and answer various queries that normally crop up in the field of primary education from time to time, despite sincere efforts being put by the state and central governments to resolve them and the constitutional provisions in place starting from Article 45 of Indian constitution to Right to Education Act. The book also sets about the pragmatics for removing the hurdles in the area of primary education.

Divided into eleven chapters, the first four chapters takes care of the out-of-school children, the government efforts to meet the challenge of educating them, inclusive education and mainstreaming, and education for integration. This is followed by early pedagogical interventions, pedagogical inputs required at the elementary level in next two chapters. ICT related actions appear in two chapters thereafter that cover capacity building in ICT and role of ICT in school education. The remaining three chapters of the book are devoted to assessment and evaluation, innovative practices in teaching and discussion on revamp of schooling initiatives. All these chapters enlightened the readers by their facts and figures, presentation, and innovative thought processes. The book presents convincing viewpoints with a new perspective.

The first chapter on out-of-school children presents historical perspective, gender gap, the concept and nature of out of school children. It also gives the demographic classification of out of school children, early main streaming efforts, alternative provisions and a case study. The various government initiatives to reach to out of school children and school dropouts such as non formal education,

residential and non residential bridge courses, alternative schools, human development centres, Right to Education act etc, are accessible in chapter 2. This chapter also contains a few select case studies, problems of implementation, and age appropriate enrolment of out-of-school children. The third chapter on the inclusive education and main streaming reflects upon legislations and constitutional provisions, other initiatives, non detention policy, optional examination policy, ICT intervention, concerns and challenges of mainstreaming, special training for out of school children. The concept and dimension of integration together with integration strategies and the teachers' role have been the focus of the subsequent chapter.

The fifth chapter on early pedagogical interventions and exciting activities has paved a way for understanding special provisions, pedagogical interventions, needed pedagogic reforms, and the language of instruction, and also reflects upon various effective activities for the primary stage learners. The sixth chapter on pedagogical inputs at elementary stage discusses learner centred pedagogy, critical pedagogy, experimental and participatory learning, problem solving and investigatory approach, peer learning and other such approaches at one place. The subsequent chapter on capacity building and ICT integration stresses the importance of capacity building as an important aspect reflecting on face to face programmes like orientation for development of material, pedagogical methods, inter disciplinary approach, and exposure to community work with key government initiatives. The chapter talks on mission 2007- Every village – a knowledge centre. The preparation needed for any assessment has been discussed in the next chapter. This chapter has beautifully described the early level assessment profile of out of school children and learning support guidelines for them. This chapter also talks about assessment for learning and has included a variety of examples and exemplars, tasks and tests, skill based strategies and practices.

The eighth chapter of the book on innovative practices in teaching presents traditional practices such as learning together, soft skill strategies, concept networking, and peer tutoring, on the one hand, and emerging practices such as constructivist teaching, reflective teaching, techno- pedagogy, on the other. Revamping primary schooling initiatives in action is the focus of the subsequent chapter that describes the segregation syndrome, fate of inclusive education, quality education determinant with a thematic approach

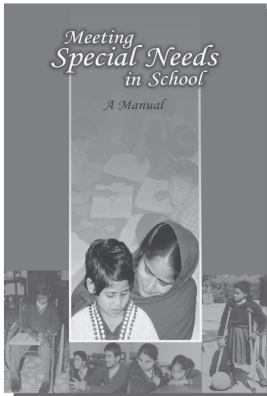
on a reforming teacher. The chapter also describes the recent initiatives and the challenges before the system. The book ends with promises and prospects of ICT in teacher education and school education with modalities of implementation and integration of ICT in primary as well as elementary education in India.

The book is certainly a good collection of literary work by Prof. L.C Singh and Meenu Dev. The case studies cited in the book are real eye opener for a beginner and give a deeper insight to every reader. The book is an excellent collection of material on different aspects of primary education and contains a variety of unique features giving guidance to all those who are working in the area of elementary education.

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