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The Journal of Indian Education (JIE) is a reviewed periodical published in May, August, November and February by the National Council of Educational Research and Training, New Delhi.

NCERT encourages original and critical thinking in education. JIE provides a forum for teachers, teacher educators, educational administrators and researchers through presentation of novel ideas, critical appraisals of contemporary educational problems and views and experiences on improved educational practices. Its aim include thought-provoking articles, challenging discussions, analysis challenges of educational issues, book reviews and other related features.

The Journal reviews educational publications other than textbooks. Publishers are invited to send two copies of their latest publications for review.

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EDITOR'S NOTE

The *National Curriculum Framework* (2005) advocates that a policy of inclusion needs to be implemented in all schools and throughout our education system. It visualises that schools need to ensure that all children, especially the differently abled children from marginalised sections and children in difficult circumstances get the maximum learning opportunities. The present issue of JIE focuses on inclusion and making learning teaching more meaningful and child centred.

Sangeeta Karmakar and Vandana Saxena in their paper present analytical review of education policies and acts related with education of children with disabilities in India. The paper concludes that our policies have not been able to address the diversity of students completely. A research paper contributed by Ravneet Kaur elaborates on how persons with disabilities are portrayed in textbooks. The paper suggests that textbook writers need to be more sensitive while depicting people with disabilities in textbooks.

Under the *Sarva Shiksha Abhiyan (SSA)*, we are committed to provide education to children with special needs in general schools. However, children with severe disabilities are not able to avail schooling facilities. Anita Julka in her research paper discusses the views of parents about 'Home Based Education', a Government of India initiative under RTE Act to provide education for such children.

Aerum Khan explores the use of technology (Web Tools) in teaching-learning language especially for differently abled children.

The Right to Education Act was enacted in 2009 to provide education to all children up to elementary level. But a large number of people are still not aware about its implementation. Vivek Tripathi and Asha KVD Kamath highlight the awareness of Muslim community about RTE Act 2009.

We face conflicting situations in our schools and classrooms which affect teaching-learning process especially the wellbeing of learners. Benudhar Chinara and Kishwar Badakhshan reflect on the common types of conflicts in classrooms at the elementary level. The paper suggests some strategies to resolve these conflicts.

Richa in her article titled 'Children's Laughter and Language of Humour' traces the role of humour in learning.

Language is an essential tool for knowledge construction. However, it is hardly given due importance in teaching-learning science. B.K. Parida and J.K. Mohapatra in their paper discuss various issues related to language in

teaching of science. R. Meganathan explores whether teacher learning takes place in in-service training programme and how it takes place. This paper also analyses the theoretical foundations of teacher learning in the context of English language. Anamika Yadav in her research paper compared three models of a child centred method 'Peer Tutoring' for teaching science in Indian schools.

This issue contains two book reviews. Kirti Kapoor reviewed a book "Only One Life to Give" written by Arun Kaul. The book includes 15 stories focussing on human values. Kavita Ghosh wrote the review of the book "Becoming a Reflective Educator: How to Build a Culture of Inquiry in the Schools".

We hope this issue will motivate you to join the forum as a contributor.

Academic Editor

BOOK REVIEWS

Only One Life to Give

AUTHOR

Wing Commander Arun Kaul (Retd)

PUBLISHER

Frog Books, Leadstart Publishing Pvt. Ltd., Mumbai, India

YEAR: 2013

PAGES: 190, Rs 145, ISBN 978-93-82473-76-3

The book has a total of 15 stories that are presented in four distinct sections. The first section is 'Touching the Sky' and contains stories of self-sacrifice that emerge from the experiences of various individuals. The second is 'Within the Family' which explores dynamics within families, sacrifice for others and relationships between family members. 'Strangers in the Fold', the third section gives anecdotes of goodness and helpfulness shown by strangers for fellow human beings. 'Women - What It Takes' is the fourth section dedicated to women of fortitude that have displayed extraordinary strength and character.

A majority of the stories present the narrator's account of events in different situations and contexts. The emphasis is on describing characters, situations, and bringing to the fore virtues of selflessness, sacrifice, simplicity, kindness, determination, and an unflinching willingness to

lend a helping hand. The stories are largely set in an era that predates the computers, telecom revolution, and the concept of India as an economic powerhouse. Hence, the reader often encounters quaint settings and simple folk that believe in upholding traditions but also come across as cheerful but naïve.

The book begins with stories that offer an anecdotal perspective on experiences that one may encounter during a stint in the Indian Air Force (and other services). This selection is not entirely representative of life in the Armed Forces; however, it is diverse in itself. With a style of writing that is descriptive, and offers several details, the author succeeds in recreating the contexts in which he has witnessed virtues of dignity, selflessness, and humanism in people at different ranks in Indian Air Force. The characters in the stories have been etched out well. One of objectives of the book is

to highlight examples of virtuosity, often even in the face of difficult times. However, the stories stand out as strictly anecdotal, and the reader is sometimes left questioning the idealism of the characters or the narrative highlighting virtues. For instance, there is a lack of critical thinking in the narrative which is desirable to give a well-rounded perspective especially with respect to some of the actions of the protagonist in 'Man of Honour' and 'Burden of Goodness'. The path chosen by some of the characters instinctively raises questions and should be challenged for the sake of impressionable readers. In the two stories mentioned above, perceived selflessness may be interpreted as stubbornness, sensitivity or an excessively emotional response, which isn't necessarily the only response, or the correct response to a difficult situation.

Taking a step back in time from the author's experiences in the Air Force, the section 'Within the Family' present stories that give an insight into the values and experiences of his family members. The stories present the actions of his parents in an extremely reverential tone. There is sufficient justification for that with instances of his father making extra efforts, and devoting himself entirely to help the underprivileged and marginalised. However, the anecdotal account in the third person does not raise critical questions about his father's actions. This leaves the reader questioning some of the

messages put forth by the story. On the other hand, the story 'A Hole in the Heart' recounting the experience of his mother, a headmistress in school in small villages in the country, paints an admirable picture. Going beyond the call of duty, the actions of the headmistress can be described as heroic. The persistence and commitment to a cause is praiseworthy. Again the writing in this section is simple; some clichés repeat themselves, as does certain background information that could be avoided.

A few stories from the section 'Strangers in the Fold' stand out in the collection. Not only for the quality of writing, which is simple, but because of some meaningful messages that accompany the stories. This is evident in the story 'Bonding with the Bonded' where one can see the main character 'Kaka' use his position of respect in the community as an instrument for positive social change. The story is set in 1960 which has a few pleasant examples of innovative ideas for extending help to those in need of money or support. Similarly, in 'Only the Poor are Rich', the reader is presented with the example of a simple character 'Ramprasad' who derives meaning and happiness in his life by supporting people in their time of need and distress. The idealism, as it is presented in the story appears to be from a bygone era, and these stories serve a purpose by bringing them into sharp focus. On the other hand, the story 'The Retreat' which

attempts to present moral lessons through two narratives interwoven could benefit immensely from a more thoughtful implementation of the idea.

Overall, the writing in the book is easy to read and accessible. The author is successful in providing descriptions of surroundings and actions in the stories. However, from the perspective of English language teaching/learning there are times when the language used is colloquial. There are also occasions when the author uses phrases and/or words from the lexicon of the Armed Forces, or recycles clichés. This is noticeable; however, it is not a major distraction while reading the stories.

By virtue of offering a window into the world of those committed

to serving their fellow humans, and doing more than fulfilling their responsibility the book triumphs virtues that are eroding in modern society. Hence, as reading material, it can certainly make a contribution in shaping the moral compass of young learners. However, one limitation of the book is that it does lend itself to highlighting these values in contexts where the reader should be exposed to equally important issues such as environmental concerns, inclusion, gender issues, health and nutrition etc. The collection is an attempt to encourage people to share goodwill and extend care for those who need it and help build a tight knit society.

KIRTI KAPUR

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Becoming a Reflective Educator: How to Build a Culture of Inquiry in the Schools

AUTHOR

John W. Brubacher, Charles W. Case and Timothy G. Reagan

PUBLISHER

Corwin Press, INC.

YEAR: 1994

PAGES: XIV+144

There is a host of literature in the recent past that laid emphasis on the importance of reflective abilities and disposition in teachers. 'Reflection' is increasingly regarded as one of the core aims of pre-service teacher

education programmes and is marked as being an essential quality in in-service teachers.

This book is a remarkable account of why and how educators become 'reflective' practitioners. The use of

vivid case studies, their follow-up analysis and simultaneous linkages with the conceptual understanding of 'reflective practice' stands as the core strength of the book. The way it takes the reader on a literary journey of peeping into the ground dilemmas faced by the teacher and their struggle to resolve them, is simply engaging and refreshing.

The first chapter of the book titled 'Reflective Practice and the Teacher' lays the ground for the coming chapters by describing why 'reflective practice' should be a desirable goal for teacher education. It begins with the portrayal of six case studies that basically illustrate the 'Continuum of reflectivity' that these teachers engage in. It talks about the nature and manifestation of reflective practice. It further depicts the possibility of differential ways in which novice and experienced teachers get engaged in reflective practice. Reflection as a complex skill can be used to deal with complex dilemmas of curriculum diversity, professional ethics and reporting child abuse.

This chapter argues that teaching just like other profession is a combination of both artistic and technical skills. The role of a teacher as a decision maker is also highlighted while emphasising the role of reflective thinking in this process. Thus, a teacher must justify her/his actions in the class by being reflective about it.

The last part of the chapter deals with the theoretical insights

on reflective practice. Theoretical approaches of John Dewy, Donald Schon, Van Manen, Killion and Todnem, Georgea Spraks – Langer and Amy Colton are discussed by briefly explaining the way reflective practice is perceived by each.

Chapter 2 is titled 'Toward a Culture of Inquiry in the School' and it introduces few very captivating case studies wherein the teacher is engaged in a conscious and arduous inquiry in their class and school. The case studies differ from each other on account of triggering problem and context. However, it is the willingness to reflect and improve the practice that has fuelled each of these inquiries. A brief discussion of positivist and naturalistic tradition of inquiry is presented. However, focus is brought to the realisation that inquiry and its objects are placed in a social and normative context. Inquiries of all kinds, whether quantitative, qualitative or action research make certain demands on the part of the researcher or inquirer. Intellectual curiosity, motivation, openness in inquiry and openness to challenge are further described as few of the central characteristics necessary for an individual to engage in inquiry.

Moving on from individual characteristics akin to inquiry, the author describes the overall characteristics of schools that promote systematic and ongoing culture of inquiry. Such schools look at inquiry as a conscientious, collaborative and continuous exercise to ensure

reflective and analytical practice. The point is further made explicit by sharing three more case studies wherein the teachers are engaging in classroom and school based inquires adopting different methodologies as per the nature of the problem.

'Transformational Curricula and Instruction' is the title of Chapter 3. In this chapter, an attempt is made to put forth the role that reflection plays in issues pertaining to curriculum and instructional strategies. The chapter begins on a note of three case studies and further builds an argument that irrespective of the socio-cultural and economic milieu of the school, it is always desirable to probe into the curriculum and instructional innovation and bring desirable changes. Theme based teaching or project based teaching with its interdisciplinary focus emerges as a strong curricular innovation. Teachers are urged to look beyond the monopoly of textbook in the class and explore ways to make curriculum engaging, contextual and vibrant. As the authors describe; 'ownership' (p.70) of learning, it should be increased on the part of the learners. The common scenario of discrepancy of planned, enacted and experienced curriculum is explained and the need for infusing each stage with a reflective approach is established.

Chapter 4 of the book titled as 'Transformational Leadership in the School' brings the focus of the reader to the immense importance of leaders and administrators in generating a

sense of reflection in the teachers as well as creating an overall culture of reflection in schools. By taking examples of three case studies, a lucid explanation is given about how the power relationships that exist between administrators, principals, teachers, parents and students define the overall culture of the school. Leadership plays a central role in making an organisation effective, efficient with sound moral grounds. Three different types of leadership as given by Burns (1979) are discussed; it includes transactional leadership, transformational leadership and moral leadership. Transformational leadership, as also the title of the chapter suggests, is the one that is highly desirable and gives 'reflective practice' its due place in the overall ethos of the school. Transformational leadership is one in which 'leaders and followers raise each other to higher levels of morality and motivation' (p.87).

The authors very aptly state; "Transformational leadership is critical for principals and teachers since so many of the problems confronting education are basically questions of values, ethics, and vision" (p.87). Reflection is seen as a potent process that can solve problems of education and schools and is an invariable part of the transformational leadership. One crucial example of Kitchener and King's reflective judgment model is given with the emphasis that leaders must understand that individuals

who are engaged in problem solving, act on the basis of different levels of assumptions (as given in the model). Such realisation and identification help the leaders to guide and support the individual according to the level they are at.

'The School as Community and the School in the Community' makes the 5th Chapter of the book and addresses a very pertinent issue of school and community as an aid to further the process of reflective practices in schools. Schools are social institutions which are rooted in the socio-cultural and economic milieu of the society and are very much linked to the community that they cater to. School and community are not isolated independent systems but are essentially woven with each other. When the link between the school and the community (people of the community, organisations and local groups) is strengthened by mutual trust, decision making and sharing of resources what emerges is an efficient, effective and democratic school. The authors argue that the problems faced in the schools of America should be seen from multiple angles. Further, meaningful solutions can be rendered only when schools fully recognise the need of taking community into the loop to understand the problems and pool ideas and resources to deal with them. Whether a school understands the wants and needs of the groups that the school is comprised of makes it either a progressive or a conventional

school. Maintaining status quo and furthering the interest of chosen segments of society is a biased and non-critical approach. The role of teachers, principal, superintendents and other administrators combined together decide what kind of association is geared between the school and the community.

Chapter 6 titled as 'Values, Ethics, and Reflective Teaching' talks about the core issue of ethical dilemmas as experienced by teachers. Ethical dilemmas, confrontations and conflicting values all form a major portion of the life of a teacher. In the wake of such situations, a teacher has to act reflectively and reach to some solution. An excerpt from the book makes the connection of ethical issues resolution with reflective practice very vivid.

"Ethical decisions and decision making are inevitably necessary part of teaching, as we have seen, and, at the same time, ethical decision making is as resistant to 'cookbook' types of approaches as are other aspects of good teaching. In short, the same kind of concerns and considerations that affect reflective practice in general will affect ethical decision making in particular" (p.127).

Moreover, sorting an ethical dilemma is not about personal claims but about value judgment; it should be taken in the light of best resources possible. It should be defended and supported with evidence as well as sound logic. The case studies presented in the chapter showcase the

vastly different ethical dilemmas and the ways to respond to them. Quite ironically even when the dissolution of the dilemma does include some level of reflective thinking, still it doesn't mean that the final decision will be right. However, good ethical judgments can be found if opinions are sought from a neutral party preferably an expert of the concerned area and if the decision is not rushed to. Two major theoretical perspectives on ethical decision making are presented; consequentialist ethical theories and non-consequentialist ethical theories.

'Toward Reflective Practice' is the title of the 7th and last Chapter. This briefly written chapter very aptly raises the view that though there is no secure way as to which one is sure to become reflective. However, as a basic requirement, reflective educators are the ones who are constantly probing into their own understanding, methods and assumptions. Strategies such as journal writing, portraiture (teachers' teams observing each other, writing and sharing observation with each other), action research and professional development endeavors encouraging teachers to solve the critical issues confronted the class and school, are advocated to make reflection an inseparable part of teaching profession.

So, overall in these seven chapters the book tries to put across the notion of reflective practice from various dimensions and makes a very persuasive case in favour of reflective practices in the school. Each chapter covered in the book makes a valuable contribution in understanding what 'reflection' entails and why it becomes the central phenomenon when one talks about good teachers or good schools. Written in a comprehensible manner, this book makes a very good use of case studies to give a realistic feel to each chapter. Case studies revolve around a plethora of issues and set the tone of the chapter.

This book has the potential to strike a chord with pre-service and in-service teachers, principals and administrators. Written about one of the most desirable aspects of teacher education and teaching i.e. the skill and disposition to reflect, this book is a very apt read for anyone who is concerned about the quality of their own teaching and wishes to make a worthwhile contribution in uplifting a culture of inquiry in their organisation.

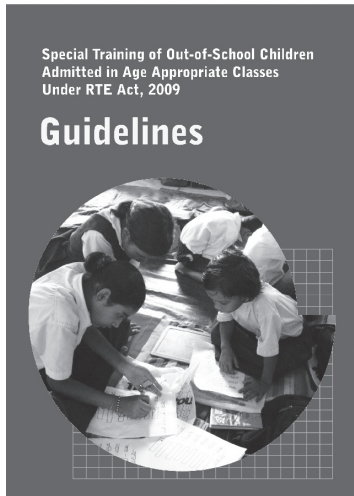
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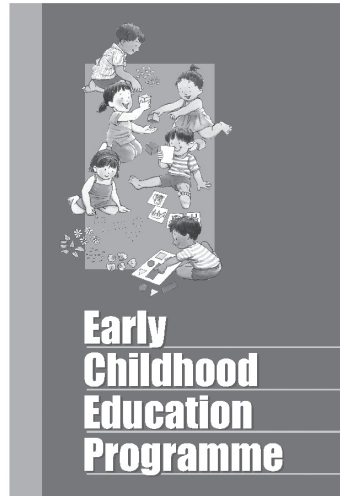
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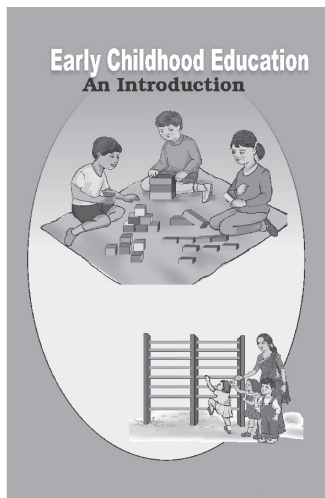
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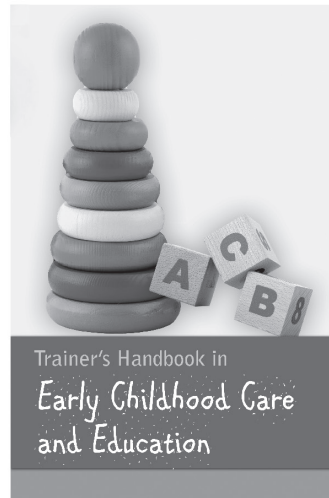
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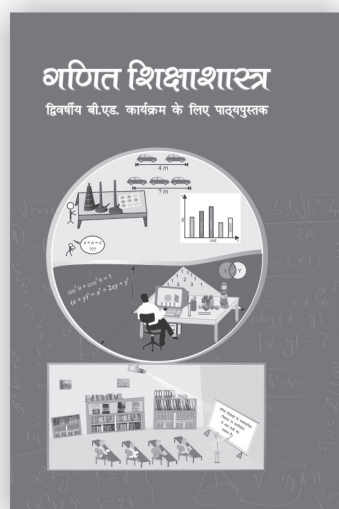
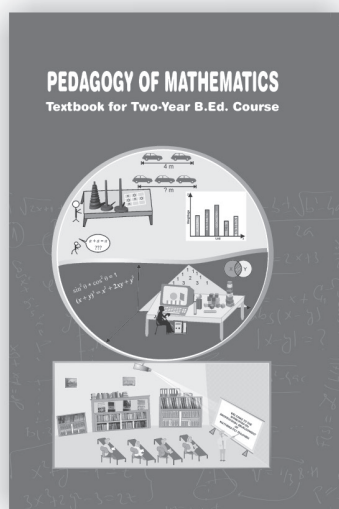
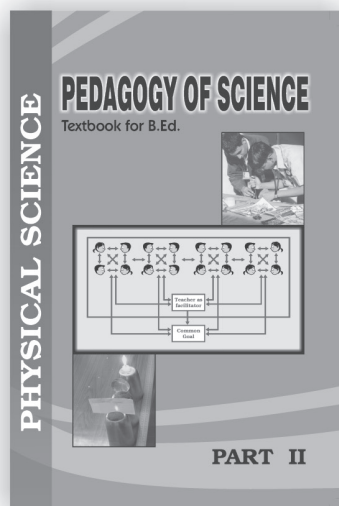
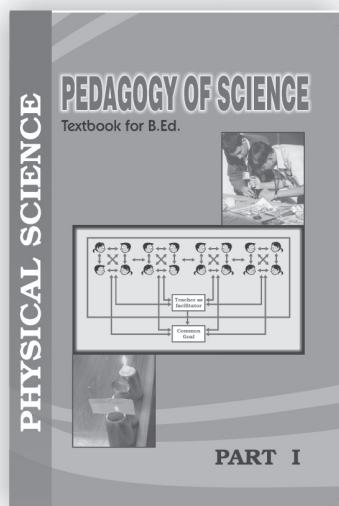


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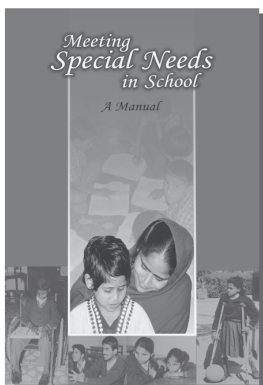
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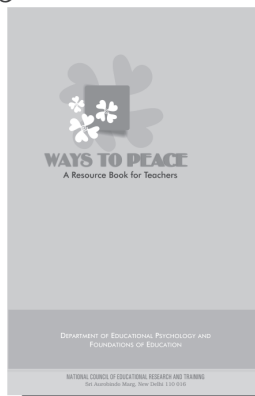
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Critical Analysis of Education Policies and Acts Related to People with Disability in India

SANGEETA KARMAKAR*
VANDANA SAXENA**

Abstract

“The majority of people with disability have the reciprocity of poverty producing disability, and disability resulting in poverty.” (Bonela, 2014)

Real GDP in India expanded 7.4 per cent in the fiscal year 2014-15. Despite this development, the majority of people still live under the poverty line. Poverty is interlinked to disability. Also statistics given by census show the decadal increase in the population of people with disability. Since India’s independence, many policies were structured, but neither the inclusive education system is established nor did the goal of “Education for All” accomplish yet. In-depth analysis of the education policies for people with disability is important to derive the information about course of special education and inclusion in India. In this paper, a historical review of the policies, acts and deeds which have caused an impingement on the life of people with disability in India, has been presented. It has been a significant focus of several international policies and India is signatory to many of these international declarations. So, it is imperative to understand the ways in which the international policies have influenced the policies and practices across India. The contemporary scenarios pose atypical challenges for effectively and efficiently addressing the diverse needs of individuals with disability which in itself is too heterogeneous. This raises the requirement for a critical evaluation of the emerging issues and challenges with specific reference to children with special needs on one, two or multiple grounds. These will include a range of special needs emerging due to an interface of physical, cognitive, social, cultural and economic circumstances of the individuals.

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INTRODUCTION

Disability has been understood in various contexts and different terms have been used for people with disability in different places and time. According to the Census 2011(Registrar General of India, 2011), there are 2,68,10,557 persons with disability in India who constitute 2.21 per cent of the overall population. This includes eight different types of disabilities. An approximated 69.5 per cent of people with disabilities live in the rural regions of the state. It is imperative to see a reflection of these data in the policy of education. It is likewise important to get an intellect that how education policies concerning people with disability have gradually developed and acquired a shape. There are spiritual, socio-historical and political facts which can be utilised to get an idea about the course of special education for the education of people with disability and inclusion in India. In this paper, a historical review has been presented of the policies which have an impact on the life of people with disability in India.

We have a number of models of disability such as moral, medical and social models which evolved as the time changed in India. It is constantly believed among a majority of people that disability is a curse, social stigma, an undesired problem, and caused by previous birth's bad *karmas*. Only in social model, shortcomings of the surroundings

were emphasised which include attitudes of the community, policies and processes of organisations towards persons with disability. "The traditional joint family, which provided an inbuilt system of supporting people by fostering the old, sick and disable" (Karna, 2001), yet disabled people continued to remain neglected and ridiculed. The Hindu society in India is built of caste segments in a hierarchical social system. In certain regions of India, during the stage of ancient history, "Gurukul" system utilised to be the education institutions in which scholars, primarily; upper caste boys lived in the teacher's home and learnt skills relevant to their caste groups. In the 17th century, there were many institutions like Nalanda, Takshashila, etc. notwithstanding, no documentation is available about the presence of people with disability in these indigenous institutions of basic and higher instruction.

HISTORIC BEGINNING DURING BRITISH RULE

The earliest documentation available is from the period when India was under British dominion. It is in 1869 that the first school for the blind was founded. As per Disability Status Report (RCI, 2012), in the British period of late 19th century, very few services were available for people with disability from private sectors and non-governmental organisations (NGO's) on charity basis or as religious deeds. During the 1800s, all the special

schools for people with disabilities included only physical disabilities; in 1918, the first school for people with intellectual disabilities came into existence. In 1909, for the first time an effort was made in the legislation for establishing inclusive education in India. Gopal Krishna Gokhale, in the Imperial Legislative Council enacted a bill under the Indian Council Act of 1909 to make primary education compulsory and had a proposal of funding for compulsory education for all. Unfortunately, this bill was not passed. In 1944, Sargent Report (Central Advisory Board of Education, 1944) stressed on the education of children with disabilities so that they can be integrated. In this period, many trade schools and workshops were started in urban areas for children with disability but because of the expensive fees, children with disability of weaker sections and rural areas could not attend these facilities. Even when India got independence, the context for people with a disability did not vary a great deal. They were least catered and there were no evidence of special provisions or services for people with disability at the time of partition.

POST-INDEPENDENCE PERIOD IN INDIA

In independent India, governed by constitutional rights, it is the major responsibility of the state governments to provide education, and the union (central) government kept on taking the responsibility for the coordination in technical and

higher education and to form the educational standards. Sharma and Deppeler (2005) mention that “the segregated facilities for education of children with disabilities did well after India’s independence from the Great Britain in 1947.” In 1960, a division called the Ministry of Social Welfare was created, which was given the responsibility for the “marginalised” sections of society. It primarily focused on rehabilitation and started giving grants for instruction of minors and people with disability without giving emphasis on inclusion of people with disability. Kothari Commission (1964-66) (Education Commission, 1966) stressed the need for the development of a comparatively small but effective programme for the education of people with disability for equalisation of educational opportunities. Further, the Ministry of Education introduced a new division namely Ministry of Social Welfare (MSW) which took the responsibility of assisting NGO’s. This transfers the responsibility of education and ministrations of people with disability and moved at once against the report and recommendations of Kothari Commission about inclusion, or at least integrated education. After that the Integrated Child Development Scheme (ICDS) was initiated in 1974 and was later revised in 1992. MHRD (1992) concedes that this scheme endeavours to provide pre-school and health facilities to weaker sections of the population, but it did not embrace people with disabilities. This scheme

emphasised that children with mild and moderate disability should be grouped but children with severe disability must be catered separately. Thus, it was not totally inclusive, and generated stress among regular and segregated special education schools. Alur (2002) asserted that formation of MSW and ICDS stops the execution of action plan of Kothari Commission. Till 1970s, these schools were the primary method of service delivery for children with disabilities. According to Pandey and Advani (1997), by 1991 there were about 1,200 special schools for students with various types of disabilities in India.

EDUCATIONAL POLICIES IN INDIA

In India, the first national policy came in 1968 and was called NPE (National Policy on Education) 1968. It endeavours that “Educational facilities for the physically and mentally handicapped children should be expanded and attempts should be made to develop integrated programmes enabling the handicapped children to study in mainstream schools.” (MHRD, 1968). In 1974, another scheme was introduced namely the Integrated Education of Disabled Children Scheme (IEDCS) created by the Ministry of Welfare, it should not to be confused with ICDS (above). IEDCS aims to cover up children with disabilities under the regular system of education in 27 states and 4 UTs (MHRD, 1992a). Though this scheme caters 15,000 schools and

has enrolled 60,000 children (RCI, 2000), Rane (1983), in his evaluation of IEDCS programme in the State of Maharashtra, reported that there was a lack of trained teachers, materials and equipments. Various departments related to this scheme also showed poor coordination which leads to failure of IEDCS. It was reported by Mani (1988) that till 1979-80, this programme benefitted only 1,881 children from 81 schools across the country.

In 1976, a Constitutional amendment made education a combined responsibility of both the governments — states and union. Article 45 of the Indian Constitution suggests that all the children have right to get free and compulsory education, which include people with disability. Parliament adopted The National Policy on Education (NPE) in May 1986. This policy also stressed on abolishing the discrimination and give equal opportunities to all by providing facilities to those who have been neglected. NPE states that children with “mild” disabilities should be permitted to receive an education in regular classrooms, whereas children in the class of “moderate to severe” disabilities should be placed in specialised schools. One can say that this policy contradicted Article 45 of Indian Constitution, which mentioned equality in education as a fundamental right for all, and not just those with “mild” disabilities.

NPE was created in 1986; it was not implemented until the Programme

of Action (POA) was created in 1992. The POA (MHRD, 1992b) suggested a pragmatic principle for placement. It suggested that children with disability who can be integrated in regular school must get education there only. And the children with disability who face problems in acquiring skills such as daily living skills, communication skills and basic academic skills, etc. may be entitled to special set-ups but when they learn these skills and can be integrated in regular schools, must be shifted to regular schools. However, POA did not define what constitutes basic living skills. The POA envisaged provision of an additional 400 special schools at the district headquarters. However, because of limited resources, the concerned authorities failed to establish even a single new special school. According to Verma, Christopher and Jha (2007), schools had opened many resource centres for the weaker and marginalised children which aimed to provide learning resources after regular school hours, but not during the normal school day, eliminating the possibility of inclusion for these students.

In 1993, the Supreme Court's Unnikrishnan judgment came which reads that Article 45 must be read in conjunction with Article 21 of the Constitution, where Article 21 states that "No person shall be deprived of his life or personal liberty except according to procedure established by law."

This law strengthened the educational welfare of weak and

vulnerable section of society, including persons with disability.

SPECIAL ACTS AND POLICIES RELATED TO PEOPLE WITH DISABILITY

In 1987, an act came for mentally ill persons called The Mental Health Act. This Act revoked the Indian Lunacy Act, 1912 with an objective to consolidate the law, enacted for mentally ill persons. The same year, in 1987, the MHRD allied with National Council of Educational Research and Training (NCERT) and The United Children's Fund (UNICEF) framed a Project for Integrated Education for the Disabled (PIED) which strives to reinforce the IEDC plan. PIED adopted a "Composite Area Approach" that transformed all regular schools into integrated schools within a specified area. According to Azad (1996), approximately 13,000 children with disabilities received educational services in regular schools. More than 9,000 teachers received training to work with children with disability in integrated schools.

In 1992, Rehabilitation Council of India Act (RCI) came and it became a statutory body in 1993. It notes that anyone offering services to people with disability, who do not have qualifications recognised by RCI, could be prosecuted. After three years of maintaining the same spirit, Persons with Disabilities Act (PWD) 1995, (Ministry of Law and Justice, 1996) stated to protect and encourage economic and social rights and made provisions of education,

employment, creation of barrier free environment, social security i.e. complete participation and equality of the people with disability. This Act also protects the right of children with disability by ensuring that whoever, fraudulently avails or attempts to avail, shall be punishable.

PWD acted as a catalyst for various other projects like “District Primary Education Program” (DPEP). In order to expand educational opportunities for differently abled children, the Central Government’s last Five Year Plan (1997-2002), set aside 1,000 million rupees specifically for the provision of integrated education. DPEP was a combined effort of the Indian Government’s Department of Education and the World Bank. The primary aim of the DPEP was to provide “education for all” by the year 2000. DPEP (2001) asserted that the main focus of DPEP was laid on the inclusion of children with mild to moderate disabilities. According to the World Bank (2007), by the year 2006, the DPEP act was enacted in 23 districts in 3 states; Rajasthan, Orissa and West Bengal, and 6,00,000 children with disabilities were enrolled and mainstreamed. Kumar, Priyam and Saxena (2001) concede that in India, the DPEP was enacted in 240 districts across 16 states. Despite this, surveys mentioned a fall in growth at the primary enrolment stage in most Indian states.

In 1999, National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and

Multiple Disabilities Act came. Later, a national level body was constituted. This Act is valid throughout India except Jammu and Kashmir. In this Act, definitions of terms such as ‘autism’, ‘cerebral palsy’, and ‘Persons with disabilities’, etc. were clarified. Ministry of Social Justice and Empowerment (MSJE) 1999 asserted that this trust provides financial assistance for these four disabilities only but it introduced various schemes namely “Reach and Relief Scheme” and “Samarth Scheme”, etc. Majumdar (2001) analysed that only few facilities like government scholarships in some institutions for students with disability were available but there was not a single good scheme for the people with mentally disability. In 2002, education became a fundamental right for all children aged 6-14 years in the 86th amendment of Constitution.

OTHER SCHEMES AND PROGRAMMES

Sarva Shiksha Abhiyan (SSA), an initiative which means “Education for All.” was initiated by the Government of India, with the cooperation of World Bank. SSA has been operational since 2000-2001 as an intervention programme. SSA cannot be called a disability-specific programme. It is a disability-inclusive programme which comprises of specific facets in favour of people with disabilities. SSA (2005) asserted that under SSA, many NGOs were promoted to get the goal of universalisation of education. Integrated Education for

Disabled Children (IEDC) ascertained a range of activities by these NGOs. Aim of IEDS was to foster training of teachers about teaching techniques like individualised education plans (IEP). Under this, assistive devices such as hearing aids, spectacles, wheelchairs, braille kits, etc. were also distributed. But unfortunately no IEP was practised and very few children were benefited by this scheme. According to Kohama (2012), ₹ 1,200 were allocated per annum per child with disability but practically there was no provision that would ensure that it will be spent on the children with disability. In addition, SSA has a 'no rejection' policy which means the children of 6-14 years cannot be turned away from schools for any reasons, including children with disability. Though this policy is inclusive, but to a large extent it is contradictory to the PWD, which aimed at the most appropriate environment for the student.

The MHRD also drafted the Action Plan for Inclusion in Education of Children and Youth with Disabilities (IECYD). This plan specifically looks to move from integration towards inclusion. Under this plan, adequate number of teachers were trained in inclusive education. This plan steps outside the Indian Constitution and includes students with disabilities outside the 6-14 age-range. 'One of the major contradicting elements for this policy is that IECYD allows children with severe intellectual disabilities to receive home-based training.'

(Kalyanpur, 2007). In 2006, National Policy for Persons with Disabilities came which stressed on prevention of disabilities, rehabilitation and women empowerment.

REFORMING PAST SCHEMES

In 2008, IEDC reformed into the Inclusive Education of the Disabled at the Secondary Stage (IEDSS). It went into effect in 2009. It aims to enable all students with disabilities, after completing with elementary schooling for eight years, to get entitled for an additional four years of secondary schooling in an inclusive and enabling environment. This is the first policy that specifically admits the value of secondary education for people with disability. IEDSS came as there was a paradigm shift from charity to rights approach for people with disability.

Next year, in 2009, another scheme called RMSA (*Rashtriya Madhyamik Shiksha Abhiyan*) came to endeavour universalisation of education at the secondary and higher secondary stage and for improvement of education with special references to weaker and marginalised sections of the society and girls with disability residing in rural areas.

There were many other policies and bills which are not specifically for people with disability but these are beneficial for all, including people with disability like Right to Education Act (RTE) which was passed in 2009 and put into full effect in 2010. MHRD (2009) pointed that one important article of this Act was to ensure that

students with and without disability are guaranteed education. The Act specifically prohibits schools from charging any type of fee for completing their elementary education.

National Early Childhood Care and Education Policy (ECCE) has received attention in the National Policy for Children (1974), resultant to which the ICDS was initiated on a pilot basis in 1975 with the objective of laying the foundation for all round and integrated development of all children up to six years of age.

In 2012, “Draft Rights of Persons with Disabilities Bill” came which include eighteen disabilities, some being thalassemia, muscular dystrophy, multiple sclerosis, etc. (MSJE, 2012). In this bill, first time issues of women and girls with disabilities were considered. Latest we have Right of Persons with Disabilities Bill, 2014 (MSJE, 2014) which was introduced in the Rajya Sabha on 7 February 2013 by the Minister of Social Justice and Empowerment.

INDIA’S STAND ON INTERNATIONAL POLICIES AND GUIDELINES RELATED TO PEOPLE WITH DISABILITY

With change in the policies and acts with time, India is also witnessing some international happenings also related to people with disability like the year 1981 was declared as ‘International Year of Disabled Persons’. Also the years 1983 to 1992 as ‘Decade of Disabled Persons’ by General Assembly of United Nation.

1993 to 2002 was declared as ‘Decade of Disabled Persons’ by UNESCAP (United Nations Economic and Social Commission for Asia and Pacific). These international deeds again bring the focus on ‘people with disability’.

The World Conference on Special Needs Education in Salamanca in 1994 (UNESCO, 1994), have encouraged many countries, including India to think about the welfare of people with disability. India is also signatory to the Declaration on the Full Participation and Equality of People with Disabilities in the Asia Pacific Region. India is also a participant of the Biwako Millennium Framework for contributing in building an inclusive, barrier free and rights based society and the UN Convention on the Rights of Persons with Disabilities. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) was signed in 2007 by India which was enacted later in 2008.

ANALYSIS OF POLICIES AND ACTS

In this section, an analysis of pertinent policies related to people with disabilities has been presented. Most of the policies and acts adopted ‘binary perspectives’ for handling issues of children with disability. First, all these policies emphasised on the mainstreaming of children with disability, i.e. they should not be segregated and on the contrary they stress on special schools too. Though Sargent Report-1944 (Pre-independence) first time recognised

the need of education of people with disabilities, but it adopted the 'binary perspectives' to cater to children with disability. After twenty years, Kothari Commission-1966 (Post-independence) also alleged that "many handicapped children feel psychologically broken after being placed in an ordinary school" (Education Commission, 1966, p. 109). This statement conveyed the inclination of the Commission on sending children with disability to special schools. This shows that binary approach of reports continued in education policies from British rule to independent India.

The NPE 1986 and POA-1992, both incorporated the educational well being of children with disability as a specific agenda. It was for the first time that education of the people with disability had been recognised as human resource development activity rather than a mere welfare activity. But in Section IV of the National Policy of Education (1986) entitled 'Education for Equality' states that 'where feasible children with motor handicaps and other mild handicaps will be educated with normal children, while special residential schools will be facilitated for severely handicapped children' (MHRD, 1986). It also displays that in independent India even after twenty years, education policies keep going with 'binary perspective'.

In 1995 also, 'binary perspectives' can be observed in the act meant for persons with disability called

PWD-1995 (Ministry of Law and Justice, 1996), which notes that, "it endeavours to promote the integration of students with disabilities in the normal schools" and also encourages the "establishment and availability of special schools across the nation" in both Government and private sectors. Also, a major drawback of the enactment of the PWD was that in every clause, it was written "within the economic capability of state...". Therefore, PWD did not immediately translate their promises into action because of lack of finance, though it acted as the impetus for a number of other development projects.

After reviewing all the educational policies one can see that none of the policies has identified girl-students with disability as a separate group and realised that they are more vulnerable and need specific attention. Only in Draft rights of persons with disabilities bill, 2012, first time issues of women and girls with disabilities was considered. Secondly, most of the policies attempt to demonstrate an inclusive education system under the influence of international policies and guidelines as India is signatory to a number of international declarations. For example, Sargent Report-1944 was criticised to be a copy of the design of the education system practiced in England and the PWD-1995 Act also showed resemblance with the United State's 'Americans with Disabilities Act' (ADA).

The term used and meaning of disability varies and gradually

changes in policies and acts as the time changes. All the policies and acts of 1990's e.g. Sargent Report-1944, Kothari Commission-1966 and even in NPE, 'Handicap' term was used to refer people with disability. In these policies and acts, 'People First' terminology was not adopted. An example of gradually change of definitions was in RCI-1992, which defines many terms such as 'mental retardation' and 'rehabilitation professionals' and the term like 'Handicapped' was referred to PWD Act, 1995, then, later it was replaced by 'Persons with Disabilities' in the amendment of this Act in 2000. Afterwards all the policies and acts of late 1900's tried to pay attention to 'People First' terminology and called 'People with disability'. In National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act (1999), the definitions of terms such as 'autism', 'cerebral palsy', and 'Persons with disabilities', etc. were clarified. The definition of 'mental retardation' was same as RCI Act 1992 and the definition of 'Multiple Disabilities' was taken from PWD Act 1995. Yet one can pinpoint many places in these policies and acts, where they did not pay attention to 'People First' terminology. In the SSA framework, a new term 'Children with Special Needs' (CWSN) was used but the scenario did not change much for the people with disability.

All the policies from late 1960's seem to lean towards inclusion. But

in real terms these policies were not impeccably inclusive. Most of such policies were having discriminating elements against people with severe or intellectual disabilities, regarding regular vs. special schooling. Some policies did not specifically mention about people with disability. Even some acts gave very limited categories of disability. For example PWD defines disability by listing only seven categories of disability. National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act include only these four disabilities. (MSJE, 1999).

CONCLUDING REMARKS

The references from ancient and indigenous stories and poems gave the idea that people with disability were always neglected and were subjected to shame. The indigenous education services were more or less not available to people with disabilities, irrespective of their caste associations. In the age of British rule, a new chapter marked its presence in the history of education for people with disability with the opening of schools in different parts of the country for blind and other categories. Even the educational policies after independence did not distinguish people with disability as a separate category for planning and execution.

The definition of inclusion also varies with different setting. In fact, inclusion sometimes leads many people to confusion, as it is seen in

India. The actual meaning of inclusion taken and the practices related to the inclusion and teacher's attitude is different. What teachers believe, think and do are completely different. Due to the ambiguous description of inclusion, it has led to confusion as to what is Inclusive education in real practice? Therefore, it has become the topic of various debates such as whether or not inclusion is an educationally sound practice for students who require special or additional educational support.

In India, all the policies, commissions related to education which came early in 1900's did not pay any attention to people with disability. Even after independence, education of people with disability did not get enough weightage in the policies. We have seen that a number of policies and acts continued to approach 'binary prospective' decades after decades. In late 1960's, policies seemed inclined towards inclusion. Special acts and policies related to disability came in late 1980's. Years 1992 and 1995 were significant years as RCI and PWD covered diverse facets for the betterment of people with disability. These acts also set laws for people with disability. All the acts and policies did not achieve their target as there were always a lack of implementation of promises because of poor coordination and few grants. In the late 1990s and the beginning of the 21st century, plenty of educational reforms came into the existence in the country, e.g. DPEP,

SSA IEDSS and RMSA, etc. in order to universalise elementary education. In these nationwide programmes, efforts were made to improve the infrastructure of schools as a first step to integrate children with disability and major programmes were initiated in all the states for infrastructure development and for the pedagogical material. Even so, a great deal needs to be accomplished in terms of genuine inclusion and pedagogic processes.

Undoubtedly, all the policies and acts did not meet their target fully and strong implementation of these policies is a must for successful inclusion of all the people with disability. Especially women with disability should be dealt with on a priority basis. It is important as girls with disability are at double discrimination on the ground of their gender and handicap. Some research works loudly say that men with disability often get better education than the women with same disability. (E.g. Rousso and Wehmeyer, 2001; Tiwari, 2009). Statistical reports and data also reinforce this argument. As per the census 2011(Registrar General of India, 2011), the male and female literacy rate is 82.14 per cent and 65.46 per cent respectively. Women share the 44.10 per cent of the overall population of disabled people and also decadal increase in proportion is higher among women with disability which become 2.01 percent from 1.87 per cent as per Census 2001(Registrar General of

India, 2001). No attempts were put to acquire data on disability through census from 1951 to 1991.

There is no single policy or act which includes all kinds of disabilities. With evolving time, different policies and acts include different categories. In Draft Rights of Persons with Disabilities Bill, 2012, eighteen types of disabilities were included, but severe and mental disability should be dealt with priority basis.

As discussed in this paper, one can infer that there has not been a proper conceptualisation of the life of young people with disability. None of the policy has given due weightage

to the empowerment of girls with disability. Their issues often appear as an afterthought or one more point. The current education system and policies in India has not been able to address the diversity of students completely. There are many physical and social barriers for children with disability. There has not been a single educational exercise which was undertaken primarily to conceptualise the challenging life of children with disability. This add-on approach resulted in the formation of fragmented schemes and provisions, aimed at governing the educational and professional life of children with disability.

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Portrayal of Disability in Textbooks

A Psycho-educational Perspective

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Abstract

The Constitution of India guarantees equal rights for all citizens. The Right to Education (RTE) Act (2009) made elementary education a fundamental right of every child, including children with disabilities. The education system works as an apparatus in furthering the ideological stand of the state. Since textbooks dominate the educational process and occupy a significant position within the Indian education culture; textbooks thus become the 'tools' to achieve constitutional, legal and social goals through education. The present paper aims to critically analyse the portrayal of persons with disabilities in textbooks used in elementary schools. The paper closely analyses the depictions of the issues and concerns pertaining to disability. The paper examines the themes, plots and contexts of the lessons. It further builds the characters of the persons with disabilities and the views and attitudes of other characters towards them. The paper locates these within psycho-educational perspectives.

The Preamble to the Constitution of India clearly states that all the citizens of India are equal before the law and everyone has the right to equality of status and opportunity without any discrimination. Although, the Articles ensuring these are general in nature and do not specifically refer

to persons with disabilities, however, the Article 41 of the Directive Principles of the Indian Constitution supports the right to work, to education and to public assistance in certain cases, including disablement. The Constitutional provisions are enacted through various legislations

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and Acts, laid down to protect the rights of persons with disabilities. To mention a few selected ones in this regard, Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1996 became landmark legislation in the history of special education in India as it ensured that every child with disabilities also has access to free education and an integration of students with disabilities in the normal schools. Besides this, the Right to Education (RTE) Act (2009) made elementary education (in the age group of 6–14 years) a fundamental right of every child, including children with disabilities.

The faith instilled in the power of education to transform lives became instrumental in getting education, recognition as a human right. Likewise, since the past few decades, India has observed a considerable shift in the manner in which disability is understood. Disability has come to be viewed in the context of Human Rights.

Henceforth, education of children with disabilities has become a priority for the Government of India. The Government's commitment has been reflected in various enactments, schemes and through establishment of relevant institutions. The education system in India can thus be perceived as a powerful means to achieve equality for all, including those with disabilities. It works as an apparatus in furthering the ideological stand of the state. In this regard, the National Curriculum

Framework, 2005 acknowledges that 'Inclusion in education is one of the components of inclusive society'. It thus recognises the need to create an inclusive environment in the classroom for all students, especially, for students with disabilities, who may be at risk of marginalisation. The National Focus Group on Children with Special Needs also noted that, "Special and general education, in other words, are gearing for a significant move to come closer together". However, here it is important to draw attention to the fact that a critical analysis of the policy documents suggests that the primary steps taken for education of children with disabilities have largely been focussed on the issues of access, and those associated with classroom based 'processes', which significantly determine the quality of the educational experience have been sparse. Anita (2000), stresses that the concept of inclusive education has not yet found linkages with the discussion on pedagogy.

This paper focuses on pedagogical tools—more specifically it looks at the content of textbooks. In the Indian education culture, textbooks continue to dominate the educational process and occupy a significant position within classrooms. Textbooks are produced in large numbers, have a large outreach (Mehrotra and Ramachandran, 2010) and are sometimes the only text the students read. Zevin (1992) notes that textbooks are the most used instructional resource in the

classroom; sometimes even more than the classroom teacher. Sleeter and Grant (1991) argue that the textbook is the 'major conveyor' of the curriculum. The content presented in the textbooks influence students, who may accept this content as 'exhaustive', 'true' and 'right'. Since textbooks dominate what students learn, they thus emerge as one of the most powerful 'tools' of the education system through which constitutional, legal and social goals can be achieved. The CABE sub-committee on textbooks suggested that textbooks should be constructed in lines with constitutional principles. They should be free of prejudice and bias and should build a commitment towards democratic values such as equality (CABE, 2005). The images that textbooks build of those who are marginalised, including those of persons with special needs, directly or indirectly influence what children assume them to be. To some extent, they understand persons with disabilities vis-à-vis the society through the lens provided to them by the textbooks.

Thus, keeping the centrality of textbooks in mind, the present paper aims to critically analyse the portrayal of persons with disabilities in textbooks used in elementary schools. The paper closely analyses the depictions of the issues and concerns pertaining to disabilities. The section below briefly presents the methodology undertaken for the study.

METHODOLOGY

The present paper investigates how persons with disabilities have been depicted in Hindi language textbooks published by National Council of Educational Training and Research (NCERT). The sample selected for the study included textbooks used for Hindi language teaching in Classes I to VIII. The Hindi textbooks for Classes I to V are entitled, *Rimjhim* and the textbooks for Classes VI to VIII are entitled, *Vasant*. Elementary school textbooks constitute an important component of education. Hindi textbooks were chosen as the stories, poems and drama included in the language textbooks offer unique opportunities to children to connect with their cultural heritage and social realities. According to NCF-2005, they provide children with opportunities to understand their own experiences and to develop sensitivity towards others. The textbooks used for the purpose of content analysis are the current editions of the textbooks in circulation. These are largely reprints of the editions that were first published in the years 2006-2008. It is important to take cognisance that these textbooks were conceived and developed in concordance with the National Curriculum Framework-2005 outlines. Ritubala (2001) observes that NCERT-2005 textbooks are in congruence with progressive educational, social and political understanding.

To identify the text and illustrations related to persons with

disabilities, an elaborate scouting task was undertaken. The Hindi language textbooks from Classes I to VIII were meticulously read and any lessons that included reference to persons with disabilities were noted. After the initial scouting, it was found that the numbers of lessons with persons with disabilities were limited; hence to expand the data pool, stories which featured animal characters with disabilities were also included for analysis. Alongside, the lessons were categorised genre-wise. This was done to reflect on the variety of genres available to the learners. To analyse the depictions of the issues and concerns pertaining to disabilities, the coverage of disabilities in the textbooks was highlighted. The themes, plots and contexts of the lessons with persons with disabilities were thoroughly examined and spelt out. In addition to that, the characteristics of the persons with disabilities, their challenges and the attitudes of other characters towards those with disabilities were also investigated.

Data analysis was done step-wise. Initially, the data were organised around themes and sub-themes. To organise better, sub-themes were later clubbed under broader themes. The data were subjected to descriptive content analysis. The paper locates these within psycho-

educational perspectives. The next section focuses on the findings of the study.

FINDINGS OF THE STUDY

This section presents an overall picture of the coverage of disabilities in the textbooks examined. Thereafter, the results of the qualitative content analysis of the text and illustrations related to persons with disabilities are thematically arranged. The themes, plots and the contexts of the lessons have been described. Following this, the characteristics of the persons with disabilities, their challenges and the views and attitudes of other characters towards persons with disabilities have been highlighted.

COVERAGE OF DISABILITIES IN THE TEXTBOOKS

The eight NCERT Hindi language textbooks reviewed for the current study contained a total of 137 lessons, which included text written in various genres, such as poems, stories, essays, drama, interviews, memoirs, letters and life stories. A closer examination of these 137 lessons revealed that six lessons contained reference to individuals with disabilities. The table given below summarises the data on the number and nature (genre-wise) of lessons included in each of the textbooks. It also elicits the lessons that took up the issue of disabilities.

Table 1
Number and nature (genre-wise) of lessons included in classes I-VIII textbooks

Genre	Rimjhim Series					Vasant Series		
	Class I	Class II	Class III	Class IV	Class V	Class VI	Class VII	Class VIII
Poems (<i>Kavita</i>)	16	6	5	4	5	6	7	7
Stories and folktales (<i>Kahani aur Lok-katha</i>)	7	6	9(7+2)	8	6(5+1)	3	5	6
Essays (Nibandh, Lekh)				1	4	5	3	5
Drama (<i>Natak/ Ekanki</i>)			1	1	1	1	1	
Interview (<i>Bhent-varta/ Sakshatkaar</i>)					1		1	
Memoir/ letter/life story (<i>Sansmaran, Patr, Jeevani, Lekha-jokha</i>)					1	2	3	
Total number of lessons (137)	23	12	15	14	18	17	20	18
Number of lessons featuring persons with disabilities	1	Nil	Nil	1	2	1	1	Nil
Details of lessons featuring persons with disabilities	Story- <i>Saat Poonch ka Choocha</i>	-	-	Story- <i>Sunita ki Pahiya Kursi</i>	Essay- <i>Jahan Chaah Waha Raah</i> Poem- <i>Ek Maa ki Bebasi</i>	Essay- <i>Jo Dekh Kar Bhi Nahin Dekhte</i>	Story – <i>Neel-kanth</i>	-

As evident from the data tabulated above, the textbooks of Classes II, III and VIII did not have any lessons with reference to persons with disabilities. Only six lessons out of a total of 137 lessons bore reference to persons with disabilities. Class IV textbook contained a story titled, 'Sunita ki Pahiya Kursi'. Class V textbook featured an essay titled, 'Jahan Chaah Waha Raah' and a poem titled, 'Ek Maa ki Bebasis'. Class VI textbook had an essay titled, 'Jo Dekh Kar Bhi Nahin Dekhte'. The stories titled, 'Saat Poonch ka Choocha' and 'Neelkanth' in the textbooks of Classes I and VII respectively did not feature any persons with disabilities but the personified animal characters with mild physical impairments gave a glimpse into the lives of differently abled.

Here, it is worth explicating that genre-wise there was a reasonable spread, including three stories, two essays and a poem on the persons with disabilities. Another point of significance is that in five of the six lessons, the protagonist was either a person with disabilities or a person close to someone with disabilities (the mother). In only one lesson, the character (the peahen in the lesson, Neelkanth) was 'included' in the story like any other character.

As far as illustrations supplementing the texts are concerned, Classes II, III, VII and VIII did not carry any pictorial representations or illustrations of persons with disabilities in any

form throughout the textbooks. The discrimination faced by persons with disabilities and differences is depicted in the illustrations carried by the Class I textbook where the seven tailed rat (in story 'Saat Poonch ka Choocha') is shown being laughed at due to his 'typicality'. Likewise, in the Class IV textbook, the boy named Amit (in story 'Sunita ki Pahiya Kursi') is mocked by his peers for being shorter in height than his age mates. Along with these, the Class IV textbook carried the picture of a girl child on wheelchair being pushed playfully by a boy child. The girl is shown smiling gaily and enjoying herself. Class V textbook carried the pictures a girl named Ila, who used her feet to embroider due to her disability. The essay in Class VI based on Helen Keller's life was also supplemented with an illustration.

The data presented in the text above explicitly points out that although an attempt to include persons with disabilities has been made, however, the text underrepresented persons with disabilities. Persons with disabilities were neither talked about nor represented pictorially in three of the eight textbooks analysed. There was a complete absence of persons with disabilities in the textbooks and consequently there was silence on their lives as well. However, the pictorial representation of a girl child on a wheelchair playing with a boy child can be marked as a positive depiction. Such depictions perhaps build positive images in

the young readers' minds. They may further contribute in fostering peer acceptance and mobilise healthy relations between children with and without disabilities within their peer groups. But such depictions were sporadic in nature.

This quantification of the data serves as a useful starting point but to get rich insights into the content and context within which the reference is located, a qualitative analysis that closely examines the contents of the stories, essays and poems that revolved around persons with disabilities was called for. The following sections present the same.

DESCRIPTION OF THE THEMES, PLOTS AND THE CONTEXT

As stated earlier, only a limited number of lessons touched upon the issues of disability and hence only six lessons could be identified for the study. In this section, the themes, plots and contexts of the selected texts have been summarised.

As reflected through the title of the Class I story, '*Saat Poonch ka Choocha*', and the protagonist is a seven tailed rat. The rat is teased and stigmatised for his difference. Under pressure, he goes to a barber and gets his tails cut off one after the other. However, the teasing does not cease even when the rat gets his last tail also chopped off. Nevertheless, others continue to tease him as the 'tail-less' rat. The story is significant as it highlights people's deep rooted attitudes towards those with physical

differences. It also implicitly weaves in the emotional commotion one goes through in the wake of social pressure and stigma.

'*Sunita ki Pahiya Kursi*' in Class IV textbook narrates the story of a physically challenged girl named Sunita, who uses a wheelchair for movement. The story revolves around an episode where for the first time; Sunita goes to the market all by herself. On her way to the market she witnesses children playing in the streets and a child named Amit being teased by other children on account of being 'shorter' in height when compared to other children of his age. Most importantly, the story presents the challenges Sunita faces in the market and the help she receives from Amit (the boy mentioned above) and others. This lesson brings out the trials and hostile social experiences and subsequently, the emotional states borne out of them, which a child with disabilities encounters.

The essay titled, '*Jahan Chaah Waha Raah*', on the life of a girl named Ila, with impairment in hands, in the Class V textbook, begins with the everyday challenges faced by her. The lesson highlights the protagonist's undying will and spirit to conquer her limitations, following which she trains herself to embroider using her feet and wins laurels. The textbook also had a poem titled, '*Ek Maa ki Bebasi*' which poetically evokes the turmoil of a mother's helplessness over her hearing impaired child. In addition, the poem sheds light on

the psycho-social states of the child with impairment and other children's attitudes towards him.

In the article based on Helen Keller's life, titled, 'Jo Dekh Kar Bhi Nahin Dekhte', in Class VI textbook, she playfully asks her sighted friends to describe what they saw while treading through the jungle. When their descriptions lack detailing, she urges to value the sense of sight that people often neglect to honour. The article inspires to cultivate a positive attitude and respect towards nature's seemingly 'small gifts' of the five senses to humans.

The story titled 'Neelkanth' in Class VII textbook unfolds the life of caged animal and bird characters. Although the narration keeps the focus on the peacock, Neelkanth, yet another character named Kubja, the peahen with fused claws also plays a small but significant role. Here, Kubja's character was painted with shades of grey. The lesson does not directly take up the cause of those with disabilities but subtly displays people's attitude of contempt towards those with differently-abled bodies.

The spectrum of themes identified across the six selected lessons depicts a myriad range of lived experiences that characterize the lives of persons with disabilities. The different personality traits and characteristics of those with disabilities that they embody through different forms of behaviour, both as individuals and as a collective, also remain at the centre. The next section takes up a detailed

description and analysis of these in relation to the objectives that were set up.

CHALLENGES FACED BY PERSONS WITH DISABILITIES

Persons with disabilities come across a number of challenges owing to their disabilities. Some may be on account of their physical limitations and others may be due to people's discriminatory attitudes towards them. The psycho-social challenges they face, may sometimes pose greater challenges to their social acceptance and well being. How these challenges have been articulated in the textbooks forms the content of the following sections. The physical, psycho-social and educational challenges faced by persons with disabilities are highlighted in the text that follows.

PHYSICAL CHALLENGES

Persons with disabilities often come across physical challenges and structural barriers and this was pertinently demonstrated in 'Sunita ki Pahiya Kursi', 'Jahan Chaah Waha Raah' and 'Ek Maa ki Bebasi'. The excerpt from 'Sunita ki Pahiya Kursi' given below is significant in this regard-

“उसने अपनी टाँगों को हाथ से पकड़ कर खींचा और उन्हें पलंग से नीचे की ओर लटकाया। फिर पलंग का सहारा लेती हुई अपनी पहिया कुर्सी तक बढ़ी।”

The text above explicitly brings forth the everyday physical challenges such as walking without help, using one's hands, changing one's clothes,

wearing shoes and so forth that people with physical disabilities confront.

The text, occasionally, evinces that owing to obstructive nature of architecture and structures of buildings and public spaces, persons with disabilities find it difficult to access them. The invisibility of persons with disabilities from social spaces and subsequently, in social participation is creatively emphasised by the poet in 'Ek Maa ki Bebasi' where the existence of the child with hearing impairment is rendered invisible by the use of the phrase '...wonder, from which invisible neighbourhood, would he appear...' ('...ना जाने किस अदृश्य पड़ोस से, निकल कर आता था वह...'). This invisibility may be a matter of social access that is often denied as a repercussion of denial of physical access to the spaces that are ordinarily occupied by the able-bodied. When persons with disabilities lack physical spaces to mingle with those without disabilities, the chances of their social acceptance within mixed groups is likely to remain restricted.

In terms of social participation, the text acknowledged that children with varying physical abilities do not participate in activities with other children in the 'typical' ways. Ratan, the child with hearing impairment, in 'Ek Maa ki Bebasi', found it difficult to connect with other children and vice-a-versa owing to his use of sign language. Nevertheless, the textbooks also portrayed pictures of positive participation such as Ila's engagement in singing with other children and wheelchair bound

Sunita being playfully pushed by a child. Such alternate pictures open up opportunities of common participation between children with and without disabilities. A study conducted by Mehrotra and Ramachandran (2010) present a counter view to this interpretation and argue that Sunita's depictions are unreal to a certain extent. They contend that wheel-chair bound individuals are less mobile than Sunita; many need a basic attendant and find it impossible to go out alone on roads and markets with traffic.

PSYCHO-SOCIAL AND EDUCATIONAL CHALLENGES

This section unravels the ways in which the textbooks have portrayed the psycho-social world of persons with disabilities. In particular, it explicates the personality traits and characteristics, thoughts, feelings and emotions of persons with disabilities. It also brings to light people's attitudes towards persons with disabilities. The educational vulnerability of persons with disabilities as presented in the text has also been looked at.

Resilience and perseverance stood out as the most adorned human traits in the depictions pertaining to persons with disabilities. In 'Jo Dekh Kar Bhi Nahin Dekhte' Helen Keller's resilience was exhibited by the fact that she asks her friends to describe what they 'saw' through their jungle trail; and eventually in comparison to their descriptions, she displays her competence by describing many

finer details that they missed out on. This act of resilience is legitimised by the fact that she did not surrender to her visual impairment and indeed developed her sense of touch much better than sighted individuals. Likewise, 'Jahan Chaah Waha Raah' also portrayed Ila, the protagonist as a strong willed and determined individual who did not give in to her situations and fought back to achieve the seemingly unachievable goal of embroidering using ones feet.

The text did not merely put on view the challenges that persons with disabilities come across but went a step ahead and presented a picture of how these people found means to combat these challenges. As drawn out from the extract given below, the persons with disabilities did not succumb to their difficult circumstances; rather they found ways to cope and work out solutions to the difficulties.

“हालाँकि कपड़े बदलना, जूते पहनना आदि उसके लिए कठिन काम हैं, पर अपने रोजाना के काम करने के लिए उसने स्वयं ही कई तरीके ढूँढ निकाले हैं”

(Excerpt taken from: Class IV, Rimjhim, lesson- 'Sunita ki Pahiya Kursi')

Hence, the text carved out the picture of persons with disabilities as those who have learnt to manage their challenges and gained autonomy and control over one's life conditions. However, this does not hold applicable universally to all the characters portrayed in the textbooks since in 'Ek Maa ki Bebasis', the mother's and her child's helplessness were pictured

and in 'Neelkanth', Kubja's character of a peahen with physical deformity was also painted negatively.

As far as the thoughts, feelings and emotions of the persons with disabilities and other persons in contact with them are concerned, the text brought forth a gamut of feelings that form the emotional repository of persons with disabilities. At one end of the continuum, these human emotions ranged from joy, happiness and achievement to sadness, sorrow and helplessness at the other end. Being able to do one's work gave a sense of contentment and fulfilment to Sunita in 'Sunita ki Pahiya Kursi'. The text clearly mentioned that Sunita's eyes sparkled as she was to visit the market by herself, for the first time (... सोचते ही उसकी आँखों में चमक आ गई। सुनीता आज पहली बार अकेले बाज़ार जाने वाली थी।). On the other hand, Sunita's sadness over the fact that unlike other children she cannot engage herself in outdoor-street games was also enunciated. Likewise, fears and worries of the persons with disabilities and their significant others also found mention in the text and illustrations.

It was interesting to note that 'Sunita ki Pahiya Kursi' threaded together two contradictory yet complementary ideas. In one instance, Sunita claimed that she was not different from other children and like other children she would also like to lead a 'normalised' childhood. She voices her frustration over the fact that people treated her 'differently'. Here, Amit argued that since Sunita used a wheel-chair and

he himself was shorter in height; this 'does' make them different from others. The point that he implicitly stressed was that people are differently abled and each person is thereby different and unique in his/her own way. He pointed out the need to accept and celebrate differences and diversity.

The textbooks presented various contours of people's attitudes towards persons with disabilities and those with other differences. Accounts of discrimination, apathy and indifference as well as sensitivity and support extended by people towards persons with disabilities were presented in the text. Two notable examples where the harsh social realities found expressions were in 'Sunita Ki Pahiya Kursi' and 'Saat Poonch ka Choocha', where Amit, for being shorter in height and the rat, for his unusual seven tails were mocked at and stigmatised. In the poem, 'Ek Maa ki Bebasai' as well as in 'Neelkanth' persons with disabilities were addressed as 'broken toy', 'strange' and 'damaged goods'. These examples point towards the stereotypic view that a majority of population still holds with reference to persons with disabilities.

However, examples of change also featured within the text. Towards the end of the poem, 'Ek Maa ki Bebasai', the child accepts that he was able to empathise with the vows and fears of Ratan as he started understanding sign language. Also in 'Sunita ki Pahiya Kursi', Amit and Sunita's mother come across as sensitive,

caring and empathetic towards her. The role of significant others was portrayed positively in this regard. The following excerpt is significant in understanding the same-

माँ ने मेज़ पर नाश्ता लगा दिया था।

“माँ, अचार की बोतल पकड़ाना «, सुनीता ने कहा।

“अलमारी में रखी है। ले लो», माँ ने रसोईघर से जवाब दिया।

सुनीता खुद जाकर अचार ले आई।

(Excerpt taken from – 'Sunita ki Pahiya Kursi', Class IV, Rimjhim)

Here, it is apparent that upon Sunita's request the mother did not rush to provide assistance to her. In fact, she showed her the way and empowered her to do her everyday tasks herself. This gesture is significant in building the self-esteem and self-confidence of persons with disabilities.

Positive attitude builds in persons with disabilities when they can mutually contribute to the well being of the lives of others around them and believe themselves to be productive members of their family and the society at large. This image of a legitimate contributing member of the family was explicated when Sunita asked her mother what she can bring from the market. This conversation between Sunita and her mother is significant in this regard-

“माँ बाज़ार से क्या-क्या लाना है?”

“एक किलो चीनी लानी है। पर क्या तुम अकेले सँभाल लोगी?”

“पक्का», सुनीता ने मुस्कुराते हुए कहा।

(Excerpt taken from – 'Sunita ki Pahiya Kursi', Class IV, Rimjhim)

Despite being aware of the difficulties Sunita might face, her mother wins over her own worries and promotes Sunita's independence. Thus, the text does not stop at shedding light on the challenges of the persons with disabilities but also gave space to the socio-emotional challenges of the people who come in close contact with them, may it be their mother or friends.

Contrary to popular belief that persons with disabilities need continuous support from others to do their work, the text suggested that persons with disabilities appreciate only occasional and moderate assistance from others. When the shopkeeper readily extends help to Sunita by placing sugar upon her lap, Sunita dislikes it. However, within the same loop of episodes, to climb the stairs, Sunita had to take the help of Amit in pressing the pedal of her wheelchair. Hence, the balance between when to help and when not to help; when not to seek help and when to seek help, were contrasted. Mehrotra and Ramachandaran (2010) urge that people should be observant and should develop basic sensitivity to respond to the real needs of the differently abled persons.

Lastly, in terms of educational vulnerability, the text in the lesson 'Jahan Chaah Wahan Raah' elicits that persons with disabilities stumble upon educational barriers due to lack of information. Ila dropped out of school before tenth standard as she was unaware of the educational

provisions such as an extra hour during examinations and facility of a scribe for writing, that she was entitled to. The need for timely support and action thus tacitly got advocated through the text.

CONCLUSION

It may be concluded that although an attempt to include persons with disabilities has been made, however, persons with disabilities were underrepresented in Hindi language textbooks published by NCERT. A variety of themes pertaining to the lives of persons with disabilities were revisited through the stories, essays and poems included in the textbooks. The themes encompassed discrimination, stigmatisation and stereotyping, along with experiences of the positive kinds that persons with disabilities come across and their emotional reactions to them. These emotional reactions ranged from feelings of rejection to acceptance. The text built the physical challenges of access and psycho-social challenges that persons with disabilities face. In terms of personal characteristics, persons with disabilities were portrayed to possess qualities of resilience, perseverance and undying positive will. Finally, educational challenges faced by the persons with disabilities were also depicted in the selected texts.

These findings are significant for policy makers, teachers and parents. Role of textbooks in classrooms cannot be undermined and hence

those involved in the process of textbooks construction may find this paper useful. It highlights the need to include examples of the plurality of people and ways of life to be positively represented in the textbooks. The portrayals of persons with disabilities should be sensitively depicted and any oversimplification, labelling, or judgement should be checked for.

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Parents' Concerns on Home Based Education

Is it in the best interest of their child?

ANITA JULKA*

Abstract

Home Based Education (HBE), a programme was initiated by the Sarva Shiksha Abhiyan (SSA) for children with disabilities as a result of adopting a Zero rejection policy for all children. It became a legitimate right through the Right of Children to Free and Compulsory Education (Amendment) Act, 2012. The aim of this programme was to provide intensive specialised support to children with severe and profound disabilities at home so that they could be mainstreamed at a later stage, if possible. As a result of this Amendment, the number of children under the HBE programme have been increasing over the years. In the present study, 62 parents conducting such interventions in the States of Rajasthan, Uttarakhand, Goa and Karnataka were interviewed on issues like parents' satisfaction with the programme, the problems faced by them in rearing up and educating their child with disabilities at home, the benefits they derived and the suggestions they can make regarding the improvement of the programme for better development of their child. Analysis revealed that although parents welcomed the interventions being provided and were also coping with the problems after consulting the resource teacher/volunteer/caretakers, they felt that the training given to them or also to the resource provider was not adequate, the financial and other provisions were not sufficient, the frequency of visits of the resource provider needed to be increased and the child should get the opportunity of going to a school after building up the basic skills. The parents also had very low expectations from their child and showed a lot of pessimism in spite of the interventions.

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INTRODUCTION

Although estimates vary from State to State, the number of children with disabilities in the Home Based Education Programme (HBE) of the *Sarva Shiksha Abhiyan* (SSA) has risen over the years. While the number of children with special needs (CWSN) under HBE programme was 1,38,133 in the year 2009-10 out of the total of 30,42,053 identified (MHRD, 2010), it was 2.06 lakh out of the 27.16 lakh till March 14 (SSA data till March 14 as presented in the expert group meeting in 2014).

The practice of HBE, however, has its roots in the year 2001, when *Sarva Shiksha Abhiyan* (SSA) was launched by the Government of India as an answer to implementing the Zero Rejection Policy. The SSA framework stated (MHRD, 2006) that “SSA will ensure that every child with special needs, irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. SSA will adopt zero rejection policy so that no child is left out of the education system.” Further “the thrust of SSA will be on providing integrated and inclusive education to all CWSN in general schools. It will also support a wide range of approaches, options and strategies for education of children with special needs. This includes education through open learning system and open schools, non formal and alternative schooling, distance education and learning, special schools, wherever necessary, home based education, itinerant

teacher model, remedial teaching, part time classes, community based rehabilitations (CBR) and vocational education and cooperative programmes.”

In the year 2012, in the month of June, the Government of India made HBE a right for children with disabilities through the Right of Children to Free and Compulsory Education (Amendment) Act, 2012. The Act stated that:

“Provided that a child with multiple disabilities referred to in clause (h) and a child with severe disability referred to in clause (o) of section 2 of the National Trust Act for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999 may also have the right to opt for home based education.”

The Amendment gives children with severe and multiple disabilities the choice between school and HBE. The idea behind this option was that there may be children with severe profound disabilities who may require intensive individualised support and attention which is not possible in a regular school system.

DEFINITION OF HBE

HBE is operationally defined by the SSA (SSA, 2006) as the education of children with severe intellectual/physical disabilities, who can be educated in the combination of home-based and alternate educational settings to enable them to achieve independent living skills. HBE aims at

school preparedness and preparation for life. Alternate educational settings provide opportunities for learning of social skills, vocational skills and implementation of life skills.

BENEFITS

The major reason given for including HBE as an option under the SSA and RTE was that a large proportion of children with disabilities were still out of school. According to the twelfth plan document, the proportion of disabled Out-of-School Children (OoSC) in 2005 was 34.19 per cent and remained slightly changed at 34.12 per cent in 2009. The twelfth plan noted that the maximum number of OoSC are those with mental disabilities (48 per cent), followed by children with speech disabilities (37 per cent). The need for highly specialised skills to be taught by special educators, incapability to access the regular academic curriculum, requirement of additional time and attention, strong need for better parental involvement, need for support of peers who are more like them, and teaching of specially tailored curriculum are some of the other reasons given by the SSA for adopting HBE as a viable option for some children with disabilities (SSA, 2006).

There have been very few researches on HBE in India. Studies done in the west have spelled out the benefits of HBE for children with disability. For example, an exploratory study that involved two male and two female elementary students with attention-

deficit/hyperactivity disorder (ADHD) was carried out in home schools and public schools by Steven (2004). The general purpose of the study was to determine whether parents could provide instructional environments that facilitated the acquisition of their children's basic skills over time. The results indicated that home school students were academically engaged about two times as often as public school students and experienced more reading and math gains. The key variable appeared to involve student to teacher ratios that existed between the two settings.

Using a less intensive intervention model of approximately 20 hours per week, Birnbrauer and Leach (1993) found that mothers in a treatment group (N = 9) reported less stress than control group mothers (N = 5) after 2 years of the intervention programme, although they were similar at intake. Cattell-Gordon and Cattell-Gordon (1998, p.82) in a report of their experiences conducting an intensive home-based programme stated that "there were also the more subtle but stressful problems of having one's home invaded for months at a time with team members who came and went." Research by Hastings and Johnson (2001) shows that comparisons with other samples suggested that UK parents involved in intensive home-based behavioral intervention for their young child with autism reported no more or less stress than other parents of children with autism. Their data suggested that parents of severely

affected children are more pessimistic regardless of coping strategies used by the family. However, believing that the intervention being used is effective at ameliorating even severe autism does result in reports of less pessimism.

The launching of HBE programme under the SSA and then being made as a legal option by the Government of India was in the best interest of the child. It was clearly stated that resource teachers/ specially trained teachers, or a para-resource teacher located in the village as a part of their job, could also visit the homes of CWSN to impart pre-integration training to them or even to do parental counselling. Severely disabled children, as a part of their HBE programme, would also require services like physiotherapy (PT), occupational therapy (OT) and speech therapy. The National Institutes, District Rehabilitation Centres, District Disability Rehabilitation Centres and Composite Resource Centres offer these services. Further, the National Trust Act under the Ministry of Social Justice and Empowerment, also trains caregivers, who provide specialised services to disabled persons within their families and communities. These caregivers are being trained through various organisations throughout the country. It was planned that convergence could be established with all these organisations to provide such support to CWSN being educated at home (SSA, 2003).

METHOD

Participants in this research were 62 parents of children with disabilities under the HBE programme who were interviewed for the study. The parent who was primarily responsible for the care of the child with disability was asked about the HBE. Only one respondent from each family was interviewed. The States visited were Karnataka, Uttarakhand, Goa and Rajasthan. Initially, visits to only 3 States were planned. However, a fourth State, Rajasthan was added because of its difficult terrain (desert areas).

TOOLS

Open ended interview schedule with 14 questions was developed with the help of experts. The instrument included open ended questions seeking answers on parents' satisfaction with the programme, the problems faced by them in rearing up and educating their child with disabilities at home, the benefits they derived and the suggestions they can make regarding the improvement of the programme for better development of their child.

RESULTS

The following are the results obtained based on the interviews held with the parents.

Parents' satisfaction with the programme

Majority of the parents (92 per cent) expressed satisfaction with the HBE programme as shown in the figure given below.

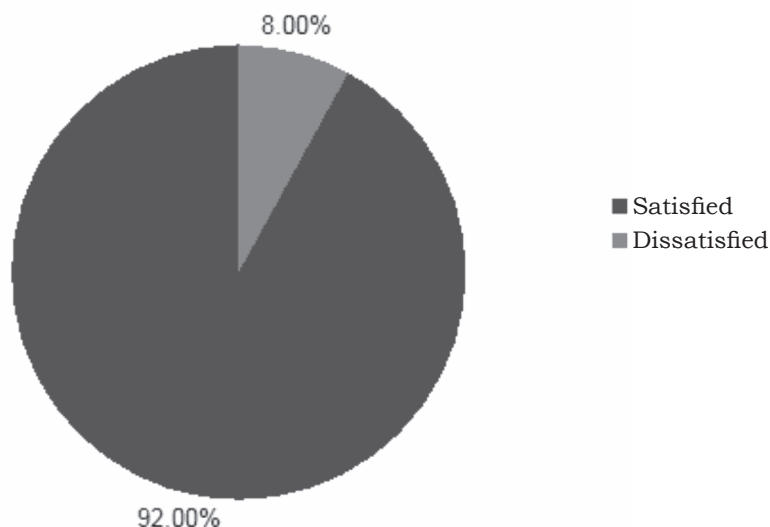


Figure 1: Parental satisfaction with HBE

Ninety two per cent of the parents thought that the programme was good and appreciated the government's efforts. The parents said that it is a useful programme since many children being bedridden or had multiple disabilities and were not able to attend the school. Since the teacher/volunteer/caretaker comes home, the child does get some basic inputs/therapy. If this was not so, their child will learn nothing and would just be isolated. A few of them also felt that when the teacher came home, they got useful information from her/him regarding how to handle their child's high support needs and their child really looked forward to the teacher coming home to teach her/him. Some parents felt grateful for the therapy and the support being provided to their child in the learning of daily living

skills. The gratitude reflected parents' pessimism regarding the future of their child. However, some parents were unhappy with the programme as they wanted their child to actually go to school as she/he does not learn much at home.

REGULAR SCHOOLS

When asked whether parents wanted their child to go a school rather than learning at home, majority of them showed willingness to send their child to school (84 per cent) with other children. One of the reasons given was that in the absence of proper resource support at home, it is important that the child should go to the school. However, some of the parents realised that it was not possible because of the severe disability conditions of their child (bedridden, no control of

urination etc.) and felt helpless and unhappy about not being able to send their child to school. There were also parents who conveyed that their child was not interested in going to school. Most of the parents, however, felt that their child needed to pick up the basic skills before she/he is sent

to school. Some of them wanted their child to go to a special school and not the regular school, go for only a few hours and not full time and have proper transport for travelling to school. The following figure gives the percentage of parents wanting or not wanting their child to go to school.

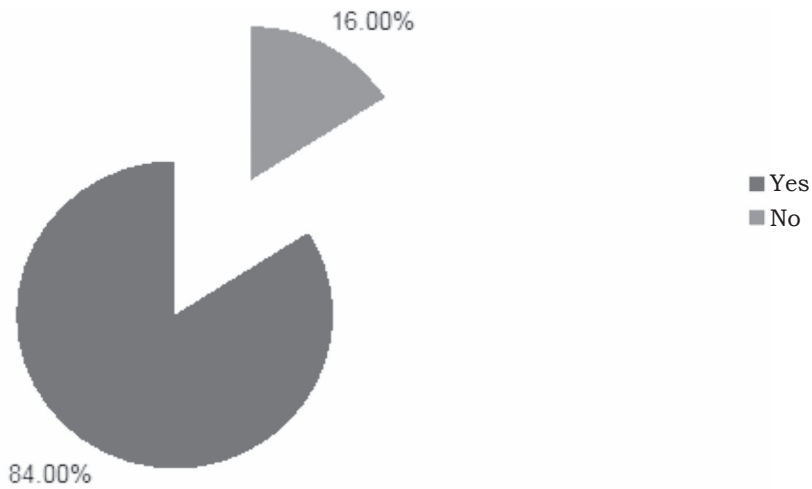


Figure 2: Percentage of parents wanting/not wanting their child to go to school

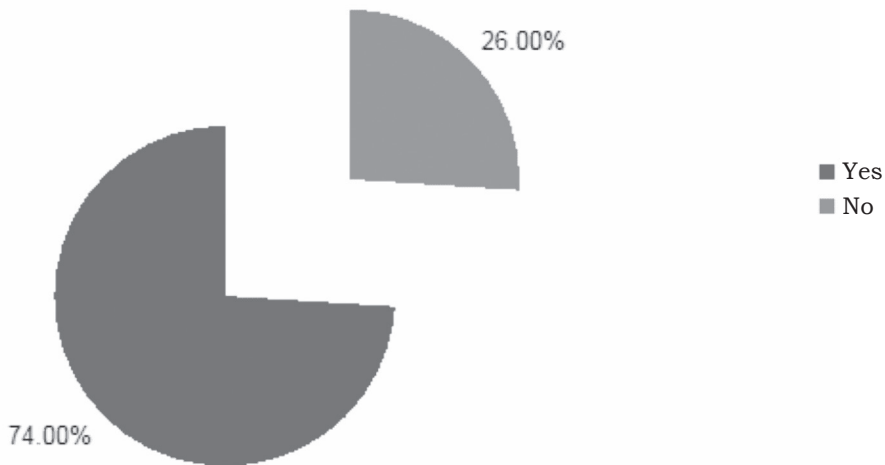


Figure 3: Benefits from HBE

BENEFITS

The following figure shows that 74 per cent of the parents felt that the HBE programme is beneficial for their children.

The benefits pointed out by the parents included:

Medical facilities and other devices

- Guidelines for medical treatment and physiotherapy.
- Mental Retardation (as conveyed by the parents) kit, cerebral palsy (CP) chair, CP stand, learning-aid.
- Information about the medical camps for physiotherapy and other facilities.

Teaching related assistance

- Learning of simple words, numbers and poems, simple addition/subtraction, tables, time and colour concepts.

However, 24 per cent of the parents felt that there was no benefit of HBE for their child. The reasons given for this were infrequent visits of the teacher, severity of child's disability condition and lack of training of the teachers/volunteers.

ADDITIONAL INPUTS

In spite of the benefits being derived from the HBE programme, the parents were asked about what additional inputs they expected to be provided in future, under the programme. Many parents conveyed the need for the following additional facilities:

In addition to above, many parents felt there should be more frequent visits of the resource teachers/volunteers. There were also parents (5 per cent) who did not have any comments because they felt that since very little inputs were being provided for their child at present, so

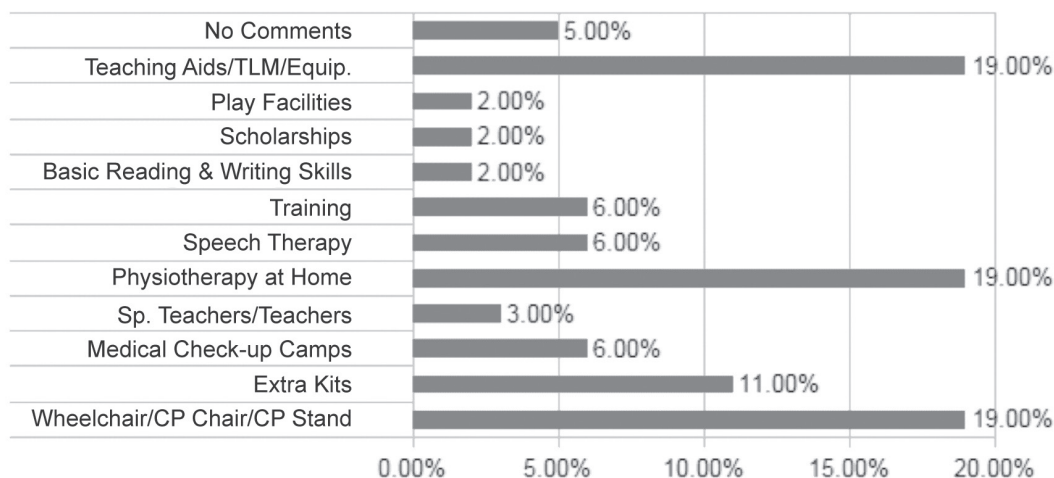


Figure 4: Parents' response to additional inputs

they are in no position to comment upon additional inputs required for their child.

TRAINING OF PARENTS

Seventy-three per cent of the parents have got some inputs on taking care of their child with disability at home. In States like Karnataka, Uttarakhand and Goa, the parents have been given training and awareness programmes like *Samudaya Jagriti, Kala Jatha*, etc.

The number of training programmes given to each parent ranged from 1 programme to 5 programmes. However, most of the parents expressed the need for more training. In the State of Rajasthan, the parents expressed that they have not been given any training. This was because of the remote distance (training camps situated at 50 kms. away), lack of transport facility and difficulty in travelling because of

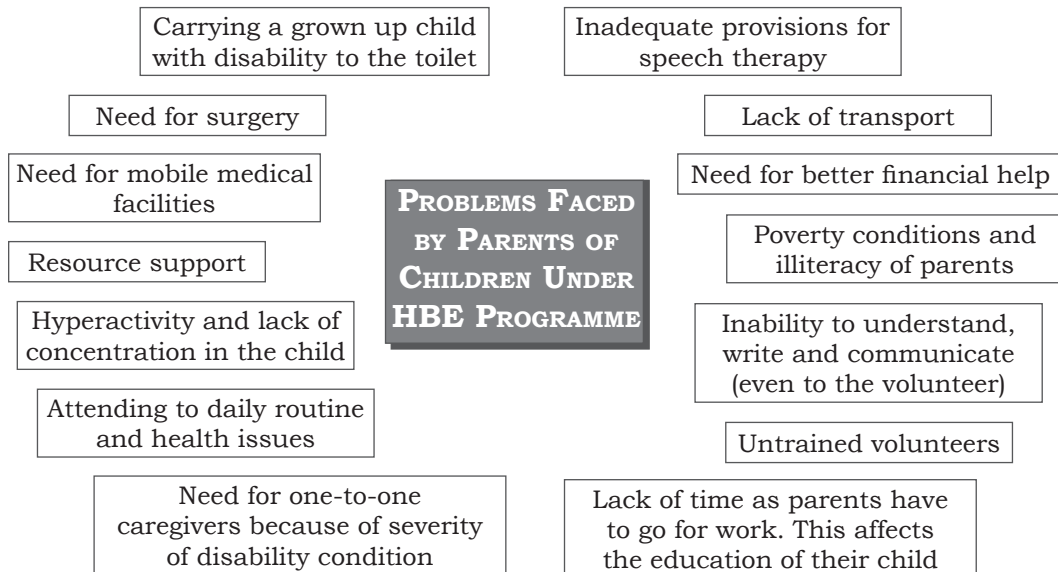
difficult terrain etc. Some parents had taken 1-2 days parental counselling sessions which they thought was not helpful in taking care of even the daily routine care of their child.

RESOURCE TEACHERS

Eighty-one per cent of parents expressed their happiness with the involvement of the resource teachers in HBE. However, most of them had problems with the frequency of teachers'/caretakers'/volunteers' visits (only once in one or two months), lack of training (as in the case of volunteers/caregivers) and negative attitudes of some teachers who did not want to spend much time with the child.

PROBLEMS FACED BY PARENTS

The following were the problems faced by the parents in HBE:



FINANCIAL PROVISIONS

Only 4 parents out of 62 were happy with the financial provisions being provided under the HBE programme. The remaining said either the financial provision was not sufficient or there was no funding at all even when the child was enrolled in the school. They felt that medicines, equipments etc. and the health issues associated with the child's condition required finances that are not being provided by the government. Some parents were getting a small amount from the State welfare department which was barely enough to meet their needs. Some of the parents also expressed the need for transport allowance for taking their child regularly for treatment or therapy.

IMPROVEMENT AFTER HBE

While 84 per cent of the parents said there was improvement in the child, the degree of improvement ranged from mild, moderate to sufficient improvement. Parents expressed the need for more physiotherapy. Some parents felt that there would be more improvement if teachers/caregivers/volunteers came more frequently to visit the child.

FOLLOWING SUGGESTIONS OF TEACHERS

Majority of the parents (80 per cent) expressed that they liked to follow teacher's suggestions and also got the opportunity to learn from her/him in carrying out day-to-day

routine activities for their child. The teachers explained to them about various provisions available like relaxation in admission procedures, scholarships, availability of bus and railway passes and physiotherapy services. Some of the parents also felt that their child is happy when the teacher visits home to teach her/him. Teachers also prepared IEP and recorded the progress of the child. They provided physiotherapy, and took their child regularly for resource support and medical check-ups to the Block Resource Centres (BRCs). On the other hand, the remaining parents felt that they were not able to gain much from the teachers. The reasons given were that the teachers came very infrequently or came once only and did not come after that at all. Some also stated that they were busy with their own work and did not have much time to interact with the teachers.

INVOLVEMENT OF SIBLINGS / OTHER CHILDREN

The following figure shows that while 69 per cent of the parents felt that there was involvement by siblings and other children of the family and from the neighbourhood, 16 per cent expressed their unhappiness regarding the same.

Majority of the parents who said yes to the involvement of siblings/ other children stated that the contribution of other children was in the form of providing support

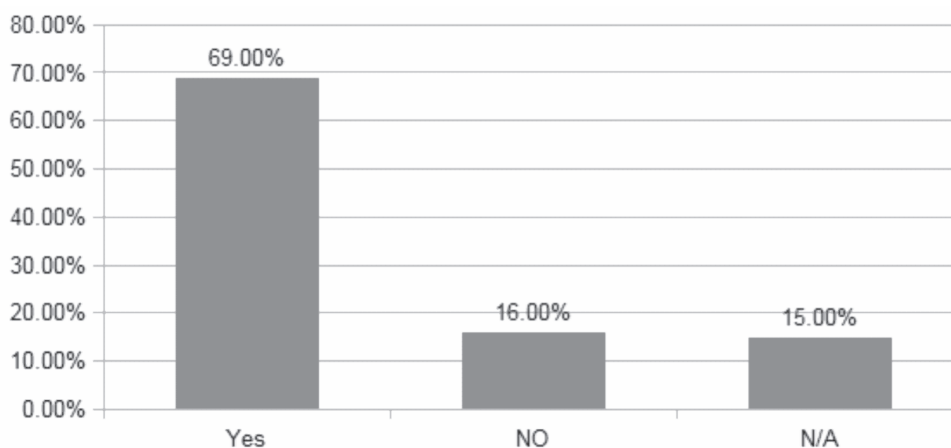


Figure 5: *Involvement of siblings/other children in the education of the child*

for daily living skills, school work/ studies (reading and saying some words), movement from one place to another, and entertainment (telling stories, playing some games). Some parents also expressed their dependence on their other children in looking after the child with disability because of their daily work routine. For these parents, earning a daily living would have been a challenge if the siblings did not look after this child. Children told stories, played with the CWSN and also took her/him out on a wheelchair. The parents who expressed non-involvement of other children stated that their child is sometimes completely isolated even when she/he is amongst other children. The reasons given for non involvement of other children were the other child being younger to the child with disability or inability of their other children to communicate with or handle the child with disability.

Fifteen per cent of the parents had no comments as there were no other children in their family to look after the child with disability.

RESOURCE FACILITIES

Majority of the parents expressed that the HBE Programme has resulted in making them aware regarding the various provisions available for their child. The different facilities available as expressed by the parents are given in the following figure:

However, the many parents pointed out that most of the provisions were being provided by the State Welfare Department and not by SSA. Some of them also said that though they knew about these facilities they were unable to take benefit of these because of procedural hurdles.

FURTHER SUGGESTIONS

Finally, the parents had a number of suggestions to offer regarding

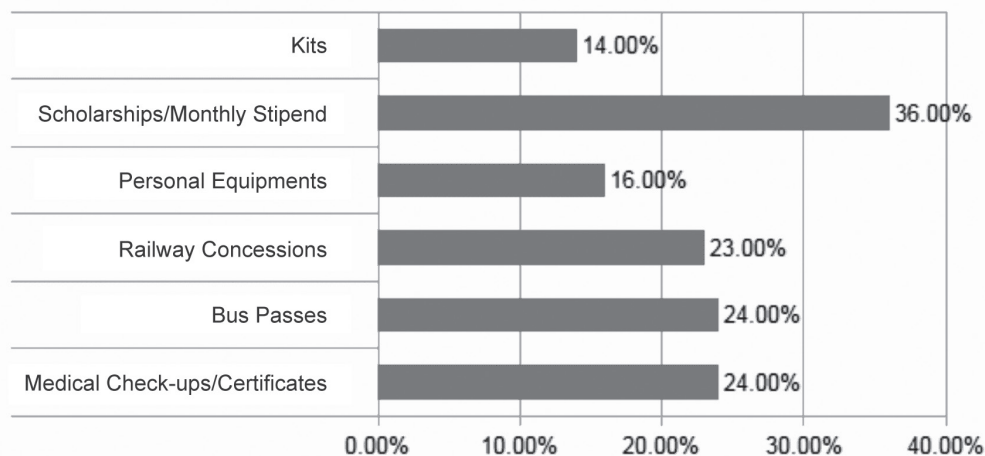


Figure 6: Percentage of parents having information regarding facilities/concessions

the HBE Programme. Some of these suggestions are:

- The HBE Programme should be carried on continuously and special teachers should be appointed permanently by the government for this.
- More training and orientation opportunities for teachers and parents should be available.
- Transport facility should be given to parents to take their child to school and for health check-ups.
- More TLM, kits and assistive devices are required.
- Individual teacher/caregiver for each child should be provided.
- Teachers should visit more frequently (throughout the week) instead of once/twice a month.
- Free medical check-ups, medicines, physiotherapy and other therapies should be provided.
- Once a while, some field visit/

trip should be arranged for all students in a group.

- Child should be taken to a nearby special school at least once a week.
- Regular visits by doctor at home should be provisioned.
- Crèche facility should be provided so that we can go to work leaving the child behind.
- Financial provisions need to be given by the Government.
- There should be a provision for admitting the child in a nearby regular/special school.
- The child should get some quality education inputs along with care and rehabilitation inputs.

DISCUSSION

Most parents of children with severe and profound disabilities, in the present study, reported satisfaction with the programme, and majority of them felt grateful for whatever

was being provided. In particular, parents were using adaptive coping strategies, informal social support sources in addition to the Government support in looking after their child with severe disability. The particular study, however, did not find any parent talking about educational interventions. The efficacy of the interventions was judged in terms of concessions/facilities being provided, frequency of visits of the caregivers/resource teachers/volunteers, financial provisions, moral support and support in carrying out daily living activities. It appeared that resource support and visits to Block Resource Centres (BRCs) tended to reduce the pessimism, especially when the disability was very severe and parents had hard time coping with the child's condition.

It was also seen that parents having children with disability under HBE in areas that are remote and not easily accessible felt helpless as the teachers/caregivers/volunteers could visit their children and the medical and training camps were arranged at a distance far from their house. Some of the parents had more than one child with disability at home and found it extremely difficult to meet the needs of these children on a daily basis.

The inclusion of HBE in the RTE and relative public acceptance of HBE has brought a number of consequences. The legitimacy of HBE as an educational practice has led to many children with disabilities being

pushed out of the regular system of education. Children who can even go to regular schools are now being put under HBE for the convenience of school authorities and teachers. For example, parents of children with visual impairment under the HBE in the State of Uttarakhand expressed that their child could easily attend regular schools if given the opportunity.

On the other hand, most of the parents interviewed valued the idea of services/information being provided at home so that they are able to build their own ability and that of their child having high support needs. Some of them stated that their "child was incurable and HBE was a ray of hope for them. These children were bedridden, or had no urine control or did not understand anything etc. and therefore unable to attend regular schools". They expressed the benefits in terms of medical camps, physiotherapy, kits, equipment and information regarding the concessions available. However, many of them also felt that this should not be the only option available for the education of their child. Their child should get the opportunity for attending regular or special school whichever is available in the neighbourhood. Keeping the child at home, fosters social isolation and exclusion from society, even if other children in the family and from the neighbourhood are interacting with this child, These children, they felt, are also deprived of many entitlements available to

other children in the school like regular teachers, mid-day meals, etc. However, high support needs of these children demand fundamental systemic changes in the educational scenario. If inclusive education has to be a reality then the system that promotes inclusion needs to be flexible, extending to all kinds of diversities that exist in our society.

It was also seen that there was no clarity regarding the labelling a child as severe and profoundly disabled. Labelling is generally based on a medical model and a child who is blind (considered to be a severe disability by many) can still be easily

included in regular schools. Parents of many children in the study felt that they were grateful and satisfied by what was being provided to their child even if the teacher/untrained volunteer/untrained caretaker visited the child only once in two months. This is because the parents believe that their child is not educable and had low expectations from her/him. Finally, the study also revealed that children under the HBE Programme living in backward, remote areas with difficult terrain are further deprived of interventions and require more intensive support measures. This has implications for future research.

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Web 2.0 Tools in Teaching-Learning of Languages in an Inclusive Environment

AERUM KHAN*

Abstract

Web 2.0 tools are web base utilities and technology tools provided by the social media, which focus on the collaborative, user driven content creation and applications leading to a more socially connected web. This idea behind creating web 2.0 tools was to get active contribution of people in creating content on the internet, rather than just accessing and consuming the content available on the web as passive users. Web 2.0 tools can be used by the educators to involve the students and enhance their essential skills like creativity, communication, language comprehension, literacy of media, technological proficiency, awareness towards global initiatives, etc. Few examples of web 2.0 tools include wikis, blogs, vodcasts, podcasts, webinars, e-mail groups, social bookmarking, web forums, instant messaging, virtual learning environment, e-portfolio, web based shared calendar, etc. In addition to these, there are specific web tools which are used for language learning like LinguaSubtitle, Babbel, Lingro, Typeit, Grammar-multi, etc. Also, there are various audio editing tools freely available which can be used for creating content which can be accessed by the differently abled audience. Some of them include Audacity software, Audio expert, Before you know it, UJAM, etc. The present paper is an exploration of various web 2.0 tools which can be used for multiple educational purposes by the teaching-learning community. While exploring these, the paper covers in detail the tools for language comprehension and adaptability, online storage and sharing, etc.

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INTRODUCTION

Language comprehension is the key to learn any subject in order to acquire functional literacy. The Annual Status of Education Report issued by Pratham displays the poor reading skills of students. In most states, Class V students are unable to read Class II textbooks (ASER, 2014).

The impact of this schooling failure is evident each day. One of the ways to deal with this situation can be the intervention of technology to enable children to comprehend languages. It will be contextual to mention here the 'Right to Read India,' which is a national initiative to promote technology-enabled reading and comprehension in government schools. It looks to urgently intervene and provide a scalable solution to India's reading challenge. It was launched in 2013, as a partnership between Dell, American India Foundation and English Helper™ (S. Gupta and P. Viswanath, 2015).

The case of Partur which is a Municipal Council in Jalna district, Maharashtra can be taken as an example where recently technology enabled reading and comprehension platform is introduced under the campaign. In a Zilla Parishad School of this constituency, an audio-visual lab equipped with a solar powered e-Pathshala which is a multipurpose educational computer is used by the teachers especially for teaching English. The digitised version of the English textbook available with the

reading platform is used. At first, the students read aloud with the voice of the reading software, which enables them to pronounce the typical words properly. To facilitate this process, there is a specific syllabification tool in the system. Several comprehension tools like the dictionary and picture dictionary and vernacular list in the mother tongue are used. This technology driven system allows the students to read English aloud, for the students belonging to agricultural communities and having no exposure to English, this is a great achievement.

While talking about technology interventions in education, it is essential to address Web 2.0 tools which are the emerging applications between the creation of knowledge and knowledge sharing in order to accumulate the collective knowledge in a spiral mode. It is contextual that the Web 2.0 tools are concerned with active sharing of knowledge and also with the creation of knowledge; on the other hand, Web 1.0 is related to passive viewing or using of content available on the internet. In addition to this, Web 2.0 tools are free and easily usable.

SOME GENERAL WEB 2.0 TOOLS

Wikis: The wiki systems are the collaborative platforms provided by the social media which encourage users to perform editing very quickly and creation of content online, with minimum technological knowledge. The wikis run in the web browser for making collaborative content creation,

maintaining, and publication in hypertext environments simpler. Wikipedia is the most renowned Encyclopaedia emerged in the recent past from the web 2.0 tools. As there are generally not any user restrictions and no requirement of advanced technical knowledge or technical background for users to contribute contents in wiki systems, they become the powerful tools for online collaboration and information sharing. The contribution of content and collaborative authoring is enabled by wiki systems because collaborators focus on the contents and the collaborative efforts without any distractions generated regarding resolving technical problems. The other useful features in wikis include navigation of content, searching and versioning capabilities. This is why many researchers have realised the potential of wiki systems for adding collaborative dimension in blended learning environments and online learning by using them (Chiu, Wen, and Sheng, 2009; Coutinho and Bottentuit, 2007; Parker and Chao, 2007; Resta and Laferrière, 2007).

Blogs: These are also known as the web logs. A page created on the internet where people are able to write about anything is called a blog. These blogs may take the form of many things, like reviews, commentary, news articles, comedy, political speeches, or may be only plain everyday gossip. The content placed on a blog or the webpage can be anything where coding is possible. At

times, they act as a personal journal which can be accessed online by the blogger and anyone who may come across the site. The blogs include textual material, images, video clips, web links, and other media the blogger wishes to add to the article. The readers can comment on these blogs and reflections by the blogger.

Podcasts: The podcasts are those types of digital media file which are designed to entertain, educate and inform the audience. Various syndication feeds can be made and distributed through the podcasts over the internet. The users can download them on their MP3 players and computers and play them at their convenience.

Vodcasts: A vodcast is a video podcast, a video broadcast over the internet. The vodcasts include basically video clippings. Often the Web television series are distributed in the form of video podcasts. Web TVs or web televisions are using video podcasts as a rapidly growing digital entertainment genre of new media for the effective delivery of the content to the receivers.

Webinars: This is the short form for web-based seminars; it can be a lecture, presentation, workshop or seminar that is transmitted over the Web by the use of *video-conferencing software*. The most important feature of a webinar is its element of interactivity, the ability of giving, receiving and discussing information. This is in contrast with Webcast, where only one way data

transmission is possible and does not allow any interaction between the audience and the presenter.

E-mail groups: This is basically an e-mail address list which is identified by a single name or title, like `mail-list@ncertciет.com`. When any e-mail message is sent to this mailing list name, it is automatically forwarded to all the listed addresses in this mail list. Most of the e-mail clients support mailing lists, which enables them to broadcast group e-mail messages. Also, there are mailing list servers which manage the centralised mailing lists for user groups.

Social bookmarking: A centralised online service that enables the users to add, annotate, edit, recall and share bookmarks of web documents is known as social bookmarking. Since 1996, many bookmark management services have launched online; one of them is Delicious, which was founded in 2003, which has made the terms 'social bookmarking' and 'tagging' popular. Tagging is a very significant feature of social bookmarking systems. It enables users to organise their bookmarks in flexible ways and develop shared vocabularies.

Web forums: These are the message boards or Internet forums, which are online discussion sites where people can do conversations in the form of posted messages. The difference between web forums and chat rooms is that here the messages are often longer than single line of text, and are archived temporarily at the minimum. In addition, on the basis of

the access level of a user or the forum set-up, the posted message might need to be approved by a moderator before becoming visible to everyone or public.

Instant messaging: A type of online chat which offers synchronous or real-time text transmission over the Internet is known as instant messaging (IM). These short messages are bi-directionally transmitted between two parties, when each user chooses to complete a thought and selects "send". Some instant messaging applications can use push technology to provide real-time or synchronous text to the users, which transmits messages character by character, as they are composed. The more advanced forms of instant messaging can include the provision of transferring files, clickable hyperlinks, and voice over IP or video chat.

Virtual learning environment: A web-based platform for the digital aspects of courses of study, found usually within educational institutions is commonly known as a Virtual Learning Environment (VLE). The virtual learning environments normally allow the participants to organise cohorts, form groups and perform roles, present resources, do activities and interactions within a course structure; which is provided for the different stages of assessment of the course. It also reports on participation and even has some level of integration with other systems of the institution.

E-portfolio: An electronic portfolio which is also known as an e-portfolio, digital portfolio, or online portfolio is a collection of electronic evidences assembled and managed on the web usually by a user. These electronic evidences may include input text, e-files, images, multimedia, blog entries, and hyperlinks. These electronic portfolios act as demonstrations of the user's abilities and self-expression platforms, both, and, if they are accessible online, then they can be maintained dynamically with the passage of time. The e-portfolios, like traditional portfolios, can facilitate students' reflection on their own learning, leading to more awareness of their learning strategies and needs. An e-portfolio can be treated as a type of learning record that provides actual evidence of achievement. Learning records are closely related to the learning plan, an emerging tool that is being used to manage learning by individuals, teams, communities of interest, and organisations.

Web based shared calendar: The web based Internet calendars are those calendars which can be shared through the Internet. These shared Internet calendars depend upon a global Internet standard which allows the information placed on the calendar to be exchanged regardless of the application that is used to view or create the information. The Internet calendars use the i-calendar format and the .ics extension in their file names for identification.

SPECIFIC WEB 2.0 TOOLS FOR LANGUAGE LEARNING

LinguaSubtitle: The LinguaSubtitle is a Java-based, user-friendly application for learning languages. It supports multiple languages and generates subtitles for the movies based on the users' vocabulary. It works on GNU General Public License version 3.0 (GPLv3) and is freely accessible.

Babbel: Babbel is a fee-based, e-learning platform and online language learning software available in various languages since January 2008. At present, Babbel is offering fourteen languages which are: Dutch, Danish, English, French, German, Indonesian, Italian, Norwegian, Polish, Portuguese, Russian, Swedish, Spanish and Turkish. According to babbel.com, it has over 2,00,000,00 users from more than 190 countries. There are beginner level and grammar courses, vocabulary lessons, as well as courses teaching tongue-twisters, sayings and songs.

Lingro: Lingro is basically a project which aims at creating an online environment that allows anyone, to read a foreign language website; it is a fast and easy means to translate words they do not understand. It is simple in concept, yet profound in implication, Lingro uses open dictionaries and user-submitted definitions which are licensed under CC BY-SA license to expand its ever-growing database. The site combines many of the largest free dictionaries available on the web and the Lingro

community helps to edit them to make them more complete and comprehensive. Users can also use a Java script tool that highlights every word on the page which they are reading, with links opening up with the definition.

TypeIt: The web tool TypeIt is a language editor designed especially to help the users to type and edit documents in one of the four major Dravidian languages of Southern India, Malayalam. The application includes all the functions of other editing tools and has proven itself to be very easy to use by both beginners and advanced level computer users.

Grammar-multi: Grammar-multi is the most useful application for languages in which words have many forms and for which grammatical agreement and other syntactic connections in a sentence are important and obvious.

SOME WEB 2.0 TOOLS FOR DIFFERENTLY-ABLED CHILDREN

Audacity software: It is a tool which can be used by or for differently-abled. It is a free and open source digital audio editor and recording computer software application that is available for Windows, Mac OS X, Linux and other major operating systems. Recording audio from multiple sources can be done by it, as well as Audacity can be used for post-processing of all types of audio programmes, including podcasts by adding effects such as normalisation, trimming, and fading in and fading

out. The programmes edited and prepared through the use of this tool can be used by the visually impaired children very well.

Before you know it: This software which is designed to help the users to build their vocabulary and practicing pronunciation in a foreign language is 'Before you know it'. It offers a complete learning system for words through a flashcard based system. The flash cards come with pictures and sound. This software also has a deluxe version which adds pronunciation practice and also has mobile support. It is very useful for children with special needs.

UJAM: UJAM is a free web application. It allows its users to create sound tracks without any need for music related skills. Everyone can use it to compose, produce, and publish their own music. The musical product can be shared with friends and colleagues worldwide. Ujam is a great alternative and one of the best solutions to copyright issues when using multimedia in classroom projects. Using UJAM, students can record their own audio and attach it to their project works. The tool is very easy and simple to use.

SIGNIFICANCE OF THE WEB 2.0 TOOLS IN LANGUAGE LEARNING

The above discussed Web 2.0 tools are extremely useful for the language learners; in case of self-learners, these tools can be the best educators. The utility of wikis, blogs, podcasts, vodcasts, webinars, e-mail groups,

social bookmarking, web forums, instant messaging, virtual learning environment, e-portfolio, web based shared calendar, etc. are well accepted in the world which has transformed into a global village, courtesy these tools. The specific language learning tools like LinguaSubtitle, Babbel, Lingro, Typeit, Grammar-multi, etc., are very useful for comprehension of various languages both verbal and written, even pronunciation of foreign languages can be learnt by them. Also, various audio editing tools are freely available. These tools can be used for creating content which can be accessed by the differently-abled audience. Some of them include Audacity software, Audio expert, Before you know it, UJAM, etc. are very useful. Audio books in Daisy format are prepared which can be used by visually impaired children in a very effective way.

CONCLUDING REMARKS

In today's world, we have various technology tools to assist us in

various ways. Their use can be made indispensable for wider dissemination of knowledge. When we talk about language learning the major constraint is the availability of trained teachers, especially in remote areas of our country, the right way of pronunciation of English of foreign language words is a big difficulty. The web 2.0 technological tools can play very positive role in this order, content creation; sharing and wider dissemination can be easily done through them. The initiatives like 'Right to Read India' have their own significance in making the people able to read various languages in right way. The web 2.0 tools play an important role in assisting the differently-abled children also, as the development of talking books, text editors and audio editors have made us able to create content usable by them, and also make the differently-abled children the creator of the content which can be used by others.

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A Study on Awareness of RTE Act 2009 among the Parents of Minority Community of Varanasi City

VIVEK TRIPATHI*

ASHA KVD KAMATH**

Abstract

Education is a basic need as well as the right of every child. But when children due to various reasons are not able to enjoy this right, there is a need for an Act to enforce the right. In spite of all efforts, if the Act is to be implemented in its true spirit, it is necessary for the stakeholders to have an awareness of the Act. This study is an attempt to investigate the awareness of Right to Education (RTE Act 2009) among the parents of Minority Community of Varanasi City. The sample consists of 73 Muslim minority parents selected randomly from the rural and urban localities of the Varanasi city. Descriptive survey method was used for the present study. The main objective of the study was to find out the awareness level of minority community parents related to RTE Act 2009. From the results, it was found that there is significant difference in the awareness level of RTE Act among male and female parents; male parents have higher level of awareness on RTE Act than female parents. Another finding was that the parents who send their children to private schools were more aware about the RTE Act than the parents who send their children to government schools. A significant difference was also found in the awareness level of RTE Act among rural and urban minority parents and that the urban parents are more aware of RTE Act than the rural parents.

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INTRODUCTION

After independence the major problem for the Indian policy makers was to remove the illiteracy, and educate the whole nation. Government of India had made a number of policies and Constitutional provisions to universalise the elementary education so that all the members of the country become educated citizens. In this process, Government of India had formulated Right to Education Act 2009 or Right of Children to Free and Compulsory Education Act 2009 and became one among the 135 countries of the world who had declared that it is the right of child to get education. RTE Act mandates the right to education of all children belonging to every section of our society irrespective of their caste, religion, race, etc. To place this Act in action it is essential that all the members of our society and parents participate and take part in providing education to everyone.

Therefore, in this research an attempt is made to study the awareness level of the Muslim minority parents about the RTE Act 2009. A few researches on the RTE Act which have been reviewed are described in the following paragraphs.

Kamath, AKVD and Somashekar, TV (2013) in their study on 'Awareness on RTE Act 2009 among Teacher Educators at Secondary Level' administered a Questionnaire to a sample of 27 Teacher Educators of southern India. The study revealed

that the awareness level of teacher educators was not satisfactory as their mean score was only 33.32 per cent.

Rahman A. (2013) conducted his study on sample of 160 Primary school teachers from Kanpur. It was found that about forty-five per cent of the teachers working in the private schools were not at all aware about the basic provisions of this Act, including the age group and level/classes covered therein, of the students. The level of awareness among the teachers' of government schools is comparatively more (54.6 per cent).

Rajput G. and Aziz T. (2013) conducted a study on 200 parents of urban slum dwellers of Delhi which revealed that 88 per cent of parents were unaware of RTE Act and only 5 per cent parents were aware of the duty of the parents to send their child to school.

Sachar Committee Report (2006) revealed that around 25 per cent of Muslim children in the 6-14 year age group have either attended school or have dropped out. Muslims have the highest dropout rate in the country and the increase in enrolment in schools has been highest among SCs and STs (95 per cent) followed by Muslims (65 per cent).

Report of the Standing Committee of the National Monitoring Committee for Minorities' Education (NMCME), (2012) recommends the Government to discuss and take remedial action for addressing the problem of low rates

of transition of Muslim students from primary to upper primary schools.

The above studies show that, there is a need to publicise about the RTE Act. They also indicate that the level of enrolment of children at the elementary level among the Muslim community is low. If the children are to be sent to school, parents are supposed to know about the Act. Even if the Act is formulated, unless the parents are aware of the provisions of the Act, it may not be possible to completely achieve the objectives of the Act. Therefore, it was felt that there is a need to find out as to what extent the parents of the Muslim community are aware of the RTE Act.

OBJECTIVES OF THE STUDY

1. To study the awareness level of minority parents on RTE Act 2009.
2. To compare the awareness level of parents belonging to the following groups:
 Locale - Rural and Urban
 Gender - Male and Female
 Educational level - Secondary Pass and Graduate Pass.
3. To find the difference in awareness level of parents who send their children to Government, Private and Madarsa schools.

DESIGN OF THE STUDY

The purpose of the study was to know the awareness level of RTE Act 2009 among the Parents of Minority Community of Varanasi City;

Therefore, the survey method was selected.

SAMPLE

For the present study investigator selected a sample of 73 parents both Male and Female belonging to Muslim community. Sample was selected randomly from the rural and urban localities of the Varanasi city. Due consideration was also given to government, private as well as *Madarsa*.

TOOL

In the present study to find out the awareness of RTE Act 2009 among Muslim parents, a Questionnaire on Awareness of RTE Act 2009 was constructed by the researcher.

Investigator studied the 10 aspects of the provisions of the RTE Act related to Admission, Age, Parental responsibility, Fees and issue of T.C., Detention punishment and harassment, Equal opportunity, Facilities to be provided to students, Educationally weaker section, School Management Committee and Minority Rights.

A tool containing 20 questions of multiple choice type, with the coverage of above aspects, was prepared and used for the collection of data for the study. One parent could score a maximum of 20 marks.

STATISTICAL TECHNIQUES

The data collected for the study were analysed using Mean, Standard

ANALYSIS AND INTERPRETATION

Objective 1: To study the awareness level of Parents on RTE Act 2009

Table 1 gives the details related to awareness of the Parents.

Table 1
Overall performance of parents on awareness of RTE Act 2009

N	Mean	SD
73	9.12	2.68

Objective 2: To compare the awareness level of Male and Female parents on RTE Act 2009

Table 2 gives the details related to awareness level of Male and Female parents.

Table 2
Mean, SD and t-value of male and female parents on awareness of RTE Act 2009

Gender	N	Mean	SD	df	t-value
Male	42	10.23	2.29	71	5.61*
Female	31	7.29	2.17		

*Significant at 0.01 level

Deviation and t-test to find the significance of the means and interpret the result.

Table 1 shows the mean and SD of total Parents (73) in terms of Awareness of RTE Act 2009. Single parent can score a maximum of 20 marks on the given questionnaire. The mean score secured by the total sample is 9.12 which is slightly less than 50 per cent, i.e., 10.0. SD value is 2.68. This shows that the level of awareness is not high.

As per Table 2, the mean scores of Male parents is 10.23 and Female parents is 7.29. This reveals that

Male have greater awareness than the Female with regard to awareness of RTE Act, 2009.

Hypothesis 1: There is no significant difference in the awareness of RTE Act 2009 between the Male and Female parents. For df 71, the Table value of 't' to be significant at 0.01 level is 2.61. The calculated value of 't' is 5.61. This value is greater than the table value. Therefore, the Hypothesis 1 is rejected. It can be inferred that there is significant difference between the Male and Female Parents regarding awareness of RTE Act 2009. This shows that

Objective 3: To compare the awareness level of Rural and Urban Parents on RTE Act 2009

Table 3 gives the details related to awareness level of Rural and Urban Parents.

Table 3

Mean, SD and t-value of Rural and Urban Parents on Awareness of RTE Act 2009

Local	N	Mean	SD	df	t-value
Rural	34	8.51	2.70	71	2.68*
Urban	39	9.82	2.47		

*Significant at 0.05 level

Male parents have greater awareness of RTE Act 2009 when compared to Female parents.

As per the Table 3, the mean scores of Rural parents is 8.51 and Urban parents is 9.82. This reveals that Urban parents have greater awareness than the Rural parents with regard to awareness of RTE Act 2009.

Hypothesis 2: There is no significant difference in the awareness of RTE Act 2009 between the Rural and Urban parents.

For df 71, the Table value of 't' at 0.05 level of significance is 1.98.

The calculated value of 't' is 2.18. This is greater than the table value [1.98]. Therefore, the hypothesis 2 is rejected. It can be inferred that there is significant difference between the Rural and Urban Parents regarding awareness of RTE Act 2009. This shows that Urban parents have greater awareness of RTE Act 2009 when compared to Rural parents.

As per the Table 4, the mean scores of parents who passed only secondary is 8.86 and Graduate pass parents is 9.5. This reveals that Graduate pass parents have greater

Objective 4: To compare the awareness level of parents who are Secondary Pass and Graduate Pass on RTE Act 2009.

Table 4.4 gives the detail related to awareness level of parents who are Secondary and Graduates pass.

Table 4

Mean SD and t-value on awareness of RTE Act 2009 of parents who are Secondary pass and Graduate pass

Qualification	N	Mean	SD	df	t-value
Secondary	43	8.86	2.63	71	1.08**
Graduate	30	9.5	2.44		

**Not Significant

awareness than the Secondary pass parents with regard to awareness of RTE Act 2009.

Hypothesis 3: There is no significant difference in the awareness of RTE Act 2009 between the Secondary pass and Graduate pass parents.

For df 71, the Table value of 't' at 0.05 level of significance is 1.98. The calculated value of 't' is 1.08. This is less than the table value [1.98]. Therefore, the null hypothesis 3 is accepted. It can be inferred that there is no significant difference

between the Secondary pass and Graduate pass parents on awareness of RTE Act. In other words, the level of education of the parents does not influence their level of awareness of RTE Act.

As per the Table 5, the mean scores of the parents who send their children to government schools is 8.57, private schools is 10 and *Madarsa* is 9.44. This reveals that parents who send their children to private schools are more aware about the RTE Act than the parents who send their children to government

Objective 5: To compare the awareness level of Parents who send their children to Government, Private and *Madarsa* on RTE Act 2009.

Tables 5 and 6 gives the details related to awareness level of Parents who send their children to Government, Private and *Madarsa*.

Table 5

Mean and SD on awareness of RTE Act 2009 of parents who send their children to government, private and *Madarsa*

Types of schools	N	Mean	SD
Government	21	8.57	2.87
Private	23	10	3.25
<i>Madarsa</i>	29	9.44	2.32

Table 6

Mean SD and t-value on Awareness of RTE Act 2009 of Parents who send their children to Government and Private Schools

Types of schools	N	Mean	SD	df	t
Private	23	10	3.25	52	2.04*
Government	21	8.57	2.87		

*Significant at 0.05 level

and Madarsa. However, there is a great difference in the mean (1.43) between the parents who send their children to government and private schools. It is necessary to see whether this difference is significant or not. Therefore, an attempt at testing the hypothesis 6 was felt.

Table 6 gives the information on level of significant difference between the awareness of parents who send their children to government and private schools.

Hypothesis 4: There is no significant difference between the awareness levels of parents who send their children to government and private schools.

For df 71, the table value of 't' at 0.05 level of significance is 1.98. The calculated value of 't' is 2.04. This is greater than the table value. Therefore, the null hypothesis stated above is rejected. It can be inferred that there is significant difference between the awareness level on RTE Act among the parents who send their children to government and private schools. The parents who send their children to private schools have greater awareness when compared to the parents who send their children to government schools.

FINDINGS OF THE STUDY

1. There is a significant difference in the awareness level of RTE Act among male and female minority parents and the male parents have higher awareness than the female parents on RTE Act.
2. There is significant difference in the awareness level of RTE Act among rural and urban minority parents and urban parents are more aware of RTE Act than rural parents.
3. There is no significant difference in the awareness level of RTE Act among Secondary pass and Graduate pass parents. Both the groups have similar level of awareness of RTE Act.
4. There is significant difference in the awareness level of RTE Act among minority parents who send their children to government and private schools. The parents who send their children to private schools have greater awareness of RTE Act than who send their children to government schools.

EDUCATIONAL IMPLICATIONS

The present study focuses on the awareness level of RTE Act among minority parents. At present, several researchers (Rajput G. and Aziz T. 2013, Rahman A. 2013) explored the problems and difficulty in the proper realisation of the objectives of RTE Act. Results of the research studies suggest the possible recommendations and measures for the effective implementation of the Act. One of the areas of research is awareness of RTE Act among the stakeholders of elementary schools of whom parents are also one.

- The study has shown that male parents have greater awareness of RTE Act as compared to

female parents. Therefore, proper measures should be taken to augment the awareness level among the female parents. In schools, during parent-teacher meetings, teachers should try to develop awareness, especially among the female parents about the RTE Act. At village level, the Village Education Committee (VEC) can also hold awareness programmes.

- The study has shown that urban parents are more aware of RTE Act than the parents of rural areas. Therefore, awareness programme should be organised in the villages and rural areas. The government body and the NGOs should take necessary steps to organise awareness programmes. Awareness could be spread through banners, slogans, pamphlets, making short

commercial advertisements in the TV and radios showing the importance and value of education and RTE Act.

- The study has shown that the parents sending their children to private schools have more awareness than parents sending their children to government schools. Therefore, it is the responsibility of government school teachers that they also inform and make the parents aware of recent policies and programmes of the government in the field of education. Teachers and other stakeholders of elementary education should spread the information of the RTE Act in the surrounding communities and localities especially in the rural areas.

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Conflict Resolution Education to Elementary School Learners Building Peace for Life

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Abstract

Facing conflict is accepted and expected part of life and one cannot do anything to avoid it. Life in classroom, play field and school is not free of it. Teachers often complain that half of their classroom time is consumed in dealing with conflicts that their students face routinely, thereby inevitably ruining away the peace in the classrooms. It is a fact that a good experience learned at a young age is nevertheless forgotten. Breaking the conflict in the elementary classrooms is thus the first step in and an integral part of elementary classrooms to promote peace among young learners. The question is thus how? In this context, the paper identifies four common types of conflicts in elementary classrooms: touch-me-not, I am the boss, you love me / love me not, and I am the best. In continuation, it suggests four strategies such as role play, reflective listening, and dealing with feelings, and talks it out for resolving such conflicts among elementary school learners. Understanding the consequences of conflicts through the successful use of these strategies may empower the elementary learners with the skills of effective communication and emotional wellbeing which they can use in life outside the classrooms to build peace for life. This will ensure that they grow up into a responsible adult, thereby making a remarkable impact as positive agent of peace for a state of peaceful co-existence of all.

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We all face conflict in our lives as a matter of routine. It is expected, natural, and accepted part of life and one can do little to avoid it. Dewey (1922, cited in Coleman, Deutsch and Marcus, 2014) said that “Conflict is the gadfly of thought. It stirs us to observation and memory. It instigates invention. It shocks us out of sheep-like passivity, and sets us at noting and contriving.”

The society at present is in crisis for it has utterly failed in resolving the conflicts. Since the school is a miniature of our society, the issue of conflicts has unfortunately seeped into our classrooms thus making the whole education system hollow. We have multiple conflicting issues in the classrooms and schools reflected through misunderstanding among student, teachers, between students and teachers, as well as between teachers and parents. The potential for conflict exists because students, parents, teachers, and other stakeholders have different needs, competing interests, and varied views, scarcity of choices, distinguishable understandings, and possibly different value systems. These yield emotions running high on a variety of issues.

The nature of conflicts in the elementary classrooms is invariably different from what we see in our classrooms of secondary and higher secondary schools. The conflicts experienced by children are not about individual identities, but a reflection of the types of conflict, they

often come across in the society. The followings are the glimpse of some common types of conflict which a teacher encounters in an elementary classroom:

Type 1 Conflict: Touch-me-not:

Little Tina frequently shouts on her classmate if they touch her. Sometimes, her mood is so sour that she gets into fighting or shoving one of her classmates. Resultantly, she has no friend in the class and she feels lonely.

Type 2 Conflict: I am the boss:

Soham is the big boss in the class. He does not pay attention to his work and is often attracted to what others have brought. He does not bother to ask any of his classmates for whatever he needs but takes away anything which he likes. The teacher has a tough time with Soham because he never listens to her instruction. The classmates hate Soham and he has no real friends in the class.

Type 3 Conflict: You love me / love

me not: Juhi is teacher’s pet. Ms. Sundriyal often appreciates her for work and sincerity. One Day, Juhi is snubbed by Ms. Sundriyal for some reason which Juhi considered not that important. Juhi is deeply hurt and feels that her teacher no more loves her. Juhi has started hating Ms. Sundriyal and her study is being affected.

Type 4 Conflict: I am the best:

Suha and Zahra are classmates. They both are good in painting. The class teacher has asked them to decorate the bulletin board. Suha

wants the decoration to be little glitzy and pictorial while Zahra wants it to be simple and more descriptive. Both Suha and Zahra want their idea to be followed and start quarrelling. As a result, they have failed to complete the task as well as have lost their friendship.

The children at elementary stage are quite immature and mostly dependent on a mature person to guide them to check out the correct behaviour. The children are so desperate to sort out their conflicts that they often make wrong decisions. Their immaturity makes the whole situation increasingly volatile.

We often hear the teachers from kindergarten to twelfth grade complaining that half of their classroom time is consumed in dealing with conflicts that their students face on a daily basis. This time could have otherwise been used for quality teaching-learning process. It necessitates resolving conflicts.

As childhood is a reflection of the personality of the young age we need to identify and use or apply measures to resolve conflicts at this innocent stage rather than nipping it later. One needs to understand that a good experience learned at a young age is nevertheless forgotten. The challenge for schools, as also for the wider community, is to find ways of managing conflict constructively so that the young learners can learn and grow with this experience. Teachers need to find ways for assisting

students in making them understand conflicts and their consequences, resolving conflicts, and keeping their behaviour problems arising out of conflicts to a minimum which are inevitably ruining peace in the classrooms. Breaking the conflict in the elementary classrooms is the first step to create a just and peace loving society. The goal is, thus, to equip the learners with skills to resolve conflicts that they can use in life outside the classrooms and school. Resolution of conflict, thus, should be an integral part of elementary classrooms. The question is thus how?

HOW TO RESOLVE CONFLICTS?

The common general response to conflicts among elementary learners is fights, insults, threats or becoming passive by either ignoring the conflict or walking away or refusing to listen, or giving in. Another common response is to demand or expect the solution to come from an authority figure such as a parent, teacher, or principal. Teaching conflicts to students is another potential means. In the words of Kreidler (2005), "If you take time to teach conflict resolution, you'll eventually have more time to teach". The theorists like Piaget, Erikson, and Vygotsky believed that conflict helps the child to develop many important life skills. Conflict may be healthy if guidance approach, rather than traditional discipline, is used when dealing with elementary learners' conflicts. While each of

these responses is appropriate under some circumstances, a collaborative approach to resolve conflict is often the most appropriate and sometimes the only method to obtain satisfactory and long-term results.

Conflict is not the culprit rather how we respond to it is the issue. Destructive conflict can result in violence, loss of friendship, or unnecessary emotional turmoil. On the other hand, constructive resolution of conflicts can lead to higher motivation, better communication, and innovation.

The teacher needs to make the learners understand the importance of calming down their pent up emotions. In the words of Goncu and Cannella (1996:60), "It is the responsibility of the teachers to make available to children, during their effort to resolve children's conflicts, culturally valued skills that children can use later without the adult's assistance". The action of calming down stops the individual from being impulsive and helps her/him to reflect upon her/him behaviour. Children though very young at this stage, are quite aware of their feelings. The interference of a mature mind helps them to channelise their emotion in the right direction. The teacher needs to make the learner understand that they need to express their emotions assertively and not aggressively. Thus, conflict resolution education is the best alternative to resolve conflicts among young children.

WHAT CONFLICT RESOLUTION EDUCATION IS?

Conflict resolution education, in general, refers to strategies that enable students to handle conflicts peacefully and cooperatively outside the traditional disciplinary procedures. Hunter (2008), author of *Creating a Culture of Peace in the Elementary Classroom*, opined that 'It is important to teach children about the diversity in the classroom and community around them. When learners are informed about the differences among the peers, they can be more culturally sensitive and accepting. Conflict resolution is designed to provide students with a neutral, yet safe, environment where they can express their point of view and discuss issues in a mutually satisfactory manner'. Conflict resolution education models, teaches in developmentally relevant and culturally appropriate ways, a variety of processes, practices, and skills designed to address individual, interpersonal, and institutional conflicts, and to create safe and welcoming learning environments (Prichard and Druliner, 2002). These skills, concepts, and values help individuals to understand conflict dynamics, and empower them to use communication and creative thinking to build healthy relationships and manage and resolve conflicts fairly and non-violently. According to the Crawford and Bodine (1996), "The purposes of conflict resolution are

to provide an environment in which each learner can feel physically and psychologically free from threats and danger and can find opportunities to work and learn with others for the mutual achievement of all. The diversity of the school's population is respected and celebrated." Conflict resolution education is thus an imperative part of classrooms which tends to make the learners discover and learn approaches and strategies to resolve their conflicts. In conflict resolution education, the skills used in mediation are learned experientially and applied to different situations in life, including that of in classroom, play field, school, and wider community.

INTERVENTIONS FOR CONFLICT RESOLUTION AMONG ELEMENTARY LEARNERS

In view of four common conflicts being faced by the elementary learners, we suggest following four different strategies as interventions which for time and again have proved efficient for sorting the things out for young learners:

Role Play Strategy

Role play as a strategy definitely works out for those who are in conflicting situations. It helps the individual to identify the problems with the victim's perspective and also helps in developing empathy and compassion. Putting yourself in other's shoe is always good as you get a fair chance to know the correct

reason as to why they are behaving in that way. The strategy could be used as a group activity as well as an individual activity for the aggrieved party concerned. The teacher could provide the learners with hypothetical situation or make them work for real conflict situation arising as and then in the classroom.

Type 1 Conflict: Touch-me-not: Tina has fought with Rahul because he has touched her pencil-box. Tina is terribly upset.

The teacher intervenes and asks Tina and Rahul to sort out the issue by using role play. They are both told that they will be playing the corresponding roles. Here is a check at the conversation they have:

Teacher: Rahul and Tina listen now. You are going to play the role. Rahul will be Tina for a while and Tina you will be Rahul. Let's see how you two sort the thing out.

Rahul (Tina): Hey stop! Stop! How dare you touch my pencil box?

Tina (Rahul): No, no I just meant to see it Tina. I was just to have a look. By the way, your pencil box is beautiful.

Rahul (Tina): Shoves Tina (Rahul). How could you touch it? It's mine (snatches and pushes Tina).

Teacher: OK, children it's over.

Tina and Rahul you acted really well. Now you both tell me what you learned.

Rahul: I realised that it was my mistake that I took Tina's box without her permission. I will take care of it now. Sorry Tina.

Tina: Oh Missy I realised my mistake. I did not like the way Rahul snatched away the pencil box from my hand. I was just taking a look. By the way, I have understood how he must have felt when I did the same with him. I am really sorry Rahul.

Tina: Miss, I am really sorry to you but I will check myself next time.

Comments: The teacher needs to develop patience and compatibility while solving the conflict. The problem has to be sorted out from the learner's perspective and not that of the teacher. It will help in making the impact long lasting.

Reflective Listening Strategy

Teachers often know that conflict among the young learners is mainly due to the fact that no one wants to listen but loves to impose his ideas and thoughts on others. Children at this stage are so filled with energy that their mind is more in the action. The teachers need to train the young learners the importance of reflective listening. Reflective listening means to listen with an open mind. The teacher needs to promote reflective listening as it helps in understanding the other person.

Type 2 Conflict: I am the boss: Soham has eaten away Namit's lunch. Namit has objected to Soham's action but he was warned by Soham not to tell it to anyone. Namit is teary and feels insulted.

Some children who have watched the incident have complained it to Miss Lisa. Miss Lisa calls Soham and Namit to meet her after the class.

Miss Lisa: "Soham and Namit you both are good boys. What happened in the class?"

Soham: Miss I did not do anything. You must believe me.

Miss Lisa: OK Soham, Let Namit speak.

Namit (almost in tear): Miss he took away my lunch and just ate it. I have nothing to eat. My mother has prepared my favourite, Cheese Sandwich, and I did not even have a single bite.

Soham: Miss I am sorry but I was hungry too. Miss I did not bring my lunch and Namit had a big box for himself. I wanted to return after having a small bite but it was so yummy.

Namit: I hate you Soham, you are trouble in the class. Nobody loves you.

Miss Lisa: Namit stop arguing among yourselves. I understand that Soham has done a wrong thing but that does not give you an opportunity to speak like this. Soham, don't you think what you did was wrong.

Soham: Miss I understand you are right but I was hungry you know. However, I can say sorry to Namit.

Comments: The teacher understands that this particular conflict requires involvement of an external party. Soham's problem has got a link with his problems at home. Soham needs immediate intervention before he becomes a trouble at school.

Talk it out Strategy

The elementary learners are often unaware of the feelings of others and

casually end up hurting each other. The teacher at this stage can play the role of facilitator and intervene in case of a conflict. The children in conflict are motivated to talk about their problem and the resolution reached is often by making them take a decision. The basic purpose is to make the child independent in decision making process and also to develop problem solving skills.

Type 3 Conflict: You love me / love me not: Juhi is teacher's pet. Ms. Sundriyal often appreciates her for work and sincerity. One day, Juhi is snubbed by Ms. Sundriyal for some reason which Juhi considered not that important. Juhi is deeply hurt and feels that her teacher no more loves her. Juhi has started hating Ms. Sundriyal and her studies are being affected.

Ms. Sundriyal: Juhi, can I have a word with you in private?

Juhi (hesitantly): Sure Miss.

Ms. Sundriyal: What has been troubling you my child? You look so upset.

Juhi: Nothing miss. I am alright. I do not have a problem.

Ms. Sundriyal: Yeah Juhi! Will you just help to carry these books to my cabin? I think we will sit there and talk.

Juhi: Of Course Miss.

Ms. Sundriyal: So Juhi what did you have for lunch? By the way, you painted the board really well.

Juhi: Miss I want to say something. I hope you will not be upset with me.

Ms. Sundriyal: Yes Juhi tell. I am listening to you.

Juhi: Miss I thought you hated me.

Miss Sundriyal: Oh Juhi! What gave you that feeling?

Juhi: But Miss you scolded me without reason and you never gave me an opportunity to explain.

Miss Sundriyal: I am sorry Juhi but I never thought that you will feel so bad about it. I am really very sorry if it is the thing which has made you so upset.

Juhi: Miss it's fine. I am happy to know that you still love me and you are my best teacher and my friend too.

Comments: The teacher needs to come down to the level of the individual learner who is in conflict. Accepting mistakes and calming down often helps in patching the misunderstanding. If the teacher would not have taken the pain to talk about the problem with the child, she might have never understood her problem and would have lead to an emotional blockage. This would have surely disrupted the child's personality.

Dealing with Feelings Strategy

Emotional awareness is a key to resolve conflicts. The teacher needs to teach the learners to identify their feelings and emotions and to communicate effectively in case of disagreement. The teacher must make the learners learn the skill to find solution in case a learner is in anger, fear, or pain. Communicating feeling is the best way to guarantee that they

are neither sedated nor ignored to create an emotional impairment. The teacher can use certain activities for developing the required skills among the learners.

Type 4 Conflict: I am the best: Suha and Zahra are best friends. They have fought on a petty issue. Suha and Zahra are feeling miserable.

Teacher: What is the problem with you Suha? You look troubled.

Suha: Miss Nothing, it's only because of Zahra.

Teacher: But she is your best buddy.

Suha: I know Miss but I think she does not love me.

Teacher: Why? Did you two fight?

Suha: No Miss. We behaved very well. She misunderstood me while we were working on the bulletin board.

Teacher: Oh! Let me call Zahra. Why you don't speak straight to her?

Suha: Miss I don't know. She may not want to talk.

Teacher: Suha are you angry or upset with Zahra?

Suha (mumbling to herself): Miss I don't know.

Teacher: Suha, Zahra is your friend, just go and ask her for it.

Suha: OK Miss, I hope she does not mind.

Teacher: No, Suha go and talk to her and do tell me today before leaving what Zahra told you.

Suha: Oh! Miss Thank you.

Comments: Teacher needs to make the learners accept the situational feelings which arise because of a conflict. The teacher has to instill faith and confidence in the learning environment in which the learners are ready to share their conflicts. It's not compulsory that the method suggested will surely work in case of a conflict. The teachers may devise suitable interventions as required by the situational crisis happening in the classroom.

WORK OUT BY TEACHER FOR RESOLVING THE FOLLOWING CONFLICTS AMONG CHILDREN

Activity 1: One boy is waiting in line to drink water from the tap and another child cuts into the line ahead of the first child.

Activity 2: Your friend has taken your assignment and promised to return the next day. She/He forgets it. You are mad at her/him because you need to submit to your teacher.

Activity 3: You have fought with your friend because she/he did not show you her/his new pencil-box. You are upset because you want to resume your friendship with her/him. You are worried because you feel that she/he will not accept your offer to talk.

Activity 4:

My friend did not show me her armband. I am angry and sad.



Miss Lisa scolded me today. I must not listen to her now.

CONCLUSION

Conflicts in the form of consistent confrontations, disagreements and misunderstandings are normal part of life in classrooms, and school. Instead of viewing conflicts as negative, it must be seen as a part of human nature. The young school learners must be made to understand that differences are inherent in individuals and they must see their immediate world differently. Acceptance of these facts as truth will not only open the option of getting more time for teachers to teach but will also make the learners learn with a peaceful state of mind in and around the school.

Exposing students to the personal joys of service, and giving them a chance to become other-centred but not self-centred are a crucial part

of education as viewed by Martin Luther King. In case of conflicts, letting the young learners verbalise their thoughts and feelings, listening to views of others with patience and reflection, understanding about the value of working things out, and talking about the effects of their resolution can provide the learners an opportunity to develop effective communication, mutual understanding, empathy, self-confidence, independent thinking, and emotional wellbeing. This will ensure that the young school learners grow up into a responsible adult, thereby making a remarkable impact on their role as positive agent of peace, building peace for life and to promoting a state of peaceful co-existence.

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Children's Laughter and Language of Humour

RICHA*

Abstract

This paper will try to elaborate on the theoretical aspect of language of humour and its implication in children's learning. An attempt is made to discuss the aesthetic dimension of human experience where a certain kind of emotional sensation, evokes laughter and mirth. In a flash, humour connects children to the multifaceted shades of life. It is seen that modern day education emphasises on learner-centred classroom, with the message that the teaching-learning process should be centred on each child's needs, wants, and initiatives. The possible suggestive precondition is assumed to be the child's laughter and happiness as per the 'Learning without Burden' (1993) report and National Curriculum Framework (2005), which stress on the use of humour in classroom learning. However, whether humour is healthy or not, is still a debateable question. The paper presents the philosophical, psychological and language orientation on humour.

INTRODUCTION

"...man is distinguished from all other creatures by the faculty of laughter."

— Joseph Addison (p. 87, 1712)

The recognition of humour and taking delight in the ludicrous incongruity are particularly human activity. Someone narrates a funny

story or tells a joke, or makes a witty remark, and we are suddenly struck by its wittiness. Depending upon how amusing we perceive the humour to be, it can make us smile or burst into laughter. The laughter seems to arise from a subtle creative twist in the language expression underlining

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something incongruous. The ability to comprehend and appreciate humour is a critical aspect of social functioning. Modern day school learning focuses on the pedagogic trend towards the promotion of joyful learning, with an attention that children are much more likely to be motivated to learn, and to retain knowledge if they are happy, rather than anxious in the classrooms. The Yash Pal Committee report *Learning without Burden* (1993), has extensively reported on the flaws of the contemporary education system, pointing out that the contemporary education system has become highly centralised, examination driven and joyless. It highlights that the child has lost “the sense of joy in being involved in an educational process” (p.5). Moreover, it argues that the textbooks are impersonal, and somewhat irrelevant to the child’s world. “Words, expressions and nuances commonly used by children and others in their milieu are all absent from textbooks. So is humour... The language used in textbooks, thus, deepens the sense of ‘burden’ attached to all school-related knowledge” (p.10).

It envisages, “...joy must be respected in a text written from a child-centred point of view” (p.9). For the first time, National Curriculum Framework (2005) recognised this, in its chapter ‘Systemic Reforms’ and recommended that “the curriculum will be designed so as to provide opportunities to directly observe learners at play and work; assignments

to help teachers understand learners’ questions and observations about natural and social phenomena; insights into children’s thinking and learning; and opportunities to listen to children with attention, humour and empathy” (p. 108-109). The use of humorous content in the classroom allows a platform for interpreting the ambiguity of humour, and integrating teaching-learning practice with the children’s wishes. This paper will try to present the philosophical orientation to understand the expression of humour, in what way, the ironic humorous or joking speeches of daily life use a figurative meaning opposite to the literal meaning of the utterance.

LANGUAGE OF HUMOUR

To facilitate the discussion of meaning and kind of ambiguity humour possesses, we need to look at the language of humour and its nature. This area is always looked upon by the society as a non-serious or joking subject. Emerson (1969) writes: “for the very reason that the humour officially does not ‘count’, persons are induced to express messages that might be unacceptable if stated seriously” (p.169-170). He emphasises that it is a process of negotiation and a covert communication, which “may be regarded as bargaining to make unofficial arrangements about taboo topics” (p.170). Underpinning this form of communication allows a mode of disguise that implies that only joke was intended, and nothing serious. The review of literature points out

that humour are incongruous and is regarded as a form of social play, a twist in the language expression with sheer creativity and spontaneity, which evokes laughter. The form of humour proposes that the appreciation of humorous material involves understanding and resolution of incongruity. Use of ambiguity or metaphor is an important feature of persuasive discourse in humorous expression because it mediates between the cognition and emotion. McGhee (1979) defines humour as “the mental experience of discovering or appreciating ludicrous or absurdly incongruous ideas, events, or situations” (p.6). The cognitive process of humour involves a social context, an intellectual appraisal comprising the perception of a playful incongruity with an emotional response of mirth or laughter. The simplest expression of that is the pun or joke, in which two different meanings of a word or phrase are brought together simultaneously.

In explaining the role of incongruity in humour, Kant (1911) writes: “in everything that is to excite a lively laugh there must be something absurd (in which the understanding, therefore, can find no satisfaction)... laughter is an affection arising from the sudden transformation of a strained expectation into nothing” (p. 54). Freud (1905) writes: “pleasure could arise from the alternation between ‘thinking it senseless’ and ‘recognising it as sensible” (p.160). Koestler (1964) developed the concept

of ‘bisociation’ to explain the mental processes involved in humour, as an incongruity. According to him, bisociation occurs when a situation, event, or idea is simultaneously perceived from the perspective of two self-consistent but normally incompatible or disparate frames of reference. Thus, a single event “is made to vibrate simultaneously on two different wavelengths, as it were” (p.35).

On the other hand, the language discourse on humour highlights the idea of ambiguity in expression of language or incongruity as a basis of origin of humour. Looking at our roots to understand the humorous incongruity and aesthetics, the enjoyment of incongruities forms the basis of aesthetic pleasure. In ancient Sanskrit literature, Humour is defined as *Hāsyā* (हास्य). Humour or *Hasya* is seen as a *rasa* of joy, a prominent integral part of the ‘*Natyashastra*’ for evoking mirth. Attardo (2001) suggests that humour in its simplest structure includes a set-up with an incongruity and a resolution. Considering joke, he writes that this structure has a disjuncture or punch line, a textual element that introduces the incongruity and forces a switch from one schema to another. Also, there has to be a connector which functions as a bridge between these schemas to achieve a ‘resolution’. The two schemas have to be incongruous with each other. Attardo (2001) writes: “by forcing the hearer/reader to backtrack and reinterpret

the text, or by forcing her/him to produce a new and incompatible... interpretation of the text, the punch line cannot be integrated into the narrative it disrupts (which is the one that has set up the first script)” (cited in Goatly, 2012, p.22).

In India, the most common form of humour among children is a riddle or question-answer structure (पहेली) in which, humour resolves the process in an unexpected way, inconsistent with the previous assumptions. The element of surprise is an evident component in the design of the humorous content. Another important aspect of humour is the punchline concept, which achieves its effect implicitly rather than overtly. It employs a twist in language expression through different vocabulary is applied in an unusual and new way that opens a new vista of thought process. Alexander (1997) writes: “jokes appear to flout/violate the maxim of manner: they often depend upon deliberate creation of ambiguity, which is eventually resolved in punchline” (cited in Goatly, 2012, p. 232). Traditionally, literal language has been distinguished from figure of speech, including metaphor, metonymy, simile, understatement, hyperbole or irony. All these figures of speech are utterances whose meanings fail to match the state of affairs, and thus involve a hidden or metaphorical meaning. Goatly (2012) says that metonymy or metaphor based text holds ambiguity, which jokes or puns may exploit. Its

comprehension mainly depends upon contiguity in experience on some perceived similarity or analogy. From a cognitive aspect, a metaphorical use in language expression can be briefly defined as thinking of one thing or idea as though it refers to another thing or idea.

PSYCHOLOGICAL ASPECTS OF HUMOUR

From a psychological perspective humour is seen as a social process, recognising that a humour or jokes may say more about social life of a particular society of a particular time. Freud (1928) sees laughter as a social phenomenon and writes that there are two ways in which a joke works, “either one person may himself adopt a humorous attitude, while a second person acts as a spectator, and derives enjoyment from the attitude of the first, or there may be two people concerned, one of whom does not himself take any active share in producing the humorous effect, but is regarded by other in a humorous light” (p. 215). Further, he writes: “similar pleasure is experienced by observers who take no actual part in it” (p. 216).

Freud (1905) called it a ‘harmless wit’, a play on words whose meaning is hidden. He viewed it as a piece of sophisticated dialogue, operating by condensed meaning and substituting signs. He writes: “words are a plastic material with which one can do all kinds of things. There are words which, when used in certain connections, have lost their original

full meaning, but which regain it in other connections" (p. 34). A significant characteristic of the joke is 'double meaning' or 'hidden meaning' through word play (p. 36). Humour, thus, in a way finding 'sense in nonsense' (p. 12). The psychogenesis of jokes highlights that the pleasure in a joke is derived from play with words or from the liberation of nonsense and that the meaning of the joke is merely intended to protect that pleasure from being done away with by criticism. Thus, it helps in deriving the pleasurable effect of humour from the conflict between feeling which arise from the 'simultaneous sense' and 'nonsense of jokes' and it achieves a general relief through discharge of suppressed emotions in real life.

Wolfenstein (1954) writes: "joke is a gallant attempt to ward off the oppressive difficulties of life, a bit of humble heroism, which for a moment that it succeeds provides elation, but only for a moment" (p.11). Richter (1804) writes: "joking is merely playing with ideas" where "freedom produces jokes and jokes produce freedom" (Freud 1905, p. 11). Joking is viewed as the ability to find similarity between dissimilar things, "that is hidden similarities" (Freud 1905, p. 11). Likewise, it maintained that the wit "is founded on the detection of unexpected likeness and distinction in things" (Hazlitt, 1903; as cited in Raskin, 1985 p. 32). Attardo (1994) argues: "humour like poetry presents a 'non-casual speech', an exceptional

kind of language though a part of causal talks" (cited in Goatly, 2012, p. 110).

Freud's (1905) joke-work is based on nearly two hundred Jewish jokes, puns, anecdotes, witticisms and riddles where he discovered the way in which pleasure arises from humour answering to the question, 'Why do we laugh'. Freud argues that jokes, like dreams, satisfy our unconscious desires. Like dreams, jokes facilitate a way of getting around restrictions on what is impressible. Thus, the content of a joke is often sexual, aggressive, or self-accusatory. In his view, jokes provide immense pleasure by releasing us from our inhibitions, and allowing us to express our repressed desires that would otherwise remain hidden. Consequently, jokes provides a space for making light of a disappointment, and transform painful feelings, and gain under the guise of foolishness or some gratification for forbidden wishes through play on the ambiguity of words.

CLASSROOM IMPLICATIONS

To understand how humour acts as a critical tool, one needs to look at the structure of humour. The jokes, cartoon, riddle, proverb and irony or sarcasm is the humorous figure of speech that is used to communicate indirectly a message that is opposite of the literal meaning of the sentence. Because of the inherent ambiguity, humour can be employed for a variety of cognitive

purposes where the child may be given appropriate space for thinking on the ambiguities in language and art expressions. A primary focus of modern day education is to provide ample space for meaningful learning through signs and symbols. Vygotsky described psychological tools as a device for mastering mental processes. He viewed them as artificial and social origin rather than organic or individual. He gave the examples of psychological tools as “language, various systems for counting, *mnemonic (memory)* techniques, algebraic symbol systems, works of art, writing, schemes, diagrams, maps and mechanical drawings; all sorts of conventional signs” (Vygotsky, 1960/1981, p. 136-7) with an attempt to provide an account of learning and development as a mediated process. In addition, proficiency in language expression is essential to understand the play of words or language discourse. Similarly, Aristotle has discussed pun in the context of a metaphor in language expression as a form of humorous verbal play.

Here, we turned then to consider Piaget’s contribution to the study of children’s language. His study is made on the assumption that children have developed abstract logic inherent in puns, proverbs, metaphors, and analogies. Their increased mental facility permits them to understand the ways in which language can be used to convey multiple messages, such as satire,

metaphor, and sarcasm. Piaget’s (1926) study of metaphor in children has exerted an overwhelming influence in understanding the cognitive process. In his study, he asked the children to match proverbs with one of the several statements to locate the appropriate meaning. He concluded that the cognitive capability does not reveal until about 11 years of age, when children are able to understand the metaphorical expressions. He says that the actual quality of creative thought or process changes beyond adolescence. Language, for Piaget, is a vehicle through which aspects of child’s thinking are revealed and, together with the child’s actions, provides the means through which child’s thinking can be studied. He considers this as a last stage (usually 11-14 years) where children are able to interpret the abstract or metaphorical expressions; Piaget calls this as formal operations stage. He writes that this permits adolescents to think about their thoughts, to construct ideals, and to reason realistically about their surrounding. The ability to come up with new problems and to decide which are most susceptible to solution defies Piaget. Likewise, Elkind (1974) writes that formal operations to enable “young people to reason about contrary-to-fact proposition” and understand the metaphor, “it is for this reason that political and other satirical cartoons are not understood until adolescence” (p. 24-25). Emphasising further, he writes that the child’s inability to comprehend a metaphor, somehow

indirectly helps them to enjoy books like 'Alice in Wonderland' and 'Gulliver Travels' more in the childhood stage than in adolescence and adulthood, when the text's social significance is realised.

The psychological account of identity formation must be attributed to Erikson (1956), who located the genesis of one's 'ego identity' in his adolescent (fifth) stage of psychosocial development. He writes that in achieving an ego identity the individual makes "choices and decisions which will...lead to a more final self-definition, to irreversible role patterns", and thus to commitments "for life" (p.74). Like Piaget, Erikson (1956) argues that it is not surprising that children's performance in dealing with an artistic task improves with age. This is the reason why children's understanding of metaphorical language improves with age. In the light of Piaget, it is believed that deductive logic becomes important during the formal operational stage where the beginning of appreciation of pure incongruity begins. The deductive logic requires the ability to use a general principle to determine a specific outcome. The appreciation of metaphor lays a field open for critical thinking and developing social perspectives. Acknowledging this aspect, National Curriculum Framework 2005 emphasises on 'critical pedagogy' as an outline for helping children to see social issues from different perspectives, and understanding how issues are

connected to their lives. Critical pedagogy helps in recognising the value of humour and satire which provides the capacity of children to think critically, and make judgements over cognitive congruency.

The way incongruity is advanced in humorous expression reveals the conflict between what is expected and what actually occurs in humour or cartoon forms. The different genres of humour do suggest its analytical constants. In recognising the pedagogic value of cartoon forms, an attempt is made to understand the role of art. Vygotsky (1971) says that art "introduces the effects of passion, violates inner equilibrium, changes with the new sense, and stirs feeling, emotions, passions, vices without which society would remain in an inert and emotionless state" (p.249). In explaining the dialectical relationship between the individual and society, Vygotsky (2004) writes, "every inventor, even the genius is the product of the time and his environment. His creations arise from needs that were created before him and rest on capacities that also exist outside of him" (p. 30).

On semiotic mediation, Vygotsky writes, "The sense of the word...is the aggregate of all the psychological facts emerging in our consciousness because of this word" (1934a, p.305). Since, every humour has some context to be understood to enjoy the intended meaning to understand and appreciate any joke, irony and sarcasm form, a child must develop

the ability to make its linguistic and social inferences. In this process a child, first needs to recognise that the intended meaning of an ironic statement is not the surface meaning, and therefore she/he must learn to substitute the true meaning for the literal meaning. In addition, children need to recognise the pragmatic i.e., social and communicative functions of humour in speech. Second, as irony or sarcasm is used to convey humour, based on the incongruity between the literal and implied meaning, it will help in recognising whether it is meant to be funny or criticise some social phenomena, process or happening through some hidden motive. Therefore, the use of humorous content like jokes, proverbs, anecdotes, art expression, and cartoons acts as a mediated meaningful signs in textbooks and provides a wide range and possibility of valid tools with recognition of its context for child's learning.

Apart from that, humour does improve the classroom environment through making the learning a more enjoyable. It helps in making a cordial relation with their respective teacher where the role of the teacher is more like a friend and guide rather than an indoctrinating agent of syllabus.

Gentilhomme (1992) writes that the use of humour in the classroom should be seen as a means of increasing ease of learning for children and good pedagogical resource.

CONCLUSION

Much of what we understand of the language lies beyond the literal meaning of the words as it depends rather on the use of words in different cultural and social contexts. The expression of language helps in giving intended meaning of the literal meaning. The introduction of different forms of humorous content in the post-NCF 2005, NCERT textbooks allowed a space for critical reasoning and humour. Laughter, in one place, provides freedom and at the other, space for critical thinking. Use of ambiguity is an attribute of any humorous expression. Words with double meaning, metaphorical or symbolic expression, by contrast, are purely arbitrary depending on apparently unmotivated relationships between form and meaning. Meaning of which seems to be hidden by the arbitrariness of the language, only to be found later in the word play. This provides space for children's inquisitiveness and reasoning critically.

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Language of Science and Teaching Learning of Science

A Constructivism Oriented Interface Overview

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Abstract

In view of the indifferent attitude of students, teachers as well as teacher educators associated with science education towards language and consequences thereof, the authors attempt to highlight various issues related to language of science and its practice in teaching learning situations. This is important because (i) language is an essential tool for knowledge acquisition in constructivist paradigm, and (ii) language deficiency acts as an impediment in the academic growth and career of an individual, apart from the fact that language is central to knowledge creation and dissemination.

PROLOGUE

It is generally observed that in our schools, when teachers teach science, students answer questions in science, whether verbally or in writing, language is hardly accorded due importance. Apparently, there are explicit instructions from boards

of school examinations to ignore/overlook language related faults of students while evaluating science papers. Perhaps all this stems from the perception that science as a discipline is isolated from language as a discipline and teachers and students of science need not worry about the accuracy/propriety of the

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language they use to communicate their knowledge and ideas. Even researchers in science sometimes have this kind of notion. However, the truth is that language plays a very significant role in science in all its forms, for everyone associated with it.

The importance of language in science can be seen in the simple but profound statement ascribed to the great English lexicographer Samuel Johnson (1709-84): "Language is the dress of thought" (Weaver, 1987), when it is combined with the fact that science begins and flourishes with thought. It sounds trivial that scientific ideas are invariably expressed in language and they would fail to achieve their objectives if the language is inappropriate. On the other hand, developments in science have resulted in enrichment of language through coining of new terms or finding new connotations of existing words. The deep connection between science and language can be seen, for example, in Physics and Philosophy, an excellent book authored by Werner Heisenberg (1901-1976), the 1932 Physics Nobel Laureate.

The book (Heisenberg, 2000, pp. 113-128) gives a lucid account of the evolution of scientific language beginning with Aristotle (fourth century BC) to the emergence of the path-breaking concepts of relativity and quantum mechanics (twentieth century AD). According to Albert Einstein (1879-1955), celebrated as

the greatest theoretical physicist of the twentieth century and the 1921 winner of Nobel Prize in Physics, the wealth of scientific concepts and scientific language created and nurtured by excellent minds of the world has a far-reaching influence on human thinking, going beyond the national boundaries. It is a foregone conclusion that the mental development of an individual and her way of forming concepts are dependent upon language to a great extent. (www.openculture.com/2013).

However, the connection between science and language does not seem to be recognised in teaching learning situations to the extent desired. In our schools, science teachers and language teachers are almost like isolated bodies with hardly any cognitive exchanges on pedagogical and language issues that affect multitudes of students. Further, in most in-service teacher education programmes on science, the participants want elaborate discussions on 'content-cum-pedagogy' of teaching science concepts without evincing interest in the role of language in teaching learning of science. Needless to say, content and pedagogy are both language dependent. The pre-service education programmes for science teachers are also deficient in the matter of language. Though language is a curricular subject in various courses such as the one-year B. Ed. (Science), the two-year B. Ed. (Science), and the

four-year integrated B. Sc. B. Ed., it is mostly taught in a general manner without adequate reference to scientific language. These scenarios have an undesirable ramification leading to the notion that language is not a serious matter in the teaching of science. Clearly, this does not bode well for teachers or students. In fact, science teachers need to be more careful than even the language teachers as the former have to handle language in its multiple forms, from everyday words to domain specific technical vocabulary.

It may be pointed out that language-mediated social interaction, as propounded by the Russian psychologist Lev Vygotsky (1896-1934), has been recognized as a basic tenet of constructivism (Liu and Matthews, 2005). In practical terms, in constructivist approach to teaching learning, language plays a role more significant than in the traditional teacher dominated transmissionist approach. Constructivism advocates pupil participation in classroom processes on a large scale using varied strategies such as cooperative learning, working in groups, analysing a situation and voicing opinion, sharing ideas through dialogue/debate, preparing and presenting a report, carrying out cognitive negotiation, etc. which give a learner ample scope to construct concepts as well as language. Realising the same, the National Curriculum Framework-2005 (NCERT, 2005, p. 38), recommends a 'language-across-

curriculum' approach, observing that all classes, whether science, mathematics, or social science, are *ipso facto* language classes. Besides its role in science and mathematics education, constructivism has been found to be useful in teaching learning of language, online as well as offline (Kaufman, 2004; Can, 2009).

Against the above backdrop, the present article attempts to give a broad perspective of language in teaching learning of science for the benefit of teacher educators, teachers, and students. The underlying motivation is to expose them to a variety of language-based tools, which they may use in the process of knowledge construction.

Now a disclaimer is in order: the language used in this article does not claim to be 'the right language'; it may not even be the 'most appropriate language'. This is because there is nothing like 'the right language', 'a right language', or even 'the most appropriate language'. Whereas there is plenty of variation in language form and usage in informal and formal social and academic settings, domain specific technical language has less maneuverability and needs to be understood and used with a bit of care, while keeping in mind the fact that in science, content-appropriate language is more important than 'beautiful' or 'ornamental' language.

OBJECTIVES

In view of the importance of the language of science in and outside

the curriculum, this paper intends to sensitise teacher educators, teachers, and students to some relevant issues such as

- The journey of an individual from baby talk to scientific language with expanding scope and ownership. (#1, #2)
- The subtle differences between the spoken and written forms of language. (#3)
- Language filters and fillers. (#4)
- The negative consequences of improper language usage and language inadequacy. (#5, #6)
- The importance of English as the global language of science. (#7)
- The nitty-gritty of the language of science. (#8, #9)
- The common language-related mistakes committed by students while answering questions in science. (#10)
- The problem of ambiguity in the interpretation of science formulae and the sanctity of definitions. (#11, #12)
- Language of science as a probable source of alternative conceptions. (#13)
- Language of questioning. (#14)
- Language as a tool for negotiation. (#15)
- The jerk technology. (#16)
- Ways of using language of science to make teaching learning more interesting. (#17)
- Discovering one's own mistakes as a professional. (#18)

These points are presented below as themes in a sequence indicated by

the numerals in parentheses in the above list.

THEMES

1. From baby talk to scientific vocabulary

A child's journey on the language path starts at infancy when she/he begins making sounds and forming words, the so-called baby talk. With the help of the language of the family, she/he quickly picks up the social language. Though both these languages may be the mother tongue of the child, she/he can learn any other language on her/his own if exposed to the same. To cite an example, a three-year-old child of an Odia speaking family residing in an urban locality in Odisha joins a nursery school having children from different linguistic groups. In no time, she/he picks up Hindi and starts speaking a hodgepodge of Odia and Hindi at home. This is mostly an informal language. When rigorous schooling starts, the language picks up a formal tone, resulting in what may be called academic language. The child is made to formally learn other languages besides the mother tongue as a curricular requirement. As the education progresses a child gains proficiency in common formal language. At the same time, she/he learns the languages specific to different domains of study such as science, social science, etc. Further on, depending upon the chosen area of specialisation, she/he uses a *lingua franca*, the technical language,

that may not be understood by a common person. When she/he joins work, she/he may have to adapt to a workplace language, which may have its own nuances. Needless to say, one does not have to give up one of these varieties of language to pick up another; language acquisition is a cumulative process going through linguistic evolution and cognitive negotiation. We may depict the journey from baby talk to scientific language as in Fig. 1. At some point of time, a pupil may find that her/his mother tongue is inadequate and she/he switches over to English, though the transition may not always be smooth or painless and may require quantum jumps. In a country like India with multiple languages and linguistic groups, anybody wanting to succeed in life needs to be proficient in English, which is often used as a social language as well as a professional language besides being an official language. Of course, if one wants, one can also adopt a multilingual stance, using one language at home, another at workplace, and so on.

In the context of science, we may paraphrase the above in the following way: (a) there is student's language of science, (b) there is societal language of science, (c) there

is textbook language of science, (d) there is teacher's language of science, and (e) there is scientist's language of science. The teacher has to be trained to transport herself/himself from (d) to (e) and help the students to gradually move from (a) to (e).

We should not forget that besides spoken and written languages, we too learn from sketches, diagrams, graphs, pictures, photographs, videos, films, animations, comics, etc., which may therefore be considered as linguistic tools. These days it has become a common necessity to learn from computer and smartphone driven Internet and social platforms, which have their own *lingua franca* that we need to learn to be able to use them effectively.

Language learning is truly a never-ending process for an individual. Learning a new word, finding new meaning of a familiar word, unscrambling a word jumble, etc. are enriching experiences at any point of time, in any language. Language learning is a good mental exercise that challenges the brain. Research studies show that when old people try to learn a new language, whether they gain proficiency or not, their brain functioning actually improves with regenerated neural pathways thereby easing age related neurological

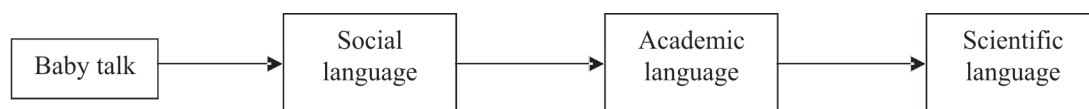


Figure 1

problems and decelerating natural age dependent cognitive decay. (Preville, 2015; Grierson, 2015).

Considering the three types of language users relevant to our discussion, namely students, teachers, and teacher educators, let us see how they stand relative to one another in the matter of language.

2. An inverted language pyramid

In view of the journey of an individual on the path of language leading to increased experience and expertise, we may think of two dimensions of language, namely 'language responsibility' and 'language ability', for students, teachers, as well as teacher educators. One ought to take the responsibility of acquiring and refining language, the responsibility growing with age and experience. Language ability of a person indicates to what extent she/he is able to achieve her/his objective using her/his language. In Fig. 2, we visualise a qualitative graphical presentation

of these two dimensions in the form of an inverted pyramid, indicating how both these aspects are expected to grow from students to teachers to teacher educators. Note that in the beginning, even if students may have minimum language responsibility, their language ability is not zero and that is why the apex of the inverted pyramid is not a point but a line.

Let us recognise that the language ability of an individual has two dimensions: (a) usable vocabulary, which the individual normally uses, and (b) comprehensible vocabulary that the individual can understand. Clearly, (b) is broader than (a) and hence (a) is a subset of (b). In fact, (b) may constitute the linguistic Zone of Proximal Development (ZPD) of the individual. The concept of ZPD is due to Lev Vygotsky, referred to above, and indicates a range of tasks, just beyond the actual competence of a student, that the student can perform with external help or scaffolding. The teacher's responsibility is to make

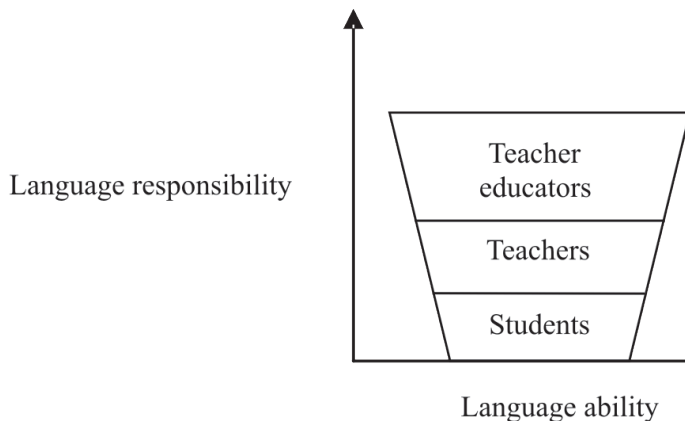


Figure 2

the student's domain (a) gradually richer thereby expanding her/his cognitive domain. This is one of the aims of constructivism-based teaching approaches. Constructivism also suggests the teacher to provide necessary scaffolding for the sake of ZPD.

Language skill of an individual involves cognitive functions such as listening, speaking, reading, and writing, usually in that order with increasing difficulty level. Though we are accustomed to use language in spoken and written forms as and when needed, there are subtle differences between the two, which may be worthwhile to keep in mind.

3. Spoken and written forms of language

Whereas the written form of a language is supposed to follow a set of stringent rules, its spoken form appears to enjoy more freedom, depending on the speaker. For example, different people may read aloud the same written line differently. Stress, accent, intonation, punctuation, pronunciation, etc. may differ from speaker to speaker in spite of the fact that there are standard rules governing them as can be seen in the books of grammar and dictionaries. These variations in spoken language are usually accepted. On the other hand, spelling of written words is standardised in a language and deviations can be easily located. Written form is more permanent than spoken form unless the latter is recorded for further use.

In science lessons, pronunciation of technical terms and scientists' names (such as Coulomb, Gauss, Thomson, etc.) poses a problem, mostly owing to their unfamiliar origins. Even many everyday words are pronounced differently by different people; e.g. some use 'j' for 'd' in 'education'.

Other features observed with teachers include mixing of singular nouns with plural verbs and *vice versa*, confusion between questions and statements/instructions, in spoken as well as written forms. Some teachers are known to exhibit some form of mannerism such as frequent repetitions of words like 'ok', 'this', etc. or, in other words, some teachers seem to have some 'pet' words which they like to use often, whether necessary or not. It is possible that this has become a habit with them and they do it without even thinking. Whatever be the reason, it is undesirable to repeat the same word in quick succession. With a bit of thought it is possible to use appropriate synonyms of a word instead of repeating it, or using other forms of the statement.

Sometimes comparison is made between the notes prepared by administrative personnel and the work teachers do on erasable boards in classrooms. It is said that the former is treated as a permanent official record and hence the concerned official cannot afford to make mistakes whereas the latter is temporary, to be found only in the notebooks of the students concerned

and therefore the teacher can escape with mistakes. However, the fact is that the mistakes of a teacher are likely to get into the cognitive space of the students thereby harming them in some form or other. The teachers thus need to be careful in their communications with the students, written or oral.

It is another general observation that students often do not ask questions or give answers properly. One important reason could be lack of skill related to spoken language. Learning a language in the form of words is not enough; it is important to know how to use the same. It is similar to the famous metaphor of 'learning the theory of swimming and not practicing it in the pool'. It goes without saying that words once spoken cannot be taken back and that they can make or mar a communication. Subsequent 'repair work' if any, may not ensure a complete recovery. Thus wrong/improper use of language, verbal as well as written, can be harmful in any situation. Teachers need to be careful about these matters and help students gather confidence and speak/debate/discuss in the class. They need not worry about their inability to use the language of science well to begin with; that would come with practice.

Let us now consider a couple of linguistic devices we often use.

4. Language filters/fillers

While listening to a speaker or reading a text, if we come across

small mistakes/omissions, we often filter them out, or replace them, or fill in the gaps to get the meaning. This comes automatically to many of us. Some students do have this ability and use it in their learning process. Average students may lack the ability and hence rely only on what they 'actually' hear or read, which may affect their learning. The best option for a teacher in classroom is to utter/write each and every line fully with utmost care. This is important since students have a tendency to copy down teacher's board work entirely, including her/his mistakes, if any. It is in the best interest of students that they should also practice speaking/writing in full sentences in and outside the classroom. The teacher should dissuade students from using incomplete utterances and advise corrections, if any, on the spot, though she/he herself can make out the meaning using language fillers/filters. There is, of course, a possibility that improper language fillers may result in misunderstanding. Besides wrong fillers, even small glitches in language may lead to big mistakes.

5. Even a small slip may result in a big problem

An interesting fact about language is that even one word misspelt or misplaced can drastically change the meaning of a statement. A simple example: 'Write in correct sentences' may become 'Write incorrect sentences' if the gap between 'in'

and 'correct' is forgotten. We may take a few examples from science. The statement 'Clean water may be considered as an isotropic medium' will become 'Clean water may be considered as anisotropic medium', carrying exactly opposite meaning, if the gap between 'an' and 'isotropic' is forgotten or ignored. In a similar manner, 'in organic chemistry' may become 'inorganic chemistry' and 'a biotic sample' may become 'abiotic sample' where 'biotic' means 'living' and 'abiotic' means 'nonliving'. 'We have a paper on nuclear physics' becomes 'We have a paper on unclear physics' if the two letters 'n' and 'u' are inadvertently transposed.

Though such unwanted faults may appear to be extremely irritating/embarrassing, these can very often be got rid of simply by a second reading of one's own written work. It is possible for everyone to make this a lifelong habit irrespective of the purpose of writing, a fact that needs to be drilled into the minds of students.

Having seen the necessity to be careful about the way we use our language, let us remind ourselves of its role in students' career.

6. Language deficiency can be detrimental to career

Lack of competency in language can actually act as an impediment in personal and professional growth of an individual. A case in point is a recent news item published in newspapers (Sambad, 2015a; The New Indian Express, 2015). It reports that many

of the students passing out of the Government Engineering Schools and Polytechnics of Odisha are unable to clear even the preliminary written and oral examinations in campus selection processes owing to their inadequate knowledge in basic English even though they may have secured high grades in their subject papers. This is ascribed to their schooling in Odia and lack of training in basic English. Accordingly, the Employment and Technical Education and Training (ETET) Department of Odisha is planning a bridge course in English on the level of CBSE Classes IX and X for the benefit of such students. Now, a look at the national scenario: according to the national employability report of engineering graduates for 2014 prepared by Aspiring Minds, a leading employability solutions company of India, as many as 73.63 per cent of engineering graduates lack English speaking and comprehension skills (Nair, 2015; www.aspiringminds.in). Two important points emerge out of this: (a) language is the path that leads from an academic degree to a preferred vocation; (b) vernacular language alone may not enable one to tread the path in (a) successfully.

If we divide the secondary and lower level schools in India into vernacular and English medium schools, the number of the latter variety is appreciable, in the government as well as private sectors, irrespective of the quality of English used in these institutions. Beyond secondary level

the medium of instruction becomes English for almost all kinds of school. This is especially true in the domain of science as not enough text/reference books are written in the vernacular and it is difficult to find vernacular equivalents of the English forms of technical terms. This underscores the importance of English as a career building language irrespective of one's proficiency in other languages.

It leads to a related issue: how English came to be the language of science?

7. English as the language of science

Today, English is an international language. It flourished throughout the British Empire, which was the largest empire of the world from the late 16th to the early 20th century. A 2008 estimate showed that English was used as the first language by about 400 million people in 53 countries and as the second language by 1.4 billion more (Country Trends, 2008). Now, nearly two billion people use it, non-native speakers outnumbering native speakers 3 to 1. This is astounding when we realise the fact that English was the language of only three tribes just about 1500 years ago. (www.englishproject.co.uk/english-language-day/2013).

How prominent English has become in the world of science can be gauged from the fact that nearly 98 per cent of all scientific articles published are in English and 80 per cent of information stored on computers is in

English ([92723] WEM_Fact_Science_Technology.jpg_low). But, in the early years, Latin was the language of science. With time, the importance of Latin decreased and by the middle of the 19th century, three primary languages emerged: French, English, and German. Then, subsequent to the two World Wars (1914-18 and 1939-45 respectively), German lost its place of prominence as a language of science, one important reason being the fact that Germany dismissed one-fifth of physics faculty and one-eighth of biology faculty for cultural and political reasons, who migrated to the US and England and started writing in English. Then, on account of the Cold War in the 1950s and 1960s, Russian became a major language of science besides English. With the decline of the Soviet Union in the 1970s, English gained over Russian. It may thus be said that the political events of the 20th century pushed English to the prominence it enjoys today. (www.popsci.com/article/science/fyi-how-did-english-get-to-be-international-language.....).

Though English has overshadowed many other languages, it has borrowed significantly from them. English has a huge, powerful, and ever-expanding vocabulary catering to all branches of science and technology. People from all countries, irrespective of their own languages, are now keen to learn English. Globally, there is a growing tendency of publishing articles in English. A report (Weijen, 2012) shows that in advanced countries like

the Netherlands, Italy, and Russia, the ratio of English to local language journal articles published in the four-year bloc 2008-2011 stands at 43:1, 30:1, and 27:1 respectively. Another piece of study, referred to in the same report, shows that among the research articles published in English during 1996-2011 nearly 44.7 per cent were in the area of physical sciences comprising physics, engineering, and material science, whereas the shares of other areas were 23.4 per cent (life sciences), 19.5 per cent (health sciences), 10.7 per cent (social sciences, arts and humanities), and 1.7 per cent (multi-disciplinary and undefined). This indicates the popularity of English as the medium of publication in the relatively harder domain of Physical Sciences. Moreover, there is a host of free software available on the Internet such as LaTeX that helps in science publication.

In spite of the advantage of English as the language of publication, some researchers find it inconvenient. For example, a researcher in the area of Microbiology opines that whereas top journals require papers to be written in formal English, it could be a difficult task and wastage of time for researchers whose first language is not English (Raghava, 2012). Another researcher agrees to the above observation and says, "Any language is always a jail that prevents from communicating with those people using another one. English is a very wide jail, and consequently you

hardly can see its walls." (Tarancon, 2012). Tarancon suggests the use of an artificial language (similar to Esperanto), simple, syntax-free and regular, to be created by a convention of the scientific world. Perhaps the concept of such a language was first conceived by Orwell (Orwell, 1949) though in a different context.

Perhaps some dissatisfaction about the English language in general may be traced to the irregularity and non-uniqueness of spelling and pronunciation of even common terms in English. To quote one view: "English is so filled with ridiculous ways to spell words that it's really a wonder any of us can spell anything at all." (Harrison, 2015). One reason given for this is that English is a 'hodgepodge' of many other languages such as Latin, French, German, etc. each with their own peculiarities.

However, it is safe to say that India is well endowed in English, thanks to the long British rule and the indigenous linguistic multiplicity. English is recognised as the official language of the country in addition to Hindi. It is our window to the world and is favoured by many for writing of all kinds. Even, within the country, people from one region often use English as the means of communication with people from other parts. In fact, many native languages are getting enriched with English terms. See for example, Manivannan (2006, Internet). English speaking has also been influenced by the native languages, resulting

in what is popularly called 'Hinglish' (a mix of Hindi and English), etc. Though purists may not be happy with such developments, these have been accepted at large.

Having seen the importance of English as the language of science, it needs to be said that studying science subjects in English poses problems for those whose native language is not English. Researchers have tried to find the difficulties such learners face in comprehending and communicating scientific concepts, facts, and ideas in English. Helpful guide-books are written on such matters (see e.g. Allen and Widdowson, 1974; Longman Group Ltd., 1979; Singh, 2010). In the first book referred to above, the authors have used a number of topics from school level physical sciences (chemistry and physics) to illustrate language aspects such as reading and comprehension, grammar, paragraph writing, etc.

In this connection, let us take a look at the vocabulary of science, which has many interesting aspects.

8. The many hues of the language of science

The language of science is like a kaleidoscope. Its vocabulary comprises (i) common terms with ordinary meanings, (ii) common terms with specific meanings, (iii) terms peculiar to the branch of science, and (iv) accessories such as symbols, equations, diagrams, tables, graphs, etc. This is depicted in Fig. 3, with examples. Though all these components are important, dissemination of science in any form depends heavily on the first type whereas the relative amounts of the other components will depend on the characteristics of the target audience. The language of a science populariser may not be the same as that of a science teacher, which in turn may be different from that of a scientist writing for a research journal. A teacher ought to recognise that concepts of science cannot be appreciated without proper use of components (ii) and (iii). Therefore, any attempt to avoid/substitute

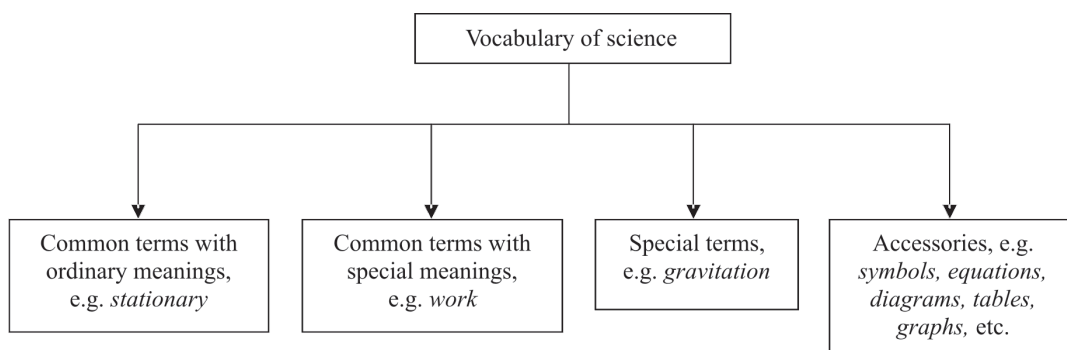


Figure 3

them in order to simplify science for students may actually be harmful and result in incorrect understanding or misconceptions.

The language of science usually follows certain conventions different from everyday language. Let us take a glance at them.

9. Special features of the language of science

Besides following the normal language rules such as grammar and syntax, the language of science stresses features such as 'precision', 'brevity', and 'objectivity' in expressions. It often condenses several ideas into simpler forms, e.g. "a body covers equal distances in equal time intervals" becomes "a body moves uniformly"; "the train is running with decreasing speed" becomes "the train is decelerating". In these two examples, the second statement uses technical terms whose definitions are explicit in the first statement. Even some names in science have become abbreviations of their original names. For example, 'oxy-muriatic acid' has become 'chlorine' and 'smoking spirit of salt' or 'muriatic acid gas' is called 'hydrogen chloride' (Sutton, 1998, p. 27).

There are international conventions on symbols and units of physical quantities, which need to be written following certain rules. These are usually described in textbooks on physics for higher secondary level (e.g. NCERT, 2006a, pp. 208-213) and are meant to be used by teachers as well as students to communicate science

even when the language used is other than English. Though the units are formally introduced at senior secondary level, these are supposed to be used whenever needed, even in lower classes. Unfortunately, authors of textbooks are not always careful about these matters thereby misdirecting the teachers and students. A case in point is the secondary level science textbooks in Odia (e.g. BSE Odisha, 2013) published by Odisha Government. In these books, instead of using the English symbols for units as per the international convention, symbols/abbreviations in Odia script are coined and used. However, in the interest of students and their future, such non-standard practices should be replaced by the standard international practices right from their first formal entry to science. This is not at all difficult when we note that a universal set of symbols is used for chemical elements (such as H for hydrogen, O for oxygen, etc.) across languages, even in Odia textbooks without replacing them by Odia substitutes.

In this context, it may be noted that in science, certain words are used as a convention, in an adhoc manner. They may induce 'conceptual incongruity' in the cognitive space of the students. For example, the word negative is used while drawing the axes to plot a graph. If one of the axes represents time, then one has a negative time zone in the graph. Students fail to conceive the meaning of negative time. Similarly, in the

case of formation of image in mirrors one uses negative distances, whereas distance, being a scalar, is always positive.

Another dimension worth considering is the 'impersonal stance' of the language of science. In formal science writings as in research articles, textbooks, etc. personal subjective pronouns such as 'I', 'we', 'you', 'he', and 'she' are usually not used and passive voice is preferred over active voice. The students are advised to follow the same convention in their science related reports. However, history shows that at the birth of a scientific concept or the pronouncement of the results of a new study, scientists do take personal stand and carry out debates/discussions/negotiations with peers on personal level. The personal tag is dropped when the ideas become a part of the accepted science. Clearly, the acceptance is a result of a social process involving scientists and mediated through language.

It is science in this person-neutral form that mostly finds place in textbooks. Thus, though the students get what may be termed the 'finished product' with or without the name of the scientist tagged onto it, they do not get to know the actual creative process underlying the same. As a result, their ability to appreciate 'doing science' gets affected and they may end up with a distorted view of science and scientists. This and other relevant aspects of language in science have been nicely put forth,

with examples, by Clive Sutton in his article titled, 'New Perspectives on Language in Science' (Sutton, 1998). Sutton advises teachers to strike a balance between the product and the process, and formulate "a school language policy to recover the human voice and personal expression of thought" (ibid, p. 36). Sutton's advice is worth considering because of its intrinsic value, instead of leaving such important matters solely to the historians of science. If, for example, the teacher can place before the students those alternatives, which were debated and discarded in favour of the accepted scenario concerning a specific formulation or interpretation in science, it might be a great source of learning and inspiration for them.

In the early years of learning, the students may not be able to exploit the special features of the language of science. Besides, they have a tendency to commit various kinds of mistakes while writing answers to questions on science. We give below a set of common mistakes students are known to make in science in general and physics in particular. It may be useful for teacher educators and teachers to keep these in mind.

10. Common linguistic mistakes of science students

In 1996-97, an attempt was made at the Regional Institute of Education (NCERT), Bhubaneswar to discover a common pattern of errors committed by Class XII students while writing answers to physics questions. For

this purpose, 500 marked answer scripts pertaining to the 1995 Annual Examination of the Council of Higher Secondary Education, Odisha, were examined thoroughly by a group of subject experts. A list of the common errors/inadequacies thus identified (Parida, 1998) is reproduced here as we are sure it is still relevant today. It may be pointed out that no quantitative analysis of the findings has been done.

- Most students possess inadequate knowledge of English, their chosen medium of instruction.
- In many cases, answers are written in incomplete sentences.
- Sentences are often framed incorrectly, with punctuation marks ignored.
- General as well as scientific terms are spelt incorrectly.
- Symbols, particularly the Greek ones, are not properly written. It is often difficult to distinguish between α and a , γ and r , and so on.
- Explanation of symbols and terms appearing in various expressions is generally ignored.
- In many cases, physical quantities are presented without appropriate units.
- Diagrams are seldom drawn or labelled carefully. It is often difficult to distinguish between diagrammatic representations of a parallel plate condenser and a cell, resistance and inductance, etc.
- Equations are not written systematically. In equations

involving vectors, for example, vector notation is not used uniformly throughout the equations.

- Students have a poor perception of graphs in general, including nature of the graph expected, procedure for plotting the graph, interpreting it and extracting information from it.

Another worrisome point related to language is students' handwriting, which sometimes becomes so illegible that nothing meaningful can be deciphered from it. Unfortunately, this may also happen to those whose understanding of science is rather good. A bad handwriting may not be good for one's academic growth. Flowery writing or calligraphy is not required in science; clear, legible, and unambiguous handwriting is good enough. It is good to note that recently the Government of India has issued guidelines to medical practitioners on how to write prescriptions such as writing names of medicines in capital letters to avoid possible ambiguities.

It is an irony that whereas with continuous development occurring in the domain of science there is a need to upgrade school level science curriculum, there seems to be a down swing in students' ability of language and arithmetic, as studies show from time to time (e.g. ASER, 2014). It may therefore be said that weakness in basic language skills such as reading, writing, spelling, and pronunciation makes science hard to learn for a large percentage of students. It is also

found that many do not understand typical action verbs such as analyse, assess, estimate, formulate, indicate, and interpret etc. which are used to form questions. Then there are subject specific terms to deal with.

As a means to ease these problems of students, the teacher needs to provide enough hand-holding kind of guidance, including drills on spelling, pronunciation, etc. The students ought to be encouraged to ask questions, give answers, take part in discussions using their own vocabulary, which may then be used to build their scientific vocabulary. Even distinctions between subscripts and superscripts, between capital letters and small letters, etc. have to be made a part of their academic work. Sometimes one may also have to deal with the dilemma of British English vs. American English. The students should be encouraged to develop a healthy reading habit and use dictionaries and glossaries almost as a habit. All this would definitely help the students construct their scientific knowledge well.

Let us now consider another dimension of the language of science, which may be a source of mistake, interpretation.

11. Language and interpretation—pitfalls in science

Between receiving an input and comprehending the same, there lies the vital step of interpretation. The same input may be understood

variously by different recipients depending on their interpretations. Scientific concepts need to be expressed in a language that should be interpreted and understood unambiguously. However, it does not appear to be always so. We shall illustrate the point by referring to the definition of ‘pressure’, an elementary concept of science, and its interpretation by various authors, taking the following two cases.

Here, we shall examine how a mathematical formula is interpreted differently in the form of statements. In all these cases, the mathematical formula for pressure is the same:

$$\text{pressure} = \frac{\text{thrust}}{\text{area}} \quad (1)$$

- (i) In the highly popular and internationally acclaimed (since 1949) textbook, Sears and Zemansky’s University Physics (Young and Freedman, 2004, p. 517), pressure at a point is defined as ‘the normal force per unit area’. As the normal force is also called thrust, pressure becomes ‘the thrust per unit area’. Thus, in this book, pressure definition as in Eq. (1) is correctly translated into statement.
- (ii) On the other hand, in the NCERT textbook on science for Class IX (NCERT, 2006b, p. 139), the statement form of Eq. (1) reads, “The thrust on unit area is called pressure.”

These examples show that the same mathematical formula is interpreted differently by different authors, some of which are not appropriate. In the instance (ii) above, the phrase 'thrust on unit area' may lead to the incorrect perception that pressure is the same thing as thrust. On the other hand, in (i) the phrase 'thrust per unit area' may be read as 'thrust divided by area', which corresponds to Eq. (1). To make the matter clearer, there is a prescription (www.physics.nist) according to which a quotient quantity ought to be written explicitly and so 'thrust per unit area' is improper and should be replaced by its proper form 'thrust divided by area'. Accordingly, 'thrust divided by area is pressure' and this is the unambiguous definition of pressure, in consonance with Eq. (1). On the other hand, thousands of teachers and lakhs of students are likely to be affected adversely by the interpretation as in (ii) over the years unless the matter is critically appraised and appreciated.

Another related dimension is definition, which plays a central role in science.

12. The sanctity of definition

Some teachers of science demand their students to reproduce verbatim the definitions given in their textbooks. They do not allow or encourage the students to paraphrase the definitions or restate them. This results in the notion that definitions are to be accepted in whichever form they are

presented, without examining or analysing them. However, actually the language of a definition does change over time without changing its meaning and implication. Let us take, as an example, the famous Newton's first law of motion, which the students start learning from Class IX.

In the magnum opus, *The Principia*, published in 1687 by Newton (the creator of the laws of motion himself), the first law of motion is stated as: "Every body perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed thereon." (Newton, 2010, p. 19).

Another version of the same law, ascribed to *The Principia*, states: "Every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it." (Cooper, 1969, p. 33).

In the Young and Freedman's textbook on physics, referred to above, the first law of motion is stated as: "A body acted on by no net force moves with constant velocity (which may be zero) and zero acceleration." (Young and Freedman, 2004, p. 124).

In the widely used NCERT Science Textbook for Class IX (NCERT, 2006b, p. 116), the same law reads: "An object remains in a state of rest or of uniform motion in a straight line unless compelled to change that state by an applied force."

The NCERT Physics Textbook for Class XI (NCERT 2006a, p. 91) on the other hand, defines the first law as: “If the net external force on a body is zero, its acceleration is zero. Acceleration can be non-zero only if there is a net external force on the body.”

What is to be seen here is that the detailed language of the same law is different in different presentations though its inherent meaning is not changed. The moral of the story is that students should be encouraged and given freedom to re-express definitions in their own language without changing their meanings. This would help deeper appreciation of the underlying concepts and their interrelations and enable the students to hone their skills of language and analysis.

At the same time, it is important to realise that improper language may be symptomatic of improper comprehension of scientific concepts.

13. Language of science and alternative conceptions

Alternative conceptions (ALCONs in short) (see e.g., Mohapatra and Parida, 1995; <http://apa.org/>; <http://www2.>) are knowledge frameworks held by students in any subject before the subject is formally taught by the teacher. Gathered from a number of accessible sources by the knowledge holder, the ALCONs in science may be different from the established scientific knowledge and may be plain wrong. However, the ALCON holders consider them

to be true or plausible in their respective cognitive frames and show a tendency to hold on to them unless they are discovered and modified or replaced in a convincing manner by the teacher, or are challenged by new inputs coming their way.

Needless to say, ALCONs act as stumbling blocks in teaching learning of science. Improper comprehension and inappropriate use of the language of science is one source of ALCONs. For example, many students think that speed and velocity, displacement and distance, force and pressure, weight and mass, are synonymous pairs of words, as is often used in everyday language. This, however, is totally wrong in the domain of science where each member of the above word pairs has its unambiguous definition. Glimpses of ALCONs may also be obtained by asking the students to define concepts in their own languages. For example, some students think that ‘temperature is the degree of hotness or coldness of a body’, whereas according to some others, ‘temperature measures the amount of heat in a body’. In another example, when students are asked about the nature of their own images as they see in plane mirrors, most name the images as real though these are virtual by definition.

Clearly, such incongruities need to be unearthed and suitably dealt with by the teacher for fruitful learning of science. In constructivism, importance is accorded to the discovery of students’ ALCONs and

how to address them by different means. It needs to be pointed out that even teachers possess ALCONs (see e.g., Mohapatra and Parida, 1995), which are likely to further jeopardise the teaching learning process. Therefore, teachers' ALCONs should also be explored, and this ought to be a responsibility of teacher educators. Even teachers who revisit their own thinking and storehouse of knowledge can also ease the problem of ALCONs to a great extent by recognising those themselves.

Questioning provides a common way of accessing ALCONs besides being an essential tool for gathering and strengthening knowledge. Let us take a look at its language.

14. Language of questioning

Questioning by teachers usually plays a great role in a science class, whether it is testing the previous knowledge, formative assessment, or summative assessment. Questioning thus occupies an appreciable fraction of the class time. Hence, it deserves consideration from the point of view of its language. Some teachers announce in the beginning of the class, "I'm going to ask you a few questions" or some variation thereof, upon hearing which most students feel threatened and try to 'hide' themselves away from the teacher's eyes. It is not uncommon for teachers to mix up questions and statements/directions during a lesson.

Oral questions need to be short, to the point, and comprehensible to

all students. Using technical terms in questioning may not always be wise as they are not likely to be understood by all; hence simpler but appropriate substitutes may be used. An example: "In what direction is light bent as it passes from air to water?" may be better received by a class than the one, "In what direction is light refracted as it passes from air to water?" (Yadav, 2000, p. 180). Here the technical term 'refracted' has been replaced by the simpler equivalent term 'bent'. Not only the teacher is supposed to ask questions properly in full and appropriate forms, the students should also be trained by the teacher to ask and answer questions using proper language.

Questioning may lead to situations where negotiation between the students and the teacher may become necessary to achieve a learning objective. This calls for a different type of language.

15. Language as a tool for negotiation

When a teacher communicates with the students in a classroom, explains a phenomenon, describes a demonstrative experiment, writes down a definition, dictates a formula, analyses the errors committed by students in their responses to a question, sets up a test paper, she uses a language which is a hybridised version of teacher's language of science and textbook language of science. This language is mostly a regimented and prescriptive one and is

imposed upon the students. However, in a constructivist approach, the knowledge constructors may resist such 'impositions' if they find these to be opposed to their perceptions.

Clearly, this calls for a strategy in which the teacher is viewed as a cognitive negotiator and the students are regarded as cognitive apprentices. This means cognitive negotiation has become a tool in the constructivist teaching learning process. (See e.g., Dykstra et al, 1992; <http://woknowing.com>). If we go by the standard connotation of the term 'negotiation' that is, 'reaching agreement through conference', cognitive negotiation implies that the teacher and the students may have to reach understanding on certain learning points through negotiation. This becomes important and necessary in view of alternative conceptions or cognitive conflicts. It is an accepted truth that the language of negotiation is much different from a language of prescription because negotiation is based on the principle of cognitive accommodation whereas prescription is based on the principle of cognitive imposition. Thus, in the new scenario the language has to be more tactful, more persuasive, and should have the quality to open up new pathways, induce adjustments, help the students to accept desirable modifications in their cognitive structures, and realise the cognitive futility of their resistance to such modifications.

An example is in order. A child learns from early days that the sun

rises in the east and sets in the west. This societal language of science may lead her/him to think that the earth is at rest and the sun is revolving around the earth. When the teacher, following the textbook language of science, states that the sun is at rest and the earth is revolving around the sun (a cognitive conflict for the child), it amounts to cognitive imposition and may not result in meaningful learning. Since this conceptual change is 'revolutionary' in nature, the teacher has to cognitively negotiate with the students by using suitable linguistic and other techniques.

Let us now look at another meaningful usage of language in classroom.

16. The 'jerk' technology

Due to the perceived nature of science as a 'cut and dried' discipline of study and the monotonous, unimaginative way of its transaction in classrooms, students often feel disinterested, inattentive and even sleepy. Moreover, children are known to have a short attention span, which is difficult to extend without changing the mode of transaction. The 'jerk technology' (JT) (Sansanwal, 2000) may prove to be a handy device in this connection. Using it the teacher can provide academic/mental 'jerks' to the students to revive their attention as and when needed. Here are some of the JT tools borrowed/adapted from Sansanwal. These are mostly applications of language.

(i) Mirror image writing

The teacher writes the mirror image of an important word on the board, which is a definite attention catcher.

Example:


(ii) Word art

This may include letters/words of disproportionate size or other fanciful writing, another way to grab attention.

Example:


(iii) Small writing

The teacher deliberately writes some important points in such small letters that the students are not able to read. This is likely to increase

their alertness and generate a sort of anticipatory commotion in the class.

(iv) Unusual sentence construction

Example: Hari is *clearly unclear* about the laws of reflection.

(v) Multiple words

In order to put extra emphasis on what the teacher wants to say, she/he may use more than one word with the same meaning; combinations of words from different languages may also work fine.

Example: Gravity *provides/supplies/gives* the necessary centripetal force to a satellite.

(vi) Misfit examples

An inappropriate or misfit example or a non-example may be clubbed together with a right example to test the understanding and alertness of the students.

Example: Rectilinear motion occurs for a bus traveling on a straight path and the *second hand of a watch*.

(vii) Teacher's known mistakes

The teacher may deliberately commit a mistake in her/his board work and test whether the students are attentive and careful enough to catch it.

Example: $s = ut + (1/2)at$

In the above equation for the distance covered (s) by a body in time interval t when it starts with a speed u and accelerates at the rate a , the teacher has knowingly written t in the second term on the right hand side in place of the correct symbol t^2 .

To sum up, a teacher may use the above tricks to break the classroom monotony and make the class merrier and livelier. Clearly, these tricks do not involve new knowledge of science but use the standard language of science in interesting and creative ways.

Of course, there are other ways of bringing in a bit of entertainment and humour to science classes with the help of language.

17. Language of science can be humorous too

Besides the 'jerk technology' as discussed above, it is possible to make science teaching learning enjoyable in other ways too, using the concepts and principles of science. Let us discuss a couple of such devices. Somewhat unconventional, humorous and funny in nature, these tools can improve the thinking and creative ability of teachers and students alike and help in knowledge construction and consolidation. Needless to say, these may be created in any language.

(i) Limericks

In general, a limerick is a five-line funny poem, rhyming as 'aabba'. Such poems can be composed as a teaching learning tool using the concepts of science. Here is an example involving Einstein's concept of relativity (quoted from Ratcliffe, 2005, p. 208):

*There was a young lady named Bright,
Whose speed was far faster than light;
She set out one day
In a relative way*

And returned on the previous night.

[Arthur Buller: 'Relativity' (1923)]

Instead of trying to pen a limerick, which may be somewhat difficult on account of the provisions as stated above, humorous poems in any form and any size may be composed in any

language as a teaching learning aid. Let us take an example of the simpler type, highlighting the concepts of good conductor, bad conductor, and heat conduction:

*A brat burns me, held in hand, all
cool and calm.*

*When he tries a spoon instead he
gets a hot palm.*

*Explain this to me, a poor wooden
stick that I am.*

(ii) Cartoons

Cartoons are very popular among the young and old alike. Then, why not use cartoons to teach science? It is possible to create cartoons using the principles and concepts of science. Here is an example based on the concept of a simple pendulum (Fig. 4) where the swinging bob is ready to offer a free ride to anyone who can identify the forces acting on it.

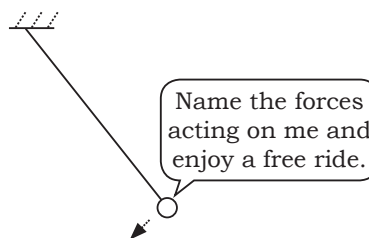


Figure 4

We would like to conclude the sequence of themes with some observations on teachers' linguistic mistakes, gleaned from a first-hand experience and how such mistakes may be addressed.

18. How teachers can discover their own mistakes

Let us begin with a few actual samples of written statements taken from a lesson plan prepared by a pre-service teacher on the topic of light:

- (a) "Can anybody say any sources of light?"
- (b) "What happens when the light beam falls on the mirror?"
- (c) "Gud afternoon students."
- (d) "Plz."
- (e) "Today, I want to ask some question which are related to the topic."

A look at the above lines discloses various kinds of mistake the student-teacher has made, including non-standard use of terms like 'good' and 'please'. To give another example of the incorrect use of language, let us quote from an advertisement issued by a private +2 college (Sambad, 2015b): "We are looking Excellent, Energetic, Result Oriented, Committed, Dedicated and highly enthusiastic professionals who are expertise in their respective subjects and experienced in the field of +2 Education." It is not difficult to locate the mistakes in this tag line of the ad.

Let us admit that we all make mistakes in our use of language; teachers and teacher educators are no exceptions. Making mistake is a signature of life. However, if we do not discover and rectify the mistakes, they get deeply entrenched within us with time and we fail to recognise them as

incorrect. Language related problems may be of different types, including the trivial variety, slip of tongue, etc. One needs to keep one's eyes and ears open, with enough self-awareness, to able to locate one's own mistakes. If a teacher periodically reflects upon her/his own work with a critical bent of mind, constantly revisits her/his own pronouncements, recalls the faces and expressions of the students in the class, she/he can hopefully discover them. Another way is to have a regular healthy reading/listening habit and reviewing one's own language during these sessions. If given opportunity, some of the students may also point out the teacher's mistakes; in such cases, the teacher ought to accept the same with humility while praising the students. Yet another way is to take help of knowledgeable colleagues. Peer learning can be a powerful weapon for teachers as well as students.

Pointing out anybody's mistake can be a delicate matter and needs to be done with care and caution. For example, instead of blatantly saying, "You are wrong", one may say, "I think it is more appropriate to.....", etc.

EPILOGUE

In the current article, we have tried to place before the stakeholders various aspects of the language of science and how to use these in classroom processes for meaningful learning as perceived in constructivist paradigm. Though a certain amount of emphasis has been put on English as the

language of science education in view of its global reach, the underlying tenets may be applied to any language, at any level of education.

From whatever angle we consider, language is important in life. We cannot possibly state it more succinctly than Ludwig Wittgenstein: “The limits of my language mean the limits of my world.” (Ratcliffe, 2005, p. 155). Wittgenstein’s world includes the world of science, which cannot be entered, explored, or enjoyed without proper language. It is thus an essential need to prepare future citizens of the world well versed in the language of science. To achieve this, teachers directly and teacher educators indirectly need to take

a bigger responsibility in helping students to construct their scientific knowledge in terms of concepts, interrelations, and applications, using appropriate language.

All associated with science education will do well to practice a robust reading habit with an eagerness so as not to miss any opportunity to learn, whether language or concept, apart from learning from any other reliable/authentic source. This would definitely enrich one personally as well as professionally. We may conclude with the advice of Sarah Caldwell (quoted in Rayan, 2015): “Learn everything you can, anytime you can, from anyone you can; there will always come a time when you will be grateful you did.”

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Teacher Learning in In-service Professional Development

Insights from two In-service Training Programmes

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Abstract

This paper attempts to understand teacher learning through formal in-service professional development activities conducted by agencies like the National Council of Educational Research and Training (NCERT) and the State Council of Educational Research and Training (SCERT) in India. Based on the experiences of the professional development programmes conducted by NCERT at the national level and the SCERT of Rajasthan at the state level, this paper, through teachers' pre-training and post-training opinions and reflections on various aspects of the training, brings out the needs and learnings of teachers in the training. Though both the training programmes showed some impact on the participating teachers and teacher learning during the training programmes, this does not ensure that the teachers will be implementing whatever has been learnt in the training. Three stages: pre-training period, while training period and immediate post-training period and the inputs by the training organisations and the trainers during all the three stages play a crucial role in making the programme effective and make an impact on the teachers. Materials for reading and worksheets for during and after activity also matter a lot for making a training programme a learning experience for the teachers.

INTRODUCTION

Teacher's while service training has been recognised as a major input for

quality improvement in classroom transactions and learning outcomes (NCERT, 1968; GOI, 1986; GOI, 1992;

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NCERT, 2005). 'In-service teacher training (INSET) for English language teachers is an important but often relatively ineffective aspect of large-scale English language teaching (ELT) curriculum development' (Waters and Vilches 2012:1). Though emphasis has been on ongoing and onsite teacher education and quite a number of teachers find opportunities to participate in the professional development programmes, the general view of teachers is that 'attend the professional development activities; listen to the trainers; and leave it there itself'. This, 'attend, listen to the trainer and leave it there' practice, though not open, is felt among the teachers. One can hear teachers say, this may be a good method or technique, but this will not work in my classroom. This paper makes an attempt to understand teacher learning through formal in-service professional development activities conducted by agencies like the National Council of Educational Research and Training (NCERT) and the State Council of Educational Research and Training (SCERT) in India.

While the teachers at the primary and upper primary level are regularly trained in some form or other under the scheme of *Sarva Shiksha Abhiyan* (SSA), teachers at the secondary level in most state systems are not trained. School systems like the Kendriya Vidyalaya Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS) and a few school education boards

like the CBSE offer regular training programmes for their teachers at the secondary and senior secondary stages. Most of the teachers at the secondary stage (Classes IX and X) in the state run school systems are not trained for decades (Meganathan, 2012). Thanks to the *Rashtriya Madhyamik Shiksha Abhiyan* (RMSA) scheme, the Government of India's mission mode exercise for education for all up to the secondary stage, all teachers at the secondary stage will now be trained. Opportunities for in-service training are crucial for the long-term development of teachers as well as for the long-term success of the school systems in which they work. Professional development of teachers at all levels is a necessity for achieving the goals of quality education for all. Richards and Farrell (2005) explain the need for it:

- (i) In any school or educational institution, there are teachers with different levels of experience, knowledge, skill, and expertise. Mutual sharing of knowledge and experience is a valuable source of professional growth.
- (ii) Teachers are generally motivated to continue their professional development once they begin their careers.
- (iii) Knowledge about language teaching and learning is in a tentative and incomplete state, and teachers need regular opportunities to update their professional knowledge.

- (iv) Classrooms are not only places where students learn—they are also places where teachers can learn.
- (v) Teachers can play an active role in their own professional development.
- (vi) It is the responsibility of schools and administrators to provide opportunities for continued professional education and to encourage teachers to participate in them.
- (vii) In order for such opportunities to take place, they need to be planned, supported, and rewarded. (p13)

Teacher learning from pre-service to an experienced or specialist stage is perceived in different dimensions. Richards and Farell (2005: 14) further attempt to list them under three categories, viz. (i) Teacher learning as a cognitive process; (ii) Teacher learning as personal construction; and (iii) Teacher learning as a reflective practice. The first approach assumes that teaching is a 'complex cognitive activity' and the focus is on 'the nature of teachers' beliefs and thinking and how these influence their teaching and learning.' In the words of Borg (2003:81) "teachers are active, thinking decision-makers who make instructional choices by drawing on complex practically-oriented, personalised, and context-sensitive networks of knowledge, thoughts, and beliefs". Teacher

learning as personal construction believes in the constructivist paradigm that knowledge is actively constructed by the learners, here teachers. Teachers based on their day-to-day classroom experience learn to be effective teachers while the third dimension teacher learning as reflective practice assumes that teachers make an attempt to learn from experience through focused reflection on the nature and meaning of teaching experiences (Wallace, 1998; Richards and Lockhart, 1994).

Teacher learning is also seen from a novice and an experienced teacher's perspective. A novice teacher with less or no experience and a teacher with quite a number of years of experience makes a difference in their understanding of nature of the subject, profile of learners, the socio-political contexts and the understanding required for realising the immediate and long-term needs and demands (Needs and demands need not match. Teachers, like learners, need something, but demand some other thing.) of the curriculum and the learners. A teacher with many years of service may not have gained/learnt the knowledge or developed a perspective that is expected or needed for an experienced teacher. Johnson (in his classroom lectures at the Lancaster University and elsewhere) describes it as 'a teacher with 16 years, experience' or 'a teacher with one year experience repeated 16 times'. His humorous statement is no joke

as there are teachers who from their inception (as teachers) do not get to learn much even after decades of experience. Tim (2010) draws the stages a teacher passes through from starting (inexperienced teacher) to a specialist teacher.

What is not making in-service professional development programmes effective? There are blames on the part of the trainers or trainer institutions as well as the teacher’s willingness to participate and learn from the in-service teacher

orientations or training. Adey (2004) and Wedell (2009) regret that most of the in-service programmes do not achieve the desired results and also they tend not to inspire teachers. Fullan (2007) puts the reasons for this state of affairs as ‘lack of awareness of and commitment to what is involved in planning for, implementing and sustaining meaningful teacher learning of this kind’.

The last curricular revision in India culminated in the National Curriculum Framework – 2005

<p>Starting</p> <p>You are a trainee teacher of English taking initial training or you are not qualified as an English teacher but working as one</p>
<p>New qualified</p> <p>You are a qualified teacher of English in your first two years of practices, who is putting initial training into practice.</p>
<p>Developing</p> <p>You are a practising qualified teacher of English more than two years of experience, and still want to consolidate your essential skills.</p>
<p>Proficient</p> <p>You are an experience qualified teacher of English with strong all round knowledge and competence as a teacher</p>
<p>Advanced</p> <p>You are a highly experience qualified teacher, who comfortably takes on leading role such as mentoring and may planning to develop more specialist skills</p>
<p>Specialist</p> <p>You are practising specialist such teacher trainer, materials writer, curriculum and syllabus developer, head of department / manager, testing expert, advisor on ELT issues (Primary, secondary, vocational, etc.), researcher</p>

Figure 1: Stages of Teacher Development (Tim Philips, 2010)

calls for systemic as well as process based reforms in teacher education programmes. The two national focus group position papers (which formed the curriculum revision in language education in India) stress for a need based and (teacher) learning oriented professional development. The position paper on teaching of English (NCERT, 2006:14) lays emphasis on continuous teacher professional development,

“Teacher education needs to be ongoing and onsite (through formal or informal support systems) as well as preparatory. Emphasis must be laid on teacher proficiency in or familiarity with the language, as the teacher is often a role model (for example, for reading). This is also one way to cultivate teacher awareness of or sensitivity to language learning. Proficiency and professional awareness are equally to be promoted, the latter to be imparted, where necessary, through the teachers’ own languages.”

While the position paper on teaching of Indian languages (NCERT, 2006:27) calls for an intensive and innovative teacher training,

“Our classrooms are still dominated by the teacher and textbook-centred language-teaching methods in which the teacher is regarded as the ultimate repository of knowledge and where learning largely takes place through pattern practice, drilling, and memorisation. We hope that

new teacher-training programmes will sensitise the teachers to the nature, structure, and functions of language, language acquisition, and language change, and equip her/him with strategies that can help her/him to build on the resource of a multilingual classroom.”

A recent study by Waters and Wilch (2012:23) on ‘Identifying Best Practice in ELT INSET’ also tells us the reality:

Effective INSET is crucial to the development of improved and new ELT (and any other) curricula. Nevertheless, there is evidence that it is frequently approached in a manner which results in it being less effective than required.

Conducted in the context of the Philippines, the study by Waters and Wilch (2012) attempted to explore INSET at three different stages and dimensions—pre-training planning; while training processes; and the follow-up activities. The first stage should take care of the logistic requirements like providing sufficient advance notice, securing training venue and choosing the right time of the year and training needs of teachers. The second stage of the training, i.e. delivery part of the training should focus on ‘participant centred’ approach, demonstration lessons of many kinds and providing resources, both human and materials. And the third stage is the follow-up stage where the teachers are again in school with new ideas and experience. This

stage would be very crucial but this is the stage which is generally neglected in our school systems. Waters and Vilches (2012:22) emphasise that *'active and extensive educational and school system support is needed in order to ensure that teaching ideas introduced in seminars are implemented. Systematic observation of and feedback on teacher's attempts to implement the training ideas is vital, and need to be approached in ways which take into account situational realities but which also attempt to maximise the potential for teacher learning.'*

TEACHER LEARNING: WAYS AND MEANS?

The next question arises is, 'Can teacher learning take place only through formal in-service training programmes?' This question is relevant for everyone, including the unwilling teacher, desires to learn or learns from every moment of the business of teaching. Teacher learning not necessarily bound to take place only through formal training programmes. It can take place through various ways and means in and outside the school. As Prabhu (2012:1) observes 'it is the teacher who is instrumental in learning, not the system. But the system has to ensure opportunities'.

I am thinking teachers' growth as something that arises from the ongoing activity of teaching—from the daily engagement in the classroom— rather than from any

professional inputs to the teacher from the world of professional specialism. Specialist inputs to the teacher are generally meant to alter or improve the teaching that takes place and/or promote an understanding in the teacher of the nature of /need for such improvement, rather than start a process of growth based on whatever teaching happens to take place. Growth arises from and is sustained by experience, not training or knowledge.

Prabhu (2012:1) also indicates 'four kinds of activities that are likely to start to prompt such a process' i.e., teachers' growth. The first activity is viewing someone else's teaching either live or video-recorded. The second activity, he suggests, is the teacher making pedagogic decision in the classroom in the light of when happens and how he perceived it at the time. The third activity is teacher's communication of his/her current pedagogic understanding to a fellow teacher. The fourth activity a teacher should do is to try to interact with the more explicit pedagogic perceptions of specialists in the field as they appear in the professional literature.

IN-SERVICE ORIENTATION PROGRAMMES

This section presents teacher learning (whether teacher learning takes place or not; how it takes place) in two orientation programmes conducted for English language teachers teaching at various stages

of school education. The first programme was conducted for the teachers teaching in government schools of Rajasthan by the State Institute of Educational Research and Training (SIERT), Udaipur. This was done to familiarise them the new curriculum and materials developed in the state in 2011 while the second programme was organised by NCERT for the teachers of Central Tibetan Schools Administration (CTSA), a special school system set up by the Government of India for the children of Tibetan community living in India. These schools are spread all over the country in different locations. The teachers of Rajasthan are teachers

teachers was conducted for 21 days from May, 2012. The number of teachers of CTSA and the government school teachers of Rajasthan are 40 and 95 respectively. The teachers of Rajasthan were divided into two groups. Trainers for the Rajasthan group include: Three senior teachers from senior secondary schools; one NCERT faculty (that is the author); one independent ELT specialist and for the CTSA group; four NCERT faculty from the department of languages. In both the programmes, the author was the lead person, i.e., Coordinator of the NCERT training and in the Rajasthan group he was the team leader.

Table 1
Number of teachers

Sl. No.	The school systems	Number of teachers	Teaching stage
1.	CTSA	40	Upper Primary, Secondary and Senior Secondary
2.	Rajasthan School Education Board	95 (This group was trained in two batches concurrently)	Upper Primary, Secondary, Senior Secondary and in DIETs

teaching Classes VI to XII and lecturers in the District Institute of Education and Training (DIET), district level pre-service teacher training institution, and the teachers of CTSA include teachers teaching Classes VI to XII. The orientation for the Rajasthan teachers was conducted for five days in August, 2012 and the orientation for CTSA

The teachers in both the orientations programmes were asked questions (through a questionnaire which included both closed and open ended questions/statements) on various aspects of language learning and teaching. The questions were developed by the author addressing the areas/ideas an English language teacher is expected to know. The

same questionnaire was administered before and after the orientation (with some modifications). This is in addition to the need analysis and feedback questionnaires. Following sections present the questions and the interpretation of opinions/ideas expressed by both the categories of teachers. The pre-orientation reflection questionnaire consisted of fourteen items and the post-orientation reflection questionnaire consisted of sixteen of which a few are added to the pre-orientation items. The questions posed to the teachers included aspects related to 'What is language?' 'How learning takes place?' and also about teaching of poetry and organising activities in the classroom.

Both the orientation programmes aimed at acquainting the teachers with the emerging trends and the changing perspectives in language learning-teaching and to familiarise them with the National Curriculum Framework-2005 and the curriculum, syllabus developed in Rajasthan as a follow-up to the NCF-2005. The CTSA teachers have been teaching the materials developed as a follow-up to NCF-2005 for about five years and they have not been trained on the National Curriculum Framework-2005 and its philosophy, the pedagogical change in language education as envisaged by NCF and the new materials. Rajasthan's case is different. The state was using the NCERT textbooks, the post-NCF-2005 textbooks but found them very difficult not only for students

also for teachers to deal with in the classroom. So the state went for a curricular revision and developing its own materials. The training for the teachers of Rajasthan was intended to be familiarising them with the ideas of NCF-2005 perspective on language education and to enable them to know the new textbooks and the ways and means to teach them in the classroom. I was involved in both the orientation programmes as a lead resource person or coordinator from planning stage and training materials development stage to the conduct of the training.

The orientation programmes included participant centred approach where the teachers were made to do group work, reflections, reading session, analysis of texts/textbook, developing activities for effective classroom interaction, assessment for learning and every morning report and so on. The themes/area include: *NCF and language education, new language pedagogies, pedagogy of reading, listening and speaking, pedagogical grammar, literature in language classroom, writing, continuous assessment, Action Research, organising activities and group work, assignments and project work.*

THE TEACHERS' REFLECTIONS (PRE-AND POST-ORIENTATION)

(i) How do you think children learn a language?

The first question addressed to them was 'How do you think children

learn a language?’ As can be seen, the responses of both the groups of teachers do not vary much. Majority of the teachers in both the groups have felt that children learn any language naturally. But the percentage varies in both the groups. Surprisingly, more percentage of teachers of CTSA felt that children learn any language naturally while the number of teachers in the Rajasthan group has increased after the orientation. Another surprise is that the number of teachers in the Rajasthan group (who feel that the learners should learn the words and their meaning) has increased slightly after the orientation.

orientation. But their understanding has differed after the orientation. If we take a close look at items ‘b’ and ‘c’ in table below number of teachers in both the groups marked as they would read aloud and then ask learners to read or ask the learners to read first and then read loudly but this has changed after the orientation. Many teachers from both the groups chose not to mark. We may infer that the orientation programme has not made them clear of the reading pedagogy. However, the responses of Rajasthan teachers for item ‘d’ show that they have got some insight into reading. The number of teachers who marked ‘one-to-one translation’ has come

Table 2
How do you think children learn a language?

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	By learning the grammar of the language	1	2	2	1
b.	They should learn the words first	0	8	4	4
c.	They should learn the words and their meaning	3	20	5	22
d.	Learning with sentence pattern	5	4	3	11
e.	They learn any language naturally	24	46	15	56

(ii) On reading

The second question relates to reading pedagogy. Responses from the groups show that teachers were somewhat aware of how to deal with the text in their classrooms before the

down from 18 to 5. But surprisingly, two teachers wanted to follow this method even after the orientation.

The table on the next page shows how teachers responded to the question, ‘Do you think children

Table 3
How do you teach reading (stories, poems) texts in your class?

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	I read out the stories aloud paragraph after paragraph and translate it	3	11	2	9
b.	I read the stories aloud once as a whole and ask students to read	20	35	13	17
c.	I ask them to read first and then I read loudly	20	13	13	12
d.	I read sentence by sentence and translate it	0	18	2	5

should understand the meaning of every word as they read?' We can see a marked increase in the percentage of teachers who believe that children need not understand the meaning of every word they read. The pre-orientation responses of both the groups reveal that the teachers were not willing to say yes, but quite a number of teachers chose not to say 'no' in the Rajasthan group.

Surprisingly, there is a decrease in the percentage of teachers who said that there is no need to understand every word one reads.

(iii) On vocabulary learning-teaching

The question relating to teaching-learning of vocabulary brings out an interesting phenomenon. The teachers of Rajasthan group, it could be inferred,

Table 4
Do you think children should understand the meaning of every word as they read?

	Pre-orientation		Post-orientation	
	CTSA	Rajasthan	CTSA	Rajasthan
	Yes	No	Yes	No
CTSA	1	27	3	23
Rajasthan	21	40	19	68

have changed their perception that vocabulary learning happens in context and learners trying to use the word in their interaction, and by using a dictionary. However, there is a marked difference in both the groups in their belief that dictionary and peer interaction are major opportunities for vocabulary learning.

teachers showed a positive increase (from 43 to 64) after the orientation. CTSA teachers' responses show that they have not been able to understand how the textbook intend to deal the vocabulary teaching-learning. We can see the responses to item 'b' teachers, particularly CTSA

Table 5
How should vocabulary be taught?

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Find the difficult words and write their meaning in the mother tongue and practice them	0	27	0	12
b.	Allow children to find the meaning of the word in a paragraph / context and then use it on their own	24	32	18	61
c.	Let children find the meaning of the word in a dictionary/group activity	6	22	16	30

a. Vocabulary in the new textbook

Teachers were also asked another question about how the vocabulary part is dealt with in the new textbooks. The responses are contradictory as more CTSA teachers felt that the vocabulary teaching is contextualised and rooted from the reading text before the orientation. The number decreased (from 23 to 17) after the orientation. But the Rajasthan

teachers are not aware of the uses of collocations and word clusters in teaching-learning of vocabulary. It is the CTSA teachers who felt after the orientation the vocabulary learning in the new textbooks is difficult. We can conclude that the orientation has not made much impact on CTSA teachers when it comes to making them understand the objectives of vocabulary learning as presented in the new textbooks.

Table 6
Vocabulary learning in the new textbook

Vocabulary learning in the new textbook		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Is contextualised, taken from the reading text	23	43	17	64
b.	Word cluster / collocation are effective ways of learning vocabulary	12	36	2	35
c.	Is difficult	0	2	14	0
d.	Will not be feasible as there will not be any time left	0	1	0	0

(iv) On teaching grammar

Though the practice of teaching of grammar has undergone drastic transformations informed by research on language learning and acquisition, teachers tend to believe that teaching formal grammar would also help. The responses of teachers of both the groups show that the new orientations to teaching-learning of grammar (pedagogical grammar) are a felt necessity to enable learners

internalise the grammar of the language in context and through use of the language. As the table below shows that the teachers have developed a perspective for teaching of grammar in contexts.

Teachers were also asked to say why they have marked what they have marked (a or b) in Table 7. The open ended responses of some teachers are shown below at the different stages, i.e., Pre-orientation and post-orientation.

Table 7
Grammar should be taught....

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	In isolation with single sentence examples	23	9	2	12
b.	In contexts rooted from the reading text	12	60	23	75

Grammar should be taught....

	Pre-orientation		Post-orientation
T1:	In contexts....I think, it is the real practical learning, which a student can use in her/his life	T1:	Through integrated grammar, children can learn different grammar items
T2:	In isolation, if grammar will be taught, children will not know in what context they need to use it	T2:	One can speak/write English grammatically correctly
T9:	It helps the children to learn the structure of sentences naturally	T9:	Students should learn the language naturally not in isolation
T10:	That helps the child to learn naturally the grammatically structures	T10:	To make the grammar for confident reading and speaking
T16:	Because it makes students to understand better	T16:	Grammar teaching in tradition method makes it quite disinteresting
T17:	Because that leaves long lasting impact in students' mind	T17:	Because it's easy to make children understand grammar in context
T18:	We can say so because children will learn how that particular piece of grammar can be used in a text	T18:	Learning becomes deeper, stronger
T23:	Because children can understand grammar when they are given sentence in chunks	T23:	Because it is learnt better in this way and it gives a life in teaching grammar
T24:	That will bring live to grammar	T24:	Because it is functional
T25:	Term grammar creates fear among students. The definitions of terms make them afraid and it promotes rote learning	T25:	So that students can understand of the text material property

Teachers, open response to the above shows that most of the teachers are for grammar in context. Their understanding and ideas about grammar learning (i.e. teaching formal grammar will not help) before the orientation has been reinforced through the training. Teachers are now saying (after the orientation) that moving from language use by learners to language 'consciousness rising' technique where underlying the rules/system of the grammatical item would help much rather than teaching the rules first. This could be stated as a major achievement of the orientations as they reinforced the teachers' belief that formal teaching of grammar will not be of much use. Knowing the grammatical rules for the sake of rules has not much to do in learning of the language.

(v) On NCF- 2005

Teachers were also asked to respond on the ideas of the National Curriculum Framework-2005. Responses of teachers reveal that the teachers are aware of the ideas of NCF and the emerging trends and beliefs about language learning. The responses are clear that the teachers have an understanding of how language learning takes place. One example is that teachers do not believe in teaching grammar formally. We can notice the difference in the responses of CTSA and Rajasthan teachers. CTSA teachers have not much changed their opinion; in fact the number of teachers on items 'a' and 'b' have come down slightly, while the teachers of Rajasthan have shown positive increase in their responses in understanding the

Table 8
National Curriculum Framework - 2005 believes
(Tick the aspects which are correct)

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Language is learnt as a whole not in bits and pieces	20	33	19	36
b.	Learning is better when children connect the new ideas with their previous experiences/knowledge	23	50	21	78
c.	Teach grammar seriously	0	0	0	1
d.	Learning is meaning making	11	6	14	7

ideas of NCF–2005. Teachers were also asked to list at least two guiding principles of NCF–2005. Most of the teachers could state more than two guiding principles. Analysis of the same follows the table above.

Like the item iv on grammar, teachers were also asked to list two ideas (or guiding principles) of the National Curriculum Framework–2005 (NCF). The responses show that the teachers have heard of the NCF and some of its ideas. Their responses after the orientation tell that the teacher have been familiarised with the ideas of NCF and its guiding principles. Maximum teachers in both the groups have listed ‘connecting life of children with classroom’ and ‘flexible examinations’. Though there was only one session allotted to familiarise the trainees with the ideas of NCF, in every session the trainers

were referring NCF and the position papers on teaching of English and Indian languages. A few teachers have said that they had not seen or heard of NCF before the orientation.

(vi) On textbooks

Teachers of both the groups are using the textbooks developed as a follow-up to NCF- 2005. The state of Rajasthan has now developed its own syllabus and textbooks for they found NCERT textbooks difficult for the teachers to transact in the classroom. Teachers have seen the new textbooks for Classes VI to VIII. As the table shows that how teachers of the groups differ in their opinion about the textbooks. The decreasing responses of the teachers of CTSA show that the textbooks do not contain stories and themes which children can relate with and do not promote child-to-child interaction. Their understanding of

Table 9
Textbooks

	The textbook you use now	Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Has stories/ themes which the children can relate with	21	29	13	54
b.	Provides scope for child-to-child interaction.	23	22	14	51
c.	Is difficult for the teacher to handle.	0	29	0	29
d.	Children find it easy.	2	3	1	9
e.	Children find it very difficult.	0	16	2	4

the textbook has drastically changed after the orientation. But the responses of Rajasthan teachers has positively increased as the difference in the understanding of the textbooks shows that they can relate the stories with the lives of children and child-to-child interaction is provided in the textbooks. One reason for the CTSA teachers' responses may be that the majority of CTSA children are wards of the Tibetans living in India. Though they are born and brought up in India (for the community has been living in India from the 1950s), their cultural and sociological orientations as a community is different from the communities living in India.

(vii) On conducting class activities

Teachers' response on various types and kinds of activities and tasks that the materials (here only the textbooks) intend to promote language interaction and language

use by learners reveals that the teachers have developed a perspective for developing these activities. For warm-up activities (which include pre-reading and pre-writing) and other while-reading or speaking activities like the group/pair work, the teachers' responses have shown marked increase positively. However, there is a difference with the CTSA teachers who believe that activities like the pair work/group work make the classroom noisier.

(viii) On teaching of poetry

Teachers' response on the purpose of teaching poetry shows interesting responses. Though there is variation in the pre-orientation responses between the groups, one can see the opinions of the groups changed positively in the understanding of teaching of poetry. Teachers of both the groups recognise fully that poetry teaching should not aim at serious

Table 10
Use of classroom activities

Warm-up activities (pre-reading or pre-writing activities) are for.....		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Taking the learners into the activities	4	18	7	19
b.	Connecting the children with their previous knowledge	18	51	12	67
c.	No use. Teachers can ignore them	1	0	0	1
d.	Initiating discussion on the ideas so that children can understand well	10	21	12	21

Table 11
Pair work /Group work

Pair work / group work		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Helps in learner-learner interaction. Children attempt to use the English language	21	54	7	75
b.	Is a waste of time. Children will not do anything	0	0	0	5
c.	Makes the teacher see children active and get involved in the activities	11	30	12	25
d.	Makes the classroom noisier	1	1	12	2

grammar teaching/language items. However, seven responses of the CTSA teachers in the post-orientation marking the item 'None of the above' arises some serious questions about the understanding of poetry teaching.

(ix) On the usefulness of the orientation

Teachers' responses about the usefulness of the orientation, both

perceived usefulness (pre-orientation opinion) and experienced usefulness of the orientation (post-orientation opinion) show a marked difference between the CTSA and the Rajasthan teachers. Rajasthan teachers have felt that their understanding of NCF-2005, about the English syllabus, handling of the textbooks, organising activities and other perceptions have been addressed

Table 12
Teaching of poetry is for...

		Pre-orientation		Post-orientation	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	Language learning	4	17	0	16
b.	Enjoyment	18	37	17	56
c.	Grammar learning	0	0	0	1
d.	Vocabulary learning	1	7	0	5
e.	All the above	12	27	3	31
f.	None of the above		1	7	0

well. This is not the case with CTSA teachers. We can infer that this group of teachers take a middle path. The increase in the number of responses in the 'fully achieved' category is very less when compared to Rajasthan group. One reason for this response is that the schools of CTSA are affiliated to Central Board of Secondary Education (CBSE) which through the materials of NCERT and its own

provides inputs for familiarisation of new ideas on language education. Teachers of Rajasthan, though have been trained at least once during last five years, the training inputs are generally very conventional.

There was also an additional question in the post orientation reflections. This question was given to find out whether the teachers have felt confident of organising

Table 13(a)
The orientation will be useful or was useful for you in ...

CTSA Group		Pre-orientation			Post-orientation		
		<i>Fully</i>	<i>To some extent</i>	<i>Not at all</i>	<i>Fully</i>	<i>To some extent</i>	<i>Not at all</i>
a.	Understanding NCF 2005	15	10		20	18	
b.	Understanding the new syllabus of English	18	14		18	9	
c.	Teaching the new textbooks in English for Classes VI to VIII	15	12	1	17	10	
d.	Organising the activities of the textbook (pair work, group work, etc.)	15	10		21	7	
e.	In devising and conducting assessment activities [Continuous Comprehensive Evaluation (CCE)]	14	11		16	12	1
f.	I would feel / I feel confident in teaching English language now with this orientation	18	5		25	3	

Table 13(b)
The orientation will be useful or was useful for you in

Rajasthan Group		Pre-orientation			Post-orientation		
		<i>Fully</i>	<i>To some extent</i>	<i>Not at all</i>	<i>Fully</i>	<i>To some extent</i>	<i>Not at all</i>
a.	Understanding NCF 2005	53	20	11	65	10	5
b.	Understanding the new syllabus of English	40	17	12	70	10	12
c.	Teaching the new textbooks in English for Classes VI to VIII	45	13	17	72	10	03
d.	Organising the activities of the textbook (pair work, group work, etc.)	49	16	05	67	13	09
e.	In devising and conducting assessment activities [Continuous Comprehensive Evaluation (CCE)]	30	23	34	50	20	01
f.	I would feel / I feel confident in teaching English language now with this orientation	30	27	11	71	16	07

activities and providing an enabling environment for promoting language learning. The responses show that both the groups have developed a perspective on how language learning takes place, organising activities for promoting interactions, use of mother tongue and so on. One may be sceptical about these responses

as they are answered conveniently. However, we can infer that teachers are convinced that these are the ways in which language learning can be promoted effectively. This recognition of the effective and scientifically accepted ways of doing itself could be stated that teachers have started learning.

Table 14
I can now do (Post-orientation)

Say whether the following activities are possible in your classroom after this orientation		Yes		No	
		CTSA	Rajasthan	CTSA	Rajasthan
a.	I can now conduct a group work well	35	66	04	10
b.	Project work is an instrument for language learning	37	55	02	18
c.	Writing involves a process	32	62	07	17
d.	I should use mother tongue also in the classroom	30	71	10	08
e.	I need to create an environment for language learning	38	73	0	01

DISCUSSION AND CONCLUSION

The orientations for both the groups of teachers were intended to familiarise them with the new curriculum, materials and the new perspectives in language education. Though the teachers of the groups are different as one group works in an English medium environment and the other (Rajasthan group) works in Hindi medium government schools where the resources are scarce. This study made an attempt to understand whether teachers get to learn anything in the in-service orientation programme. Began with much uneasiness to find out what teachers learn from the in-service training, this study took a shape by observing the teachers' need (as perceived by them), their activities during the training and their post-

orientation reflections. It cannot be established with confidence what the teachers have learnt or have not learnt at all the new ideas and developed a perspective on language education and language pedagogy. An analysis of the responses as discussed in the previous sections show that teachers of both the groups had an understanding about language learning, how to teach language aspects, conduct classroom activities, and ideas of NCF-2005 even before the orientation. Their responses after the orientation reveal that this understanding has improved to a greater extent in most cases while in some aspects the understating has not progressed well. There is no indemnity that the new strategies and ideas learnt during the orientation will be adopted by the teachers in the classroom. If one

goes by the responses of teachers as shown in the previous section, one can believe that teacher learning has taken place in both the orientations. If teachers have learnt something or anything during the orientations, what could be attributed to the reasons for the learning?

The reasons for teacher learning in the orientations could be seen from different dimensions. Firstly, both the orientations were organised with advanced planning. Four months before the start of the orientation, the preparatory work started with the identification of teachers in Rajasthan and information about the programme to the teachers of CTSA. Arrangements of proper venue and reading / study materials during orientation for the teachers were developed before-hand for Rajasthan teachers while NCERT's training package for North-eastern state teachers was used for the teachers of CTSA. Both the materials covered the major aspects of language education and pedagogy. Teachers were, in a way, compelled to read the material for their assignments, everyday class discussions and demonstration lessons.

Secondly, the orientations were participatory in the sense that the aspects were dealt with as teachers are expected to do in their classrooms. For example, reading pedagogy was made known to the participants through a demonstration of reading text as done in a classroom through pair work, individual reading, post-

reading activities, re-reading and so on. Story telling was done by a trainer telling a story and then participants telling the story in groups and in different languages (for promoting multilingualism), and then one group telling to the whole class. Participant centred approach (Waters and Vilchs, 2012) will work when teachers are not treated as the ones who do not know. Listening to the teachers and their problems would help for it makes them feel that the 'trainer is on their side'. This, 'being on the side of the participating teachers', (like teachers being on the side of the learners) would open up the minds of the teachers to come out of their apprehensions. Apprehensions are such that the teachers are crippled with their day-to-day system or logistic related problems resulting in what generally teachers say, "This will not work in our schools." "This can't be done in our large classroom." "Our children are not used to group / pair work which you are advocating." What is needed is to alleviate the apprehensions and enable the teachers to 'move from their apprehension to comprehension'. This movement will not take place easily. Teachers need to trust their trainers who require not only the techniques and strategies, but also compassion to understand the teachers' problems and how the curricular intensions get diluted at the teacher level. As Prabhu (2012) points out teachers in general do not want a specialist view of teaching-learning. They expect

'tips' that would work. This does not mean that training/orientation programmes should not be dealt with theoretical or pedagogical aspects. Moreover, just giving 'tips' is not a professional way of training professionals (if we consider teachers as professionals). Teachers, like learners in the classroom, are curious to understand first the practical benefits in their contexts and then are drawn to the understanding of theory. One difference between the learners and teachers is that teachers can be cynical because of their resource constrains and what they feel as 'not having good students' or 'not learning environment at home' for their learners. 'So all these new techniques cannot work there.' This problem is very common to every school system in the country. What is interesting is that those teachers are willing to find ways and means till they raise the first two problems like 'not having good students' and 'no learning environment at home'. It becomes difficult to deal with teachers who feel 'nothing can be done to change the situation or to make our learners learn.' This is what I would call, 'cynicism' and this I feel is dangerous for the learners who the teacher teaches and for the teacher herself/himself as she/he becomes hyper critical (not to say frustrated) of every idea or practice which comes. They become very resistant to change. Let's see some of the statements of teachers in the first open session in which they were asked to discuss

their training schedules and talk about their problems.

RAJASTHAN GROUP

'Our children can't read even the letters of the alphabets even in Class VI.'

'Their parents are mostly illiterates and daily coolies. They can't help their children in learning.'

'We don't have any facilities in the school. Only thing available is the textbook.'

'Our children can't learn English.'

'Most of the training programmes tell us many many things. But they don't work in our classroom.'

CTSA GROUP

'Our problem is different, our children don't have much motivation. They know English, but they are unwilling to learn because they get money from everywhere.'

'We have facilities and can create resources but our management is highly hierarchical and everyone exercises her/his power.'

'We can't do much as the system only wants us to produce 100 per cent result.'

One can see 'we' and 'they' thinking is more than half of the teachers. Purpose of this paper is not to explore the other sociological aspects, but we need to recognise that this (teacher thinking) is important for understanding the learner. A teacher need to recognise that her/his students are capable of learning because cognitively

every child is capable of learning, though it depends on other factors like motivation, support, interest, environment for learning, etc. One session discussed 'Who my learners are and their language merits and problems' informally helped the teachers to come out their negative thinking about their learners. But this was a problem which surfaced every time.

Thirdly, we adopted 'consciousness raising technique', through activities and tasks, teachers' attention was drawn to the underlying rules/principles or the 'why' and 'how' of ideas is expressed. Let me cite an example from my own session. One of the sessions I took was on listening and speaking, I took up mutual dictation in which teachers in pairs had to read out alternate sentences to their partner. Having done the dictation activity, their attention was drawn through recall. They were able to say that the activity was able to integrate the four skills (listening, speaking, reading and writing) and how the neglected areas of listening and speaking are included well in the activities.

Fourthly, the teachers were given freedom to modify the schedule prepared first by us. Their demands for new areas/topics were taken, accepted and included. Making them partners in the planning and processes of the orientation helped in owning the responsibility (responsibility of mutual learning and sharing of practices and experiences). Use of

audio and video in the orientation helped them to understand how the videos, not necessarily in language education or educative (like the Hollywood movie on a Mathematics teacher, *Stand and Deliver*) could make the orientation lively and enjoyable. We need to understand that teachers have to learn not very consciously i.e. they would feel that this I can do in my classroom and there is an element of fun to learn. Lecture-cum-demonstration is not the method for achieving this. Our methods have to be interactive and reflective. They need to be prompted to connect with what they are doing in their classroom and verify with what the trainer is trying to give them. One of the activities we did in the two programmes was to raise slogans on various aspects of language learning-teaching. There were charts displayed on the walls, they were asked to raise slogans like, 'Grammar is learnt implicitly, don't teach formal grammar in early years.' At the end of the orientation programmes, teachers were able to create (with understanding) about twenty slogans which were later converted into staffroom posters.

Fifthly, needless to say the teachers (trainees) should be aware of what the orientation programme/training is going to achieve for them. This will help in making teachers know of the expectation of the orientation and also an accountability of learning or knowing the aspects through the orientation. 'What' should be made

known to the trainers? A typical content of the orientation should be seen from the perspective of enhancing teachers' proficiency (wherever needed), the pedagogical knowledge, understanding the learners and her/his contexts, pedagogical knowledge with reference to each language aspect like reading, writing, pedagogical grammar, assessment processes, materials development and creating resources, system related issues and problems with regard to language education, classroom research (Action Research) and so on. This makes the teachers understand her/his professional role as a teacher individually and in the system. Both the orientations attempted to make the teachers aware of the content and the expectation from the teachers. This could be said as one reason for the success of the orientations.

Lastly, trainer learning is as important as teacher learning in any orientation or training programme. Selection of trainers makes all the difference. Trainers need to have an understanding of the emerging ideas and be able to provide an enabling environment for the teachers. Instructing the teacher the theoretical aspects only as precepts may not create an impact. Cater to the needs of teachers as to how to do and then draw their attention to underlying principles (if any or needed). In the Rajasthan group I was the only trainer— from NCERT while in the CTSA group, there were four trainers—all from NCERT. The mixed

group of Rajasthan was felt both as a merit and demerit. Merit is the diverse experiences and ideas, and the demerit is that understanding of ideas of NCF–2005, changing perspectives in language education and language learning. Trainers need to understand that teachers (and these teachers will become master trainers in future) are individuals who represent an institution called school. Both their individual perceptions and school practices and experiences influence their response to the training. Trainers who meet them only for some time need to understand and reflect this aspect to deliver their best.

We can conclude that the teachers have learnt new ideas, particularly NCF perspective on language education, changing/emerging trends in language education, teaching of vocabulary, grammar in contexts, organising activities and so on. The responses of the teachers also reveal that the orientation has helped them to equip themselves with new pedagogies. The pre-orientation arrangements like, information to the teacher well in advance, training materials for the teachers to read and to do activities during the orientation and knowledge and strategies of the trainers are major factors which will support the teacher learning in the in-service training programmes. Content of the orientation concentrating on language proficiency, pedagogical knowledge, and assessment processes, materials development, and system related issues and classroom research helps

in greater teacher involvement in the activities. Selection of trainers is important for the conduct / processes and the learning of teachers. Trainer learning from the orientation/training is instrumental for the quality improvement of orientations and teacher learning.

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Adaptation of a Suitable Model for Peer Tutoring in Indian School Situations

ANAMIKA YADAV*

Abstract

Peer tutoring is an alternative classroom arrangement in which students take an instructional role with classmates or other students. Many models have been developed in which students work in pairs (dyads). The present research was intended to adopt a suitable model for peer-tutoring in Indian situations. The pre-test and post-test design was used and the study was conducted on a sample of 100 students from Varanasi district of Uttar Pradesh. It is evident from the analysis that Reciprocal peer-tutoring is more suitable than Class-wide and Cross-age peer tutoring models because in this model, each and every student gets a chance to become tutor and tutee. As a result, they are able to understand each others' problems regarding the learning and are able to help each other.

INTRODUCTION

There is undoubtedly no one right way to teach science to young children. Teaching is an interactive process, the foundation for which consists of the interchange of ideas, information, observations and point of views between an individual or group, called the teacher and a usually much larger group of learners. Although science

education means different things to different teachers and the shift in of emphasis in the area of teaching of science has known varying shades of combination of the activities that go simultaneously.

All teachers present science in different ways. A major responsibility of science teacher is to foster opportunities for pupil-to-pupil

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discussion. UNESCO Report (1972) pointed out that “No doubt, the teacher has to impart knowledge, but the more important function is to encourage thinking on the part of the students. He has to devote more time and energy to productive and creative activities; interaction; discussion; stimulation; understanding and encouragement.” Hence, there is a need to identify and try out a method through which scientific attitude, logical reasoning, etc. can be enhanced. There exist various methods, viz. textbook method, lecture, project, narration, story-telling, individualised instruction, peer-tutoring, etc. A method known as peer tutoring fulfills the criteria where students get full opportunity to satisfy their individual need without hesitation because teaching is done by her or his own peer (peer is a child/student who is either classmate or older one and who acts as a tutor). It helps the students not only to interact with their mates and meet out the individual demand but also strengthen their confidence. This, free and fair atmosphere helps the individual to learn more with their classmate (Singh, 2010).

WHAT IS PEER TUTORING?

Paolitto (1976) traced the historical roots of peer-tutoring back to the first century A.D. when Quintilian noted the practice of having younger children taught by older children in his institution *Qratoria*.

The method was subsequently employed on a limited basis in

Germany and Spain in the 16th century. Establishment of peer-tutoring on a formalised and widespread basis is generally credited to Andrew Bell, a Scotsman, who in the late 18th century established a school in Madras (presently Chennai). It was “India for orphans of British soldiers and Indian mothers”. Bell modified the ancient Hindu tutoring system and, in a 1797 report, described the successful application of individual and group peer tutoring as a method of instruction and discipline.

Tutoring is basically a cognitive apprenticeship between an expert and novice. It can take place between an adult and a child or between a more skilled-child and a less skilled-child. According to Slavin (1995), peer tutoring is a component of cooperative learning. Utley and Mortweet (1997) defined peer tutoring as “a class of practices and strategies that employ peers as one-on-one teachers to provide individualised instruction, practice, repetition and clarification of concepts.

There are three models of peer tutoring – Class-wide peer tutoring (CWPT), Reciprocal peer tutoring (RPT) and Cross-age peer tutoring (CAPT). Class-wide peer tutoring was developed at the Juniper Gardens Children’s project in Kansas City, Kansas (Greenwood and Delquadri, 1995). It is one model that commonly pairs competent students with students with special needs. In this method, half of the students become tutors and the remaining half as

tutees. Noting the benefits that students receive from acting as tutors, Fantuzzo and his associates developed RPT, in which, for some time, half of the students acted as tutors and the half as tutees and after some time they exchanged their roles (Fantuzzo and Heller, 1993). In CAPT, tutors are the students of higher class and the tutees are that of the lower class. Tutors are typically two years older than tutees.

Many researches have been done to check the effectiveness of peer tutoring strategy at different school levels. Brady (1997) and Mastropieri *et al.* (2006) found improved academics (*e.g.* reading, comprehension, and math computation), desirable behaviours (*e.g.* on-task, motivation) and improved social interactions or relationships such as making friends. Well-implemented peer tutoring provides the additional instruction, practice and support often needed by students with disabilities (Vaughn, Klingner and Bryant, 2001). This method allows the teacher to share her or his responsibilities with students and by doing this she/he becomes a facilitator instead of deliverer of instruction.

PURPOSE OF THE STUDY

Science as an instrument of development plays a dominant role in industry, agriculture, medicine and even in our daily life. In spite of the fact that science is such an important subject, in the elementary levels it is generally seen as narrow

and defective in nature. Nearly, every teacher struggles with the problem of how to best individualise instruction within the group-oriented setting of the classroom. In spite of many methods, teachers teach science in the same way their teachers did decades ago because they had acquired theories with very little practical teaching during the training. So, there is an urgent need of adapting such a teaching method through which students get more and more opportunities for interaction.

Though many researches have been done regarding the effectiveness of peer tutoring strategy but most of them are done in foreign nations. Our Indian culture and environment both are quite different from these countries. In our schools, no such facilities are available as in foreign schools. Our infrastructural facilities are quite different in comparison to their facilities. Our one class has generally more than fifty students whereas in foreign schools nearly thirty students are there in one class due to which the teacher is able to give attention to each and every student. So, before studying the effectiveness of peer tutoring, it is necessary to find a suitable model of it for our Indian context. By doing this, we can also facilitate our different organisations like, NCERT, NCTE, NEUPA, etc. to make such arrangements in textbooks, in curriculum of different subjects and teacher-training syllabus so that teachers as well as students become

aware of this teaching method and can take its maximum benefit.

OBJECTIVE

To find a suitable peer tutoring model for the Indian situation. Indian situation here has been delimited to Varanasi city of Uttar Pradesh.

NULL HYPOTHESIS

There is no significant difference

do the experiment. After one week of experiment, a post-test was taken.

SAMPLE

Total ninety students (seventy-five from Class VII and fifteen from Class IX) were selected from a CBSE affiliated school situated in Varanasi city. The details about the three groups are given in Table 1.

Table 1
Number of students in different peer tutoring model groups

Sl. No.	Group	No. of students	Peer-tutoring model used
1.	1	30 (fifteen from VII and fifteen from IX class)	Cross-age PT model
2.	2	30 (all from VII class)	Class-wide PT model
3.	3	30 (all from VII class)	Reciprocal PT model

between the three peer tutoring models viz. CWPT, CAPT and RPT in Indian situation.

RESEARCH DESIGN

In the present study, pre-test/post-test design is used but without a control group. All the students were divided into three groups, namely CWPT group, RPT group and CAPT group containing thirty students each. Then, all were paired randomly in tutor-tutee relationship. For conducting the experiment, first of all a pre-test was taken of all the groups. Then, they were given a three-day training on how they have to teach their peers. After it, a chapter from their science subject was chosen to

TOOLS

Two tests (one pre-test and one post-test) on chapter 'Water' of science were used for data collection. Both tests had thirty multiple-choice questions. Time duration of both tests was thirty minutes. The reliability of the pre-test was found to be 0.88 and that of post-test was 0.85. Content validity of the test was assured by taking the view of experts in the field of psychology, research methodology and science.

STATISTICAL METHODS

In order to know the nature of data, the measures of central tendency (mean, median, mode and S.D.) were calculated. To find the significant

difference between the groups, t-test was used.

RESULT AND DISCUSSION

The data obtained were analysed in terms of mean scores, S.D. and t-value. The detailed description has been given in separate tables as follows.

It is evident from the table that obtained t-value for CAPT model group is not significant at .05 level of significance because it is less than the theoretical value which is 2.04. This shows that CAPT model is not fit for Class VII students. The reason for this insignificance may be that the students of Class VII may have fear of senior students. They were unable to ask questions from senior students to clarify their confusions. They may have taken seniors as their teachers and have a respectful gap in conversation with them.

It is evident from the table that obtained t-value for CAPT model group is not significant at .05 level of significance because it is less than the theoretical value which is 2.04. This shows that CWPT model is not fit for Class VII students. The reason may be that in this model, half of the students remained tutor for the whole session and the other half remained tutees which made them active and passive learners, respectively. The tutors may have shown their dominance over tutees and the tutees may have in them the feeling of inferiority. Due to this, tutees may not have been able to ask questions to clarify their confusion regarding the chapter. The other reason may be that the tutors may not have such competence to clarify the confusions of the tutees.

It is evident from the table that obtained t-value for RPT model group is significant at .05 level of

Table 2 (a)

Mean score, S.D. and t-value for group-1 i.e. Cross-age PT model

Group	Test	N	Mean score	S.D.	t-value	Significance
CAPT Model	Pre-test	30	5.3	1.96	tcal=0.26 < t.05=2.04	Not significant at .05 level of significance
	Post-test	30	5.9	1.29		

Table 2 (b)

Mean score, S.D. and t-value for group-2 i.e. Class-wide PT model

Group	Test	N	Mean score	S.D.	t-value	Significance
CWPT Model	Pre-test	30	5.4	1.66	tcal=0.80 < t.05=2.04	Not significant at .05 level of significance
	Post-test	30	6.1	1.46		

Table 3
Mean score, S.D. and t-value for group-3 i.e. Reciprocal PT model

Group	Test	N	Mean score	S.D.	t-value	Significance
RPT Model	Pre-test	30	5.4	2.01	t _{cal} =2.56 >t _{.05} =2.04	Significant at .05 level of significance
	Post-test	30	6.8	1.10		

significance because it is greater than theoretical value which is 2.04. This shows that RPT model is fit for Class VII students. Its reason may be that in RPT model there is no talk of active-passive learners. In this model, each and every student gets a chance to become tutor and tutee. Due to which, they are able to understand each others' problem regarding the learning.

If we compare all the three tables, we will find that the mean score of all the groups was nearly same before the experiment. But after that, the mean scores have increased significantly. The mean score of CAPT and CWPT groups are almost the same but it has increased for RPT group.

CONCLUSION

The findings of the study lead to the conclusion that RPT model is more suitable for our Indian context in comparison to CAPT and CWPT models. So, we can use it more frequently in schools than the other two models.

EDUCATIONAL IMPLICATIONS

The major educational implications of the study are as under:

1. Organisations like, NCERT should

make such type of curriculum and textbooks so that schools can make arrangements to use peer tutoring.

2. Organisations like, NCTE should make recommendation in teacher training syllabus so that pupil-teachers become aware of it and should be trained to use it in future.
3. Our schools should organise such type of activities so that children learn skills of tutoring one another.
4. Teachers should develop initiatives to use peer tutoring in their class. For this, our academic organisations should make arrangement for training the teachers.

LIMITATIONS

Due to paucity of time and as a pilot study, the following limitations were observed:

1. The pilot experiment was performed only in a school of Varanasi city.
2. Only Class VII students were considered.
3. Only one chapter was considered from Class VII textbook.

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