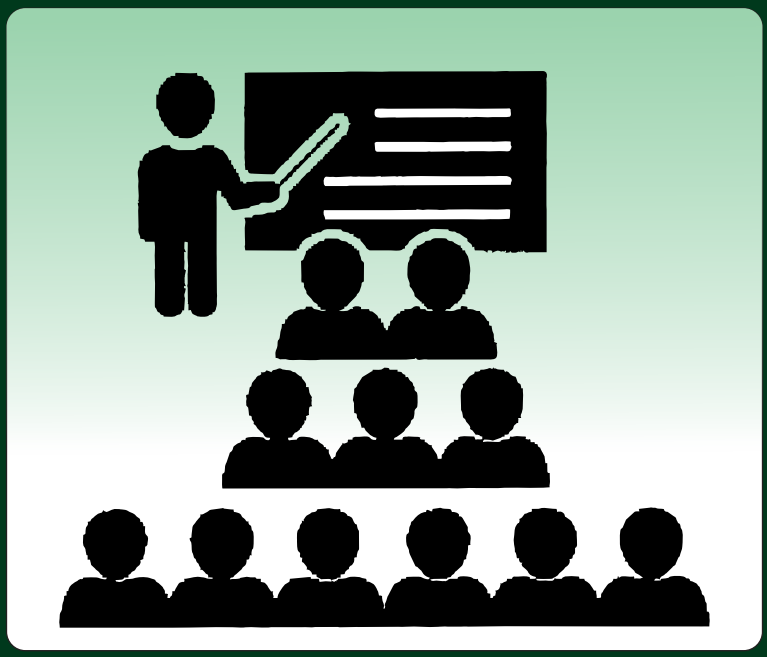
TEACHER LEARNER AND SOCIETY

Vol 18 No.1. June 2021



An Interdisciplinary Peer Reviewed Research Journal in Education

Mar Theophilus Training College
Thiruvananthapuram - 15, Kerala, India.

www.mttc.ac.in
ISSN 2319-1709-35

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An Interdisciplinary Peer Reviewed Research Journal in Education
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(An Interdisciplinary Peer Reviewed Research Journal in Education)

(Recognized by University of Kerala)

Vol. 18 No. 1. June 2021

Mar Theophilus Training College

(Re-accredited by NAAC : Grade - A)

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ISSN 2319 -1709-35

CONTENT

ISSN 2319 -1709-35

ISSN 2319 -1709-35

EDITORS' NOTE

Commitment to quality is dependent on a life time of vigilance. The focus on quality is refleded in the research works in addition to other fields. Research is a disinterested endeabour to learn analyse and propagate the truth. In addition to the issues of learners and teachers the pivotal area of social upliftment is a matter of serious concern. Technology and innovation can give us a winning edge. In this issue of the 'Teacher Learener and Society some of the crucial technological and methodological innovations are presented.

The research articles are on visual and verbal narratives at the grassroot level, correlation between metacognitive awareness and social competence in tribal students, effect of working memory training using dual n back software on fluid intelligence of higher secondary school students in Kerala, effectiveness of a strategy based on7e learning cycle model for enhancing achievement in chemistry and science process skills, impact of educational blogs for enhancing remembering ability of secondary students, a study on awareness of school teachers about the educational provisions and features of RPWD act 2016, development of an instructional strategy based on social constructivism for the better acquisition of language skills in Hindi ,identification of select life skills among higher secondary school students, a comparative study on academic stress of secondary school students of working and non -working mothers, a study on the correlates of learning mathematics among secondary school students, a study on screen time stress among higher secondary school level during covid 19 and a comparative analysis of physical fitness level of college male students from different geographical regions in Kerala.

The general articles are on management of children with hearing loss in mainstream classrooms, traversing through stress management mechanism and discourse - oriented pedagogy of English

In this issue the hybrid learning is discussed in the from the news column. the educational contributions of C.V. Raman are discussed in the educator speaks column and application of metaverse for preparation of educators of technology era is discussed in from the cyber sea. the legendary work of joseph murphy- the power of the subconscious mind is reviewed. The editorial team wishes you fruitful reading.

Dr. Joju John
Issue Editor

Dr. Deepthi Elizabath Mathew
Chief Editor

Research Article

VISUAL AND VERBAL NARRATIVES AT THE GRASSROOT LEVEL: A MINOR ANALYSIS WITH SELECTED RESPONDENTS

Akanksha Prajapati & K.Y. Benedict

Abstract: *From time immemorial the method of storytelling has fascinated the humankind, be it the beautiful cave paintings of early humans or well-illustrated ancient Egyptian hieroglyphic language. As humans, we have always loved visuals and the verbal narratives associated with it in the form of storytelling have influenced our intellects for decades. In the present paper, the investigator tries to analyze the significance of visual narratives at the primary school children level and highlight the significance of verbal narratives at the primary school children level and evaluate the influence of verbal and visual narratives on the cognitive development of children showcasing the responses of parents, teachers, and caregivers at the said level.The research highlights the importance of storytelling and narratives in helping the development of cognitive abilities and language skills among primary education children and both visual and verbal narratives are crucial in helping the children understand and learn the basic features of the language, thereby, developing their cognitive competencies.*

Keywords : Visual and Verbal Narrative, Story Telling

Introduction

A narrative shift concerning humanities has highlighted the emphasis on the way of storytelling as a cognitive construct (Wrightand Dunsmuir, 2019). Stories are considered to be a definite human strategy for coping with changes, time, and processes as a part of global experience. Stories are evident to be a significant part of the communication and cognitive activities of a person initiating from daily conversation to artistic presentation in movement, image and terms (Dore et al., 2018). On the other hand, from the perspective of linguistics, narratives are considered to be verbalized memories of ongoing and past experiences.

Additionally, narratives are considered as a significant way of developing communication competence in both primary and pre-school children (Carlsson et al., 2020).It is also noted that certain explanations concerning narration studies highlight various narrative types. Thus, it can be stated that the description of narrative types is dependent on the broad array of communication activities in primary education, specifically in text production. Hence, children's narratives are evident to contain event casts, accounts of different authors, recounts, and fictionalized stories. Therefore, the presentation of narratives for children belonging to a reader highlights the developmental aspects concerning narrative capability. Hence, it can be said that visual and verbal narratives in children belonging to primary education level are able to comprehend the narrative structure of the text, thereby, developing his or her own competency for narrative text. Hence, this research highlights the significance of visual narratives and verbal narratives in children belonging to primary education group emphasizing the importance of narrative skills integrated with cognitive features in children.

Research Questions

- To what extent Visual narrative influential to children of varying ages?
- Is Visual narrative a substitute for chalk and talk approach?
- Do visual and verbal narratives influence the cognitive development of children?
- Is storytelling an effective way for enhancing the interests of primary school children?

Selected Review of Literature

Lyons and Roulstone (2017) revealed that telling stories for children can be considered as an opportunity for them, as well as for the educators to learn regarding the community, language and culture. Therefore, support must be given to children so that they can learn about the history of their respective culture and broader community through the stories and narratives. Stories or narratives are considered to be a medium with

which all children are extensively familiar with (Cohn, 2019). Children are evident to enjoy storytelling, especially in the form of narratives. It can be through pictures, books, music, multimedia, spoken word or rhymes. Thus, storytelling helps in the cognitive development of children and is evident to be a crucial element of early childhood development and education. Additionally, it is noted that a child's ability to understand and propose stories have an extensive link to their later literary success and language development (Cohn, 2020). The key developmental milestones play an important role in cognitive development and characteristics. The early communicators are infants within 18 months of age. They are evident to enjoy listening to simple stories, draw benefits from shared book reading and listening to oral stories or narratives. They are likely to present interest in pictures of any book and costumes to highlight their stories (Cohn, 2020). On the other hand, the early language users are usually children belonging to 12-36 months of age. It is evident that children of such age groups enjoy listening to stories and from 2 years of age, thereby, develop their individual stories. It is evident that from 2 years of age, the children are enthusiastic to describe any unrelated or unrealistic events. Moreover, from 2-3 years of age they start to tell stories concerning a central topic, setting or character. These reveal that parents, caregivers or educators incorporating narratives and storytelling in regular routine is beneficial for the language development of the children.

Scope and Significance

The National Education Policy 2020 has put special emphasis on the Early Childhood Education (ECE).The NEP 2020 envisages a five-year foundational stage of education: emphasis on the three years of ECE and the first two years of primary school. In India it is of utmost importance to focus on the development of young children through concrete child policies and one such way is to analyze various methods that can be incorporated for the better development of our children. Storytelling includes recollecting and recounting a story from imagination or memory without a book. It is noted that storytelling is evident in every culture

across the world predating writing and is usual in all human societies. Grove (2017) highlighted the impact of storytelling and narratives in young children belonging to the age group 3-5 years concerning story comprehension and language development. It is noted that the storytelling group of students are likely to score higher than the story-reading group. Additionally, narratives play a pivotal role in developing the child's language. Story comprehension and vocabulary increase through both visual and verbal narrations. In this regard, the research aims to highlight the importance of visual narratives and verbal narratives in enhancing the cognitive abilities of the primary school children.

Objectives

The objectives of the piece of investigation are:

- To analyze the significance of visual narratives in education at the primary school level
- To highlight the significance of verbal narratives at the primary level
- To evaluate the influence of verbal and visual narratives on cognitive development of children at the primary level.

Methodology

The research methodology involves the research philosophy, research approach, research strategy, and research design that facilitates the understanding of the research topic. In this regard, this micro investigation research adopted a positivitic research philosophy so that it was possible to gather factual knowledge concerning the extensive observation of the participants. As the research methodology involves quantitative analysis, positivism research philosophy is selected (Ryan, 2018). Additionally, the research approach utilized in this piece of work is inductive. Specifically, the research strategy selected for this research is the survey method. The research choice is mono-method for this research work as only quantitative analysis has been carried out with selected participants.

On the other hand, the research time horizon selected for this research work is cross-sectional. A non-probability sampling method, namely purposive sampling is used for the research work to select the required number of participants (Berndt, 2020). A closed-ended questionnaire consisting of 10 questions related to the significance of verbal and visual narratives concerning the age was used. The participants selected for this quantitative analysis were educators, parents, guardians, and caregivers of primary school children. A total of 50 candidates comprising of teachers, educators, and caregivers from a well reputed primary school from Lucknow city were selected out of which 31 candidates responded. The inclusion criteria included teachers, parents, caregivers of children who are in primary school currently. The survey took place through questionnaires that were dispatched to the selected participants via their e-mail IDs.The informed consent was taken from each participant before their involvement in the research work. They were assured of the privacy and confidentiality of their responses. The reliability and validity of the data will be linked with the literature search concerning the topic of interest stating the ideas and concepts proposed by different authors on the significance of narratives for primary school children.

Data Analysis and Interpretation

The following table 1 showcases the responses of the parents, teachers, and caregivers to questions prominently highlighting the importance of visual and verbal narratives in the development of language and cognitive abilities among primary school children. In response to the question asking whether storytelling plays an important role in cognitive development, almost all of the participants comprising of parents, teachers and caregivers at the grassroots level agree 100 percent to the fact that storytelling is indeed a very powerful tool to enhance the cognitive abilities of young children. In fact, 93.54 per cent of respondents believe that the storytelling method is important for infants while only 6.45% responded negatively to the same. Around 90.32 per

cent of the responses were affirming that verbal and visual narratives play a very crucial role as a developmental milestone for children.

Analysis of the selected response against significant proactive statements.

A. Response Set: Visual and Verbal Narratives Versus Age

Table 1: General statements about the significance of visual and verbal narratives and Age

Proactive Statements	Response (N 31) Distribution	
	Yes (%)	No (%)
Do you think that visual and verbal narratives help in developing the language and cognitive abilities of children?	93.54	6.45
As per your experience with primary school children does storytelling play an important role in their cognitive development	100	0
Whether visual and verbal narratives play an essential role during key developmental milestones of children?	90.32	9.68
Do you think whether storytelling is important for infants?	93.54	6.45
Whether children grow interested in developing their own stories based on their learned narratives?	93.54	6.45
The visuals accompanied with verbal narratives enhances the interests of primary school children	96.77	3.23

In the present study, more focus has been put on analyzing the significance of the visual and verbal narratives of primary school children, as storytelling is an integral part of anyone's growing-up years. Storytelling brings joyful learning to young minds and creates fascination and curiosity to learn more. Symbolic thought is another important cognitive development that happens during the pre-school years. Age is an important factor when it comes to learning.

B. Focused Response Set: Age Versus. Language Development

Table 2:Language development Versus Age

Proactive Statement: What is the crucial age of language development as per your experience? • Response Distribution:			
0-1 years	01-02 years	02-03 years	03-04 years
0	22.58	77.42	0

Table 2 showcases the responses of the parents, teachers, and caregivers focusing on the age vs. language development criteria.In response to the question "Which age group is crucial for language development?" around 77.42% of the participants believed that the age ranging from 02 to 03 years is very important for the language development among primary school children and 22.58% responded that 01-02 years is crucial. These responses filled with the experiences of the respondents showcase the importance of the age range of 02-03 years in language development of the students.

Table 3:Apt Age Versus Visual and verbal narratives

Proactive Statement: As per your experience which age group enjoys the most visuals and verbal • Response Distribution:			
0-1 years	01-02 years	02-03 years	03-04 years
16.12	35.48	45.2	13.23

Table 3 showcases the response to the question "Which age group enjoys the most visual and verbal narratives?" around 45.2% of the participants responded that the children from the age ranging from 02 to 03 years enjoy the most.Hence,it can be said that the most suitable age for introducing the visual and verbal narratives is 02-03 years.

Table 4: Age Versus Fascination for story characters

Proactive Statement: At which age group do children start to tell stories concerning a central topic or are fascinated by a character in that story? • Response Distribution:			
0-1 years	01-02 years	02-03 years	03-04 years
3.23	22.58	67.74	6.45

Table 4 showcases the responses to the question "At which age group children start to tell stories concerning a central topic or are fascinated by a character in that story?". Around 67.74 per cent of the participants were of the opinion that at the age ranging from 02 to 03 years the children tend to gravitate more towards a central character of a story and get fascinated by it.The opinions expressed by the participants strongly agreed with the fact that visual and verbal narratives help in developing learning and cognitive abilities in children. The survey question highlighting "Whether visual and verbal narratives play an essential role during key developmental milestones in children" suggested that the majority of the participants gave a positive response to it. Hence, it can be noted that key developmental milestones play an important activity in language development and enhancement of cognitive abilities.

Additionally, considering Cohn's (2020) work, it can be noted that the children are likely to present interest in pictures of any book and costumes to design and presents their stories. It is already noted that the participants revealed that 2 years of age is the most crucial stage of language development and thus, the children enjoy narratives, both visual and verbal narratives. This aligns with the research of Cohn (2020) where the author revealed that such children are enthusiastic to describe any unrelated or unrealistic events. When the question related to "cognitive development" were asked to the participants, they highlighted that from the age of 2-3 years, they start to tell stories concerning a central topic, setting, or character.

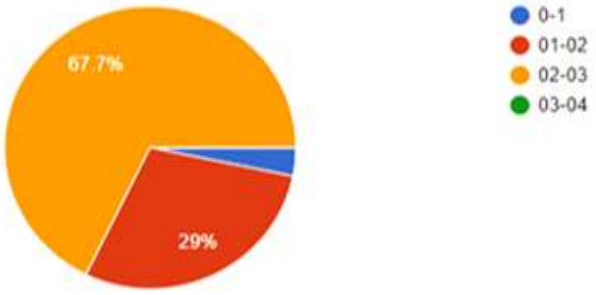

Figure1.
Crucial age group for cognitive development

In response to the question "Whether the children grow interests in developing their own stories based on their learned narratives", the participants gave positive responses.

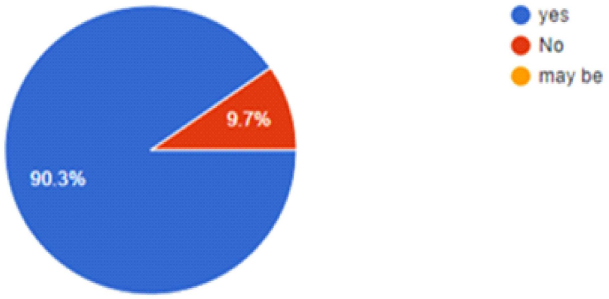

Figure 2.
Children's interests in developing stories based on their learned narratives

This can be supported by the work of Kaefer, Pinkham and Neuman (2017), where the authors highlighted that child of such ages are considered as the emergent literacy learners and during 3-4 years of age, children usually tell stories that are in synchronized order.Therefore, it can be noted that the children are likely to use those phrases and words in their stories that they have been familiar with. Thus, narratives play a significant role in early language development in kids.

Summary of Findings

Though the study was done with a small set of population, the data analysis substantiate strongly to the rationale of the research questions raised by the investigator. The major findings of the investigation can be listed as follows:

1. The visual and verbal narratives help in developing the language and cognitive abilities of children during the age of 02-03 year range.
2. It was revealed that storytelling in the form of visual and verbal narratives plays an important role in cognitive development of primary school children.
3. Visual and verbal narratives play essential role during key developmental milestones of children and the age range of 02-03 years is a crucial age for the children to tell stories and be fascinated by the central characters of it.
4. Age is an important factor for development and it was revealed that the 02-03 age year range is very crucial for cognitive development of the children.
5. It was also revealed that visuals accompanied with verbal narratives enhances the interests of primary school children

Conclusion

It can be concluded from the research that narratives play a pivotal role among children of pre-primary education. Considering a quantitative research analysis, the research highlighted the importance of storytelling and narratives in helping the development of cognitive abilities and language skills among primary education children. Both visual and verbal narratives are important in helping the children understand and learn the basic features of language, thereby, developing their cognitive competencies. Narratives also play a significant role in improving a child's learning capabilities in every subject area, such as both academic and non-academic. Thus, it can be said that this extensive utilization of narratives and storytelling underscores a general notion that visual narratives are easy and transparent to understand and comprehend

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Research Article

CORRELATION BETWEEN METACOGNITIVE AWARENESS AND SOCIAL COMPETENCE IN TRIBAL STUDENTS

Biju G. & Sreevrinda Nair N.

Abstract : *Understanding student's capacity to direct their own thinking has been a central topic of discussion among educational practitioners. The purpose of this paper was to investigate the level of metacognitive awareness and the level of social competence in tribal students and to check the relationship between these variables. The investigator used a metacognitive awareness inventory and a social competency scale for the data collection. The study was conducted among a sample of 200 secondary school students belonging to mannan tribal community in Idukki district.The investigator used Karl Pearson's correlation coefficient to find out the relationship between the variables. The study reveals that there is a moderate level of metacognitive awareness and social competence in tribal students. It also shows that there is a significant difference in the level of metacognitive awareness and social competence in tribal students based on gender. Findings of the study showed that there is only a negligible correlation between metacognitive awareness and social competence in tribal children.*

Keywords: Metacognitive Awareness, Social Competency, Tribal Students

Introduction

Tribes are the people with different way of living and community life. They are living in definite geographical area. They have their own culture, customs, religious belief etc. which make them different from other tribal community. The tribes have been confined to low status and are often physically and socially isolated instead of being absorbed in the mainstream population. Psychologically, the Scheduled Tribes often experience passive indifference that may take the form of exclusion from educational opportunities, social participation, and access to their own land. They are entirely different from others in the society in terms of living conditions, thinking skills, competency to involve in the societal

ISSN 2319 -1709-35

affairs etc. Their thinking influences the ability to interact with others and the ability to solve the issues related to society. In the present study, the investigator tries to find out the relationship between metacognitive awareness and social competence in tribal students.

Metacognition

"Thinking about thinking" is a common description of meta cognition. Metacognition is a regulatory system that aids in the understanding and control of a person's own cognitive function. Metacognition empowers people to take control of their own education."Metacognition was originally referred to as the knowledge about and regulation of one's own cognitive activities in learning processes" (Flavell, 1979; Brown, 1978).The most popular division of metacognition is divided into a distinct but connected categories. Metacognitive knowledge, or awareness of one's own thinking processes, and metacognitive regulation, or the ability to govern one's own thinking processes, were characterized by John Flavell, one of the first researchers in metacognition and memory. Metacognition is being aware of how they learn, assessing their learning requirements, devising strategies to meet those needs, and then putting those strategies into action (Hacker,2009). Metacognition was first defined by John Flavell, who divided it into two parts: metacognitive knowledge, which refers to awareness of one's own thinking, and metacognitive regulation, which refers to the ability to govern one's own thinking process. Metacognition is knowledge about cognition, and cognition is knowledge about things in the real world, according to Flavell (1979). Metacognition, according to Brown (1987), consists of two parts: knowledge of cognition and regulation of cognition.

Metacognition allows pupils to benefit from instruction by influencing how cognitive processes are used and maintained. Metacognition is used by students who recognize acceptable learning strategies in the right situation. Metacognition is a teaching method that stresses the development of thinking abilities and processes as a means

of improving learning. This goal is to assist all students to become more strategic, self-reliant, flexible, and productive in their academic pursuits.It is founded on the notion that there are distinct cognitive methods that can be taught to most students, which were previously thought to be used solely by the greatest and brightest pupils. The use of these tactics has been linked to successful learning and determining what the question means and how it might be addressed.Children must be prepared to learn for the rest of their lives through education. As a result, it is critical for pupils to build lifelong learning skills. Students should be taught how to recognize themselves as learners and how to manage their own activities. The development of metacognitive skills boosts an individual's self-confidence. Metacognitive knowledge is essential for independent learning and participation in social activities in students of all ages since it fosters self-reflection and social competence.

Social Competency

The condition of having the social, emotional, and cognitive abilities and behaviours required to succeed as a member of society is known as social competence. It also refers to the social, emotional, and cognitive skills and behaviours that children need for successful social adaptation.The term "social competency" refers to a wide range of internal and external variables that influence the likelihood and quality of social interaction. Competence refers to an individual's total level of success in social interactions as they occur in everyday life. Children's social competence allows them to connect with peers in a variety of ways and circumstances, as well as establish strong relationships with peers and adults, all of which are essential for academic success and beyond.There are many things one should know and be able to accomplish in order to be a successful social member of human society. Adults may take simple things for granted, such as greeting someone appropriately, but young children who are new to this culture must learn and develop those social competences.Children's social competence allows them to connect with peers in a variety of ways and circumstances, as well as establish strong relationships with peers and adults, all of

which are essential for academic success and beyond.Adoption of social values, development of a sense of personal identity, acquisition of interpersonal skills, learning how to regulate personal behaviour in accordance with societal expectations, planning and decision-making, and development of cultural competence are the six categories of competence that have been identified (Kostelnik et al., 2002).

Need and Significance

Children must be prepared to learn for the rest of their lives through education. As a result, it is critical for pupils to build lifelong learning skills. Students should be taught how to recognize themselves as learners and how to manage their own activities. The development of metacognitive skills boosts an individual's self-confidence. Tribes are indigenous peoples who mostly rely on forest resources for survival. The majority of tribal people who still adhere to tradition and culture have little interest in relocating for improved exposure or getting educated. Some even believe that becoming educated will harm their culture. The tribal clans of Idukki district are example of a group that is progressively developing and transforming. Because of the physical and cultural conditions, the students belonging to tribal communities are entirely different in the ability of handling the social situations and developing awareness about their thinking process. So, they have to develop an awareness about their thinking process to effectively interact with the society. Metacognitive knowledge is essential for independent learning and participation in social activities in students of all ages since it fosters self-reflection and social competence. Therefore,the investigator decided to conduct a study on the relationship between metacognitive awareness and social competency in the tribal students of Idukki district.

Objectives

- To find out the level of metacognitive awareness in tribal students.
- To find out the level of social competence in tribal students.

- To find out whether there is significant difference in the level of metacognitive awareness and level of social competence in tribal students based on gender.
- To find out the relationship between metacognitive awareness and social competence in tribal students.

Hypotheses

- There is a moderate level of metacognitive awareness in tribal students.
- There is a moderate level of social competence in tribal students.
- There is significant difference in the level of metacognitive awareness and level of social competence in tribal students based on gender.
- There is significant relationship between metacognitive awareness and social competence in tribal students.

Methodology

Survey method is adopted for the present study.200 secondary school students (100 boys and 100 girls) belonging to Mannan community were selected from Idukki district for the present study. A metacognitive awareness inventory prepared by Hameed, Meharunnisa Karadan and SabnaE.P., Department of Education, University of Calicut and a social competence scale prepared by S. Sabu and Shibu Varghese.P were used for the present study.Basic statistical techniques such as Arithmetic Mean and Standard Deviation,Significance of difference between the means and Karl Pearson's coefficient of correlation were adopted for the present study.

Analysis and Interpretation of the Study

The present study is intended to find out the relationship between metacognitive awareness and social competence in tribal students. The statistical analysis was done on the basis of the objectives formulated for the study. Based on the results of statistical processing of data, the investigator tested the hypotheses formulated for the study.

The analysis and interpretations of the collected data are given under the following heads;

- Analysis on the level of metacognitive awareness in tribal students.
- Analysis on the level of social competence in tribal students.
- Analysis of the level of metacognitive awareness and social competence in tribal students based on gender.
- Correlation between metacognitive awareness and social competence in tribal students.

Analysis on the Level of Metacognitive Awareness in Tribal Students

The analysis on the level of metacognitive awareness in tribal students was analysed and the details are presented in table 1 and figure 1

Table 1: Level of Metacognitive Awareness in Tribal Students

Level of Metacognitive Awareness	No. of Students	Percentage
High	42	21
Moderate	125	62.5
Low	33	16.5

By analyzing the data, the investigator got a mean value of 106.79 and standard deviation as 6.16. From table 1, it is clear that, 62.5% of tribal students have moderate level of metacognitive awareness, 21 % have high level of metacognitive awareness and 16.5% have low level of metacognitive awareness.Therefore, the first hypothesis was accepted. Figure 1 shows level of metacognitive awareness in tribal students.

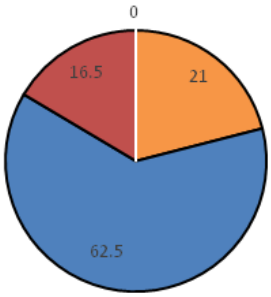

Figure 1:
Showing the Level of Metacognitive Awareness in Tribal Students

Level of Social Competence in Tribal Students

The analysis on the level of social competence in tribal students was analysed and the details are presented in table 2 and figure 2.

Table 2: Level of Social Competence in Tribal Students

Level of Social Competence	No. of Students	Percentage
High	40	20
Moderate	133	66.5
Low	27	13.5

Table 2 shows that, 66.5% of tribal students have a moderate level of social competence, 20% have high level of social competence and the remaining 13.5% have low level of social competence. Therefore, the second hypothesis was accepted. Figure 2 shows the level of social competence in tribal students.

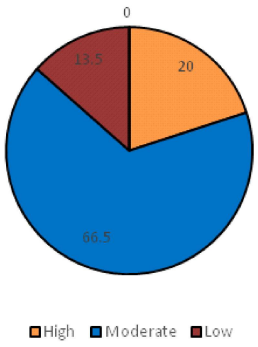

Figure 2:
Showing the Level of Social Competence in Tribal Students

Analysis of the Level of Metacognitive Awareness and Social Competence in Tribal Students Based on Gender

The analysis on the level of metacognitive awareness and the level of social competence in tribal students based on gender was analysed and the details are presented in Table 3 and 4.

Table 3: Mean, Standard Deviation and Critical Ratio of the Level of Metacognitive Awareness in Tribal Students based on Gender

	No. of Students	Mean	SD	Critical Ratio
Boys	100	105.64	6.2	2.71
Girls	100	107.94	5.93	

From table 3, it was found that the mean score and standard deviation of tribal boys were 105.64 and 6.2 and that of tribal girls were 107.94 and 5.93 respectively with regards to the level of metacognitive awareness. The critical ratio obtained was 2.71, which was greater than the table value at 0.05 level. This showed that there was significant difference in the level of metacognitive awareness in tribal students with regards to gender.

Table 4: Mean, Standard Deviation and Critical Ratio of the Level of Social Competence in Tribal Students based on Gender

	No. of Students	Mean	SD	Critical Ratio
Boys	100	98.48	6.86	0.43
Girls	100	98.87	5.94	

Table 4 shows that the mean score and standard deviation of boys were 98.48 and 6.86 and that of girls were 98.87 and 5.94 respectively with regards to the level of social competency. The critical value obtained was 0.43, which was less than the table at 0.05 level. This showed that, there was no significant difference in the level of social competence in tribal students with regards to gender.

Correlation between Metacognitive Awareness and Social Competence in Tribal Students

The analysis on correlation between metacognitive awareness and social competence in tribal students was analysed and the details are presented in table 5.

Table 5: Correlation between Metacognitive Awareness and Social Competence in Tribal Students

N	Coefficient of Correlation (r)	t	Level of Significance
200	0.09	2.90	0.05

The investigator adopted Karl Pearson's Coefficient of Correlation (r) to find out the relationship between metacognitive awareness and social competence among tribal students. The value obtained for 'r' is 0.09. The calculated value of r = 0.09 and is not significant at 0.05 level. Hence it can be concluded that there is a negligible correlation between metacognitive awareness and social competence in tribal students.Therefore, the fourth hypothesis was rejected.

Findings

The purpose of this study was to find out the level of metacognitive awareness and social competence in tribal students and to find out the relationship between them. From the study, the investigator found that majority of the tribal students have a moderate level of metacognitive awareness and social competence. The investigator also found that there is significant difference in the level of metacognitive awareness in tribal students based on gender. The study also reveals that there is no significant difference in the level of social competence in tribal students based on gender. The major finding of the present study was that there is a negligible correlation between metacognitive awareness and social competence in tribal students.

Conclusion

Metacognitive activities that allow students to reflect on what they know, care about, and can do. The present study was conducted to understand the relationship between metacognitive awareness and social competence in tribal students. The study was conducted to a sample of

200 secondary school students belonging to Mannan tribal community in Idukki district. From the study, it was found that there exist a moderate level of metacognitive awareness and social competence in tribal students, but the correlation between those variables were negligible.

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Research Article

EFFECT OF WORKING MEMORY TRAINING USING DUAL N BACK SOFTWAREON FLUID INTELLIGENCE OF HIGHER SECONDARY SCHOOL STUDENTS IN KERALA

Subin K. S. & Bindu D.

Abstract : *This study is an attempt to find the effect of working memory training on fluid intelligence of higher secondary school students in Kerala. For this purpose, a sample of 90 higher secondary school students from Kerala were selected using multi stage random sampling technique and their fluid intelligence was measured using Raven's Progressive Matrices. The sample was divided into two groups of 45 students each. One of the groups was taken as the experimental group and the other as control group. The experimental group is exposed to 14 sessions of working memory training using dual n-back task over a period of two weeks. After two weeks both experimental and control groups were again tested for their fluid intelligence. Post-test fluid intelligence scores were found to be significantly greater for the experimental group compared to the control group.*

Keywords: Fluid Intelligence, Working Memory, Memory Training, Performance Tasks

Introduction

Working memory is a psychological variable which plays an important role in the educational achievement of children. It involves the temporary maintenance and manipulation of information. Working memory provides a transitory storage that reinforces our capacity for complex thought. It may be divided into the following.The phonological loop, a sub system which holds and manipulates sound and speech.The visuo-spatial sketchpad, a sub system which holds and manipulates non-verbal material. The central executive, an attentional control system of limited processing capacity that selects and operates strategies. The Episodic Buffer, a temporary store of limited capacity capable of

ISSN 2319 -1709-35

combining a range of different storage dimensionsby representing them as multidimensional chunks or episodes. Individuals differ in the capacity of their various working memory sub-components in ways that affect scholastic achievement.

Dual n-back task is a performance task where two different types of stimuli such as one visual and one auditory are simultaneously presented to the subject in continuous steps. The task is to find a match of the current stimulus/stimuli to the stimulus/stimuli from n steps earlier in the sequence. The difficulty level of the task can be varied by adjusting the step factor n. It is commonly used as an assessment tool in cognitive neuroscience to measure a part of working memory capacity. In psychology, fluid and crystallized intelligence are considered as factors of general intelligence. Fluid intelligence is the capacity to solve new problems, independent of the previous knowledge. It is the ability to think abstractly, identify patterns and relationships, reason and solve problems logically. It includes both inductive reasoning and deductive reasoning.

Objective

The study was designed to test the effect of working memory training on fluid intelligence of higher secondary school students in Kerala.

Hypotheses

The following hypotheses were formulated for the study:

1. There is significant difference between experimental and control groups in their post-test scores of fluid intelligence.
2. There is significant difference between boys and girls in the experimental group in their post-test scores of fluid intelligence.

Methodology

The investigator adopted Experimental method for the present study. Population of the study consists of all the higher secondary school

students in Kerala. The investigator selected a sample of 90 higher secondary school students for the study. The samplewas selected using multi stage random sampling technique.

Tools Used

The tools used for the study were the dual n-back task software developed by the investigatorand Raven's Advanced Progressive Matrices (RAPM). The dual n-back task software which can be installed in a computer running windows operating system was designed to present two different types of stimuli one visual and one auditory simultaneously to the subject in continuous steps. The task was to find a match of the current stimulus/stimuli to the stimulus/stimuli from *n* steps earlier in the sequence. The visual stimulus consisted of the appearance of a coloured square at one of the nine different locations of the screen and the auditory stimulus consisted of one of the letter sounds presented sequentially through headphones. Each stimulus persisted for a short span of about 3 seconds. The step factor *n* was started at 1 and its value was varied from one block of trials to another, with continuous adjustments for each participant based on performance. When the performance improved, n was incremented by one and when it worsened, n was decremented by one. Thus, the task changed adaptively for each participant so that it always remained challenging.

Raven's Advanced Progressive Matrices is a nonverbal test characteristically used to measure general human intelligence and abstract reasoning and is viewed as a non-verbal approximation of fluid intelligence. The tests were developed by John C. Raven. In each test item, the subject is asked to recognize the absent element that completes a pattern. Many patterns are offered in the form of a 6×6, 4×4, 3×3, or 2×2 matrix, giving the test its name.The advanced form of the matrices comprises 48 items, presented as one set of 12 and another of 36. Items are presented in black ink on a white background, and gradually become complex as progress is made through each set. These items are suitable for adults and adolescents of above average intelligence.

Experimental Design and Procedure

Here the investigator used non-equivalent groups pre-test treatment post-test design. For this study 90 higher secondary school students were selected and their fluid intelligence was measured using RAPM. The sample was divided into two groups of 45 students each. The experimental group was exposed to 14 sessions of working memory training over a period of 14 days using the dual n-back task software developed by the investigator. Each session consisted of a minimum of 25 minutes. Both the experimental and control groups were again tested for their fluid intelligence after 14 days of working memory training. Parallel forms of test are used for the pre-test and post-test by dividing RAPM into odd and even items. The effect of working memory training on fluid intelligence was tested by comparing the post-test fluid intelligence scores of the experimental and control groups.

Statistical Techniques

The statistical techniques adopted for analysing the datawere ANCOVA and t test for significance of difference between independent sample means.

Analysis and Interpretation of Data

Analysing the data is one of the most essential part of research paper. To simply elaborate, data analysis is the breaking down of the intricate research material into its vital and simplified state. This helps to deliver proof and improved understanding of the research. The first part of the analysis deals with the Analysis of Co-Variance of pre-test and post-test fluid intelligence scores of Experimental group and Control group and the details are given in Tables 1 and 2. The second part of the analysis deals with test of significance of difference between means of post-test scores of fluid intelligence of girls and boys in the experimental groups and the details are given in Table 1.

Table 1. Analysis of Co-Variance of pre-test and post-test fluid intelligence scores of Experimental group and Control group.

Source of variation	df	Sum of Squares	Mean Square	F	Level of significance
Among means	1	73.998	73.998	24.823	Significant at 0.01 level
Within groups	87	259.344	2.981		
Total	88	333.342			

Table 2 Adjusted means of post-test scores of experimental and control groups

Group	Number of students	Pre-test	Post-test	Adjusted Post-test
Control	45	22.98	23.84	23.68
Experimental	45	22.29	25.36	25.52

Since the Adjusted Post-test mean of experimental group is significantly greater than that of the control group, it can be inferred that the experimental group performed better in post-test fluid intelligence compared to the control group. From the analysis of the total scores of pupils in the experimental and control groups using the statistical technique, Analysis of Co-variance, it is clear that training on working memory using dual n-back task improves fluid intelligence of higher secondary school students.

Table 3 : Test of significance of difference between means of post-test scores of fluid intelligence of girls and boys in the experimental group

Gender	**Number of students**	**Mean**	**Standard deviation**	**t**	**Level of significance**
Girls	24	25.79	1.55	1.64	Not significant at 0.05 level
Boys	21	24.86	2.1		

The calculated value of t is 1.02 and is not significant at 0.05 level ($t = 1.64$; $p>0.05$). Since the mean of the girls do not differ significantly from that of the boys, girls and boys are more or less equal in fluid intelligence after doing working memory training.

Tenability of hypotheses

Hypothesis 1

Ha: There is significant difference between experimental and control groups in their post-test scores of fluid intelligence.

H0: There is no significant difference between experimental and control groups in their post-test scores of fluid intelligence.

Analysis of Co-Variance of pre-test and post-test fluid intelligence scores of Experimental group and control group revealed that there is significant difference between Experimental and control groups in post-test fluid intelligence scores. Hence the null hypothesis formulated in this context is rejected and the alternate hypothesis i.e., hypothesis 1 is substantiated.

Hypothesis 2

Ha: There is significant difference between boys and girls in the experimental group in their post-test scores of fluid intelligence.

H0: There is no significant difference between boys and girls in the experimental group in their post-test scores of fluid intelligence.

Test for significance of difference between means of fluid intelligence scores of girls and boys revealed that there is no significant difference between girls and boys in fluid intelligence after doing working memory training. Hence the null hypothesis formulated in this context is not rejected and the alternate hypothesis i.e., hypothesis 2 is not substantiated.

Implications of the study

Fluid intelligence and a well-functioning working memory is crucial for a number of everyday activities including learning and academic performance. Understanding of working memory training and its potential role in supporting academic attainment is of very much importance.The improvement influid intelligence by the working memory training points to the need for training of both these basic faculties which will enhance learning and academic performance.

Conclusion

The study revealed that the fluid intelligence of higher secondary school students can be improved significantly with training on working memory using dual n-back task. The study also revealed that there is no significant difference between girls and boys in fluid intelligence after doing working memory training. The improvement in fluid intelligence with working memory training is more or less same for male and female students. The results of the study points to the need for training of working memory which will help in the significant enhancement of the fluid intelligence of students.

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Research Article

EFFECTIVENESS OF A STRATEGY BASED ON 7E LEARNING CYCLE MODEL FOR ENHANCING ACHIEVEMENT IN CHEMISTRY AND SCIENCE PROCESS SKILLS AMONG SECONDARY SCHOOL STUDENTS

Lekshmi Sekher G. & Ranjini Devi S.

Abstract : *The purpose of this study was to examine the effectiveness of a strategy based on 7e learning cycle model for enhancing achievement in Chemistry and science process skills among secondary school students. Pre-test post-test non-equivalent experimental group design was adopted for the study. This study was carried out with two intact groups of IX standard students having 30 students in Kollam district, Kerala. 7E learning cycle approach was implemented in the experimental group, while instruction in the control group continued with activity based instruction. The Science Process Skill Test was applied to groups as pretestand post-test. A retention test was applied to both groups eight weeks after the post-test. Data were analyzed through SPSS 17.0 statistical software by using a t-test and ANCOVA test. It was indicated in this study that 7E learning cycle approach significantly increased ninth grade students' chemistry achievement and science process skills in comparison to activity based instruction.*

Keywords: Science Education,7E Learning Cycle Approach, Process Skills.

Introduction

Education, in its broadest definition, may be defined as any event or deed that has a formative influence on an individual's intellect, character, or physical ability. The most apparent example is the capacity to comprehend and apply language, as well as mathematical skills, which are subsequently used throughout a person's life.Instruction is not limited to these domains; it may also take place in more informal settings and dynamics, such as friends educating one other, volunteer groups giving education and practical learning via action, and so on.

ISSN 2319 -1709-35

The primary purpose of modern scientific education is to prepare students to be global citizens. It stimulates students' curiosity and inquiry in order to foster a spirit of discovery and enjoyment of learning and it provides them with the skills to learn and acquire knowledge individually or collaboratively, as well as to apply these skills and knowledge appropriately across a wide range of areas. Inquiry is an essential for science learning.

Alan Colburn defined inquiry as 'the development of a classroom where students are involved in fundamentally open-ended, student-centered, hands-on activities' in "An Inquiry Primer' (March 2000). Colburn believes that an inquiry-based classroom includes a variety of methods to inquiry-based education. Structured Inquiry, Guided Inquiry, Open Inquiry, and Learning Cycle are some of these techniques. The Learning Cycle Model is a teaching method that is congruent with the nature of science as an investigation and with the method of learning of children(Cavalloand Laubach, 2001). Many different variations of the learning cycle may be found in scientific curriculum, with stages ranging from 3E to 5E to 7E. Every learning cycle, regardless of the number of steps, has a core; the same goal (Settlag, 2000). The investigations on the instructions based on Learning Cycle methods assisted students in making understanding of scientific ideas, improving their scientific reasoning and attitudes toward science, increasing their participation in the class, and overcoming students' misconceptions. The 7E Learning Cycle Instruction Model, as modified by Arthur Eisenkraft (2003), was utilized in this study. It contains instructions for seven distinct elements such as ELICIT, ENGAGE, EXPLORE, EXPLAIN, ELABORATE, EVALUATE and EXTEND.

Need and Significance

Science education is focused with developing an individual's analytical, critical observation, and problem-solving talents, as well as his or her creativity. These talents are less developed in the conventional method since practical and productive labour does not take centre stage.

The goal of science education is to prepare students to apply scientific process abilities. Science process skills are the tools that students use to examine the world around them and create science concepts, thus developing these abilities is critical for pupils. As a result, the learning cycle method may be utilized to increase students' success in scientific and process skills. Students' language arts skills, intellectual skill, reading skills including synonyms, logical thinking skill, perceptual skills, concepts vocabulary and oral languages skills, communication skill, and problem solving can all benefit from science process skills. Many scientific class activities rely on students' reading and alertness abilities. Integration of science and mathematics also needs few efforts because the development of logical mathematical reasoning and problem solving skills is a goal of education in both fields.The learning cycle model is a teaching technique. Many variations of this learning cycle may be found in scientific curricula, with stages ranging from 3E to 5E to 7E.Most of the studies are related to 5E learning cycle. Osman cardak (2013), studied the effect of 5E instructional Model in student success in primary school sixth year circulatory system topic. To compare the treatments, the percentage of correct statements and t- test results were used. While initial levels of the experimental group and the control group were the same, a significant difference occurred in favour of the experimental group as a result of the application.

As a student of scientific education, the investigator thought that the 7E learning cycle model would be more appropriate for teaching the topic so as to enhance the process skills and achievement in chemistry, and this might be investigated. In this study, a learning strategy based on the 7E learning cycle model was created and executed. It necessitates the education of seven distinct elements: Elicit, Engage, Explore, Explain, Elaborate, Evaluate, and Extend are the steps in the process. The primary goal of this study is to look into the impact of a learning approach based on the 7E learning cycle model and activity-based instruction on ninth-grade students' achievement in Chemistry and science process skills.

Objectives

The main objectives of the study are:

- To find the effectiveness of 7E based learning strategy model for enhancing achievement in chemistry and science process skillsamong secondary school students on the basis of pre-test and post- test scores.
- To find the effectiveness of activity based learning strategy model for enhancing achievement in chemistry and science process skills among secondary school students on the basis of pre-test post- test scores.
- To compare the effectiveness of 7E based learning strategy model and activity based learning for enhancing achievement in chemistry and science process skills among secondary school students on the basis of pre-test post- test scores.

Hypotheses

Hypotheses of the study are the following are:

- There is a significant difference between the students' achievement in Chemistry and science process skills taught through 7E learning Cycle model in pretest and post-test.
- There is a significant difference between the students' achievement in Chemistry and science process skills taught through Activity based learning strategy in pretest and post-test.
- There is a significant difference between the students' achievement in Chemistry and science process skills taught through 7E learning Cycle model and Activity based learning strategy in pre-test and post-test.

Research Methodology

The method adopted was Experimental method. Pre-test post-test Non-equivalent Experimental group design was adopted for the study. Two intact groups of 1X Standard students having 30 students in Kollam district are taken as the sample for the study as control and Experimental group. The tools used are lesson templates based on 7e based learning strategy model, lesson templates based on activity based instruction,

achievement test in chemistry (pre-test& post-test) prepared by the investigator, science process skill test prepared and standardized by investigator. In the present study descriptive statistics used are Mean, Median, Mode, Standard deviation and inferential statistics used are,'t' test (test of significance), Skewness, Kurtosis.

Analysis and Interpretation of Data

In this section the performance of the students in two groups based on Science Process Skills is evaluated. During the Experimental study the investigator conducted a pre- test in the beginning and a post- test at the end of the treatment

Comparison of Science Process Skills of the Experimental and Control groups based on pre- test and post– test scores

To test the effectiveness of 7E based learning strategy model for enhancing science process skills, the pre- test and post- test scores of the Experimental and Control groups were compared using t- test.

a) Before the Experiment

The central tendencies of the pre- test scores are presented in table 1.

Table 1: Measures of central tendencies of pre-test Scores in Experimental and Control Group

Statistics Calculated	Value Obtained Experimental Group	Control Group
Mean	9.30	8.50
Median	9.00	9.00
Mode	9	9
Standard Deviation	1.573	1.889
Skewness	-.027	-.362
Kurtosis	-.124	-.054

The negatively skewed distribution shows that there are very few higher scores. The kurtosis value shows the distribution is platykurtic.

a) After the experiment

Descriptive statistics of post-test scores of the two groups are shown in table 2.

Table 2: measures of central tendencies of post-test Scores in Experimental and Control Group

Statistics Calculated	Value Obtained Experimental Group	Control Group
Mean	13.93	10.30
Median	14.00	10.50
Mode	14	12
Standard Deviation	1.258	1.896
Skewness	-2.207	-0.497
Kurtosis	7.263	-0.489

The values show that the two groups differ very much in their performance after the experiment. The negative distribution shows that there are very few higher scores. The kurtosis value concludes the distribution is leptokurtic.

Comparison of pre- test Scores in Science Achievement of Students in the Experimental and Control Groups

Before commencing the experiment, the performance of the Experimental group and Control group are compared by testing the significance of difference between means of pre-test scores and is presented in table 3.

Table 3: Data and Results of Test of Significance of pre- test Scores in Achievement in Chemistry among the Experimental and Control Groups

Groups	No. of	Mean Students	Standard Deviation	Critical Ratio	Level of Significance
Experimental group	30	10.53	2.161	1.21	P>0.05
Control group	30	11.27	2.504		

From the above table it is inferred that before the experiment the two groups were more or less the same ability.

Comparison of post- test Scores in Achievement in Chemistry of Students in the Experimental and Control Groups

The differences between the mean scores of the two groups were tested for significance by finding the critical ratio and presented in table 4 and figure 1.

Table 4: Data and Results of Test of Significance of post- test Scores in Achievement in Chemistry among the Experimental and Control Groups

Groups	No. of	Mean Students	Standard Deviation	Critical Ratio	Level of Significance
Experimental group	30	18.20	2.427	1.4.66	P<0.05
Control group	30	15.40	2.222		

Iit is inferred that Experimental group is better than the Control group.

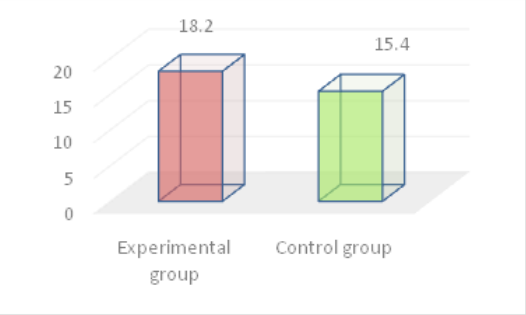

Figure 1:- Graphical Representation of post-test mean Scores of the Experimental and Control Groups

Comparison of post-test Science process skill of Students in the Experimental and Control Groups

Comparison of pre-test and post-test Scores of Achievement in Chemistry of Students among the Experimental and Control Groups

The performances of Students in both the groups were compared by testing the significance of the difference between the mean of the mean scores between pre-test and post-test in both group students in their Achievement in Chemistry.

Table 5: Data and Results of Test of Significance of the pre-test and post-test Scores in Achievement in Chemistry of Students' among the Experimental and Control Groups

Groups	Type of test	Mean	N	Std. Deviation	r	CR	P value
Experimental	Pretest	10.53	30	2.161	0.82	8.18	P<0.05
	Posttest	18.20	30	2.427			
Control	Pretest	11.27	30	2.504	0.72	4.72	P<0.05
	Post Test	15.40	30	2.222			

From the table it can be concluded even though both strategies are effective for enhancing achievement in Chemistry the 7E based learning strategy model is more effective compare to activity based learning strategy model.

The data and results of the test of significance are given in the following table 6 and figure 3.

Table 6: Data and Results of Test of Significance of the post-test Scores in Science process skill of Student's in the Experimental and Control Groups

Type of test	Groups	Mean	N	Sd	R	CR	P value
SPST	Experimental	13.93	30	1.258	.067	9.02	P<0.05
	Control	10.30	30	1.896			

From the table it is inferred that Science process skill of students in experimental group is high compare to the Control group.

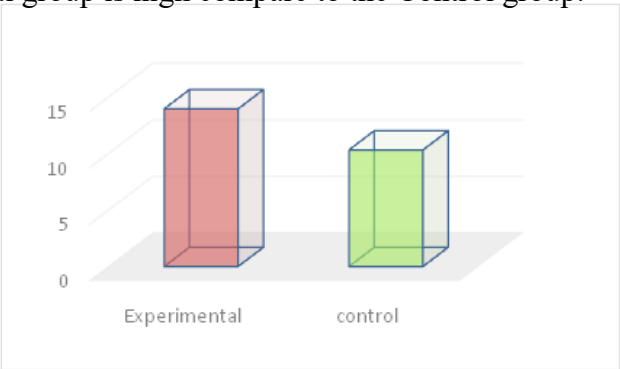

Figure 2
Graphical Representation of post-test mean Scores of the science process skills in Experimental and Control Groups.

Major Findings

1. Learning strategy based on 7E learning cycle model is found to be effective in enhancing achievement and science process skills among secondary school students.
2. Activity based learning strategy is found to be effective in enhancing achievement and science process skills among secondary school students.
3. Learning strategy based on 7E learning cycle model is found to be more effective as compared to activity based learning in enhancing achievement among secondary students.
4. Learning strategy based on 7E learning cycle model is found to be more effective as compared to activity based learning in enhancing science process skills among secondary school students.

Conclusion

The study revealed that the students taught through 7E learning CycleModel and Activity Oriented Method had gained significantly. But here the 7E learning cycle model is more effective than the Activity Oriented Method in enhancing students achievement in Chemistry and science process skills .7E learning cycle model is an effective strategy which can be used to enhance students'active participation in learning even if the topic is very difficult to understand.So 7E Learning Cycle Model serves an efficient tool to enhance students' learning capacity and teaching method.

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Research Article

IMPACT OF EDUCATIONAL BLOGSFOR ENHANCING REMEMBERING ABILITY OF SECONDARY STUDENTS

Shafi Thompson T.

Abstract : *In the light of need of engaging twenty first century learners in online learning environments (OLEs), Educational Blogs (EduBlog) was found to offer new avenues in development of social and cognitive aspects of learners. This study looked into depth of educational technology and considered the impact on students remembering ability. 70 students, 10 Biology Teachers and 20 parents were selected as sample. In this study, the tools used were Questionnaires and Opinionnaires. The study revealed that, Educational blog improves learning ability and academic performance, creates best learning environment and curiosity on Science topics, interesting and compatible with learning of Science, accelerate retaining and remembering ability of students and reduces teaching and learning deficiency.*

Keywords: EduBlogs, Online Learning Environments, Educational Blogs

Introduction

EduBlogs can be used to communicate efficiently or as digitized instructional resources, collaborative tools, and to present learner's educational activities like write up, assignment and projects. Moreover, EduBlogs can be used to post announcements notifications, suggested reading, classroom instructions or schedules, home assignment related hyperlinks or samples for scaffolding learners. Educators who blog are sometimes called edubloggers. Research suggests that people learn abstract, new and novel concepts more easily when they are presented in both verbal and visual form (Salomon, 1979). Other empirical research shows that visual media make concepts more accessible to a person than text media and help with later recall (Cowen, 1984). Educational technology is a systematic way of designing, carrying out and

ISSN 2319 -1709-35

evaluating the teaching learning process. Educational technology makes instruction more effective, understandable and meaningful. Traditional teacher-centered approach in the classroom has been shifted from teaching to learning. It is called student centered or resource-based approach, the student being the resource.

Need and Significance of the Study

Learning becomes effective when students are actively involved in teaching-learning process. The educational use of blogs has expanded to include diverse age groups and fields of study. The use of blogs has become popular in education institutions including public schools and colleges. Blogs can be useful tools for sharing information and tips among co-workers, providing information for students, or keeping in contact with parents. Educational blogs will serve as a means of launching effective teaching and learning on the part of the teacher and exposing the students fully to the scientific world.

Objectives

The objectives of the study are:

- To study the relevance and need of Educational Blogs
- To design an Educational Blog for the 9th standard students and to collect the feedback of students and teachers

Methodology

The researcher adopted Survey method for the investigation. The sample consists of 70 students from School X, 10 teachers from School X & Y and 20 online respondents including subject experts, academicians and website developers. The tools used were Questionnaire for students and teachers, Opinionnaire for online respondent about the educational blog. The statistical technique used for the analysis of data was simple percentage method.

Analysis and Interpretation

Data analysis is the process of uncovering patterns and trends in the data and interpretation is the process of assigning meaning to the data. The researcher analyzed the collected data using statistical tools and conclusions are drawn based on objectives.

Objective 1: To realize the relevance and need of educational blogs

The opinions of 70 students from 9th standard of School X,10 science teachers from School X & Yand 20 online respondents collected through the Questionnaire and Opinionnaire method, highlighted the need of an educational blog for enhancing the remembering ability of students on Biology topics.Eighty percent of the teachers support the implementation of blog in teaching because it enhances the learning ability of students. Most of the respondents (70 per cent) realized that use of educational blog helps teaching learning process effective. But 40 percent teachers revealed that most of the educational blogs not contain appropriate contents about the topic. All respondents believed that 3D images and relevant videos will create interest and curiosity on students which helps to deal with difficult topics. Eighty percent teachers claimed that educational blogs increase the academic performance of each student. But unfortunately, only 20 per cent respondents have their own blog to enhance teaching- learning process. The researcher designed an educational blog as per the respondent's suggestions and recommendations. The suggestions and recommendations are,

- Preparation of notes on difficult areas of Biology
- Addition of three dimensional imageson difficult areas of Biology supports the teacher and learner.
- Including video files on difficult topics in Biology will enhance the remembering ability of students

Objective 2: To design an Educational Blog for the 9th standard students and collecting the feedback of students and teachers

The Educational blog was designed by the researcher using the Word Press platform with the help of instructional videos and support provided

by the website designers. The researcher gave importance in designing the educational blog with maximum resources on Biology as per the suggestions of the 70 students from 9th standard of School X, 10 science teachers from School X & Yand 20 online respondents. The main contents included in the Educational Blog are,

- Text notes on difficult topics in Biology for 9th Standard students.
- Three dimensional images related to difficult areas of Biology that supports the teacher and learner.
- Video resources and YouTube links to enhance the remembering ability of students on Biology topics.

The designed Educational Blog is provided to students, teachers and online respondents to rate and collect the opinion of the quality of notes, images and videos based on Biology. From the Opinionnaire, 100 per cent of the respondents appreciated about the appropriate contents, videos, easy searching format and selection of topics for secondary students included in designed Educational Blog. Eighty per cent respondents liked the attractive design of the blog and 90 per cent claimed that presentation of topics and selection of contents improved their knowledge on the specific topics in biology. From the online rating, revealed that 100 per cent respondents liked the videos and images included with each topic and 90 per cent of the respondents like the look of blog and text content on each topic. Ninety five per cent rated it as great venture for secondary students

Implications of the Study

The educational system is constantly adapting and changing, looking for the latest trend or quickest solution to a problem. Educational technology is a systematic way of designing, carrying out and evaluating the teaching learning process. It makes instruction more effective, understandable and meaningful. Traditional teacher-centered approach in the classroom has been shifted from teaching to learning. Globalization and technological change processes that have accelerated in tandem over the past fifteen years have created a new global economy

powered by technology, fueled by information and driven by knowledge. Blogging is a worthwhile long-term investment laudable of implementing into our curriculum or teaching plan. Students who participate in educational blogging are undertaking a commitment to work on their studies on a more in-depth level than simple rote memorization cannot offer. Additionally, the skills students learn with blogging will benefit them in their future educational efforts as well as future careers.

Conclusion

The current study was conducted for the development of educational blog for enhancing the secondary school student's performance in Science.It has been revealed by the analysis and interpretation of data revealed that educational blog improves remembering ability and academic performance, creates best learning environment and curiosity on science topics.The research findings exposed that technology had a positive impact on the attitude of students towards learning. It also changed the teachers' teaching practices towards more cooperative group work and less lecturing load.It will also increase students' attendance and decrease dropout rates.

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Research Article

A STUDY ON AWARENESS OF SCHOOL TEACHERS ABOUT THE EDUCATIONAL PROVISIONS AND FEATURES OF RPWD ACT 2016

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Abstract: *The education of the persons with disability is a matter or prime concern for any developed society. In this study the investigatorsassess the level of awareness about the educational provisions and features of the Rights Persons with Disability Act (RPWD Act) 2016 among School teachers. Through a survey using a questionnaire regarding several dominant areas of and about the act mentioned above. The level of awareness is found low among school teachers. It was found that most of the school teachers not aware of the availability of identity card for disabled, educational and employment reservations, scholarship facilities and allowances for children with disabled. The study showed that a good way to enlighten our teacher population about the rights, needs and its educational provisions of RPWD Act 2016 is to include it in the curriculum for the perspective teacher educators.*

Keywords: RPWD Act, Children with Disability, Educational Rights.

Introduction

Education is the right of all children. The special children require greater care and specialized education. Teachers and other care takers should be aware of the provisions of RPWD Act 2016 to ensure meaningful intervention. In this context the investigator tries to ascertain the awareness of the teachers handling the initiative. Each and every person included the initial committees selected by each school should be aware of the educational provisions and features of RPWD Act 2016.In this study the investigators undertake a survey on the awareness of school teachers about the educational provisions and features of RPWD Act 2016.

ISSN 2319 -1709-35

RPWD Act 2016 - Salient Features

The protection and uplifting of the children with disabilities and their educational balance and acceptance among normal children in our community is a necessary factor which can pave the way for effective involvement, inclusion and non-discrimination of disabled children in our society. Indian Lok Sabha passed "The Rights of Persons with Disabilities Bill – 2016" on 16.12.2016. This Act has replaced the existing PWD Act, 1995, which was enacted 21 years back and it was not a rights-based piece of legislation.The RPWD Act will bring our law in line with the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD 2006), the new Act will fulfil the obligations on the part of India in terms of UNCRPD. The new act came in to force on 01.01.2017. It will not only enhance the Rights and Entitlements of 'Divyang Jan' but also provide effective mechanism for ensuring their empowerment and true inclusion into the Society in a satisfactory manner. 'Divyang Jan' is the new term for Persons with Disabilities.

Free and Inclusive Education

- Every child with benchmark (40%) disability between the ages of six and 18 years will have the right to free education.
- Government funded educational institutions, as well as government recognized institutions, will have to provide inclusive education to children with disabilities.
- Increasing accessibility by building ramps and lifts in all buildings.
- The Act specially mentions women and children with disabilities as both these groups have very specific needs requiring separate recognition that had not been included in the previous PWD Act.

Duty of Educational Institutions

The appropriate Government and the local authorities shall endeavour that all educational institutions funded or recognized by them provide inclusive education to the children with disabilities and towards that end shall -

- admit them without discrimination and provide education and opportunities for sports and recreation activities equally with others;

- make building, campus and various facilities accessible;
- provide reasonable accommodation according to the individual's requirements;
- provide necessary support individualized or otherwise in environments that maximize academic and social development consistent with the goal of full inclusion;
- ensure that the education to persons who are blind or deaf or both is imparted in the most appropriate languages and modes and means of communication;
- detect specific learning disabilities in children at the earliest and take suitable pedagogical and other measures to overcome them;
- monitor participation, progress in terms of attainment levels and completion of education in respect of every student with disability;
- provide transportation facilities to the children with disabilities and also the attendant of the children with disabilities having high support needs.

Specific Measures to Promote and Facilitate Inclusive Education.

The appropriate Government and the local authorities shall take the following measures for the purpose of section 16, namely:-

- to conduct survey of school going children in every five years for identifying children with disabilities, ascertaining their special needs and the extent to which these are being met: Provided that the first survey shall be conducted within a period of two years from the date of commencement of this Act;
- to establish adequate number of teacher training institutions;
- to train and employ teachers, including teachers with disability who are qualified in sign language and Braille and also teachers who are trained in teaching children with intellectual disability;
- to train professionals and staff to support inclusive education at all levels of school education;
- to establish adequate number of resource centres to support educational institutions at all levels of school education;
- to promote the use of appropriate augmentative and alternative modes including means and formats of communication, Braille and sign language to supplement the use of one's own speech to

12 fulfil the daily communication needs of persons with speech, communication or language disabilities and enables them to participate and contribute to their community and society;

- to provide books, other learning materials and appropriate assistive devices to students with benchmark disabilities free of cost up to the age of eighteen years;
- to provide scholarships in appropriate cases to students with benchmark disability;
- to make suitable modifications in the curriculum and examination system to meet the needs of students with disabilities such as extra time for completion of examination paper, facility of scribe or amanuensis, exemption from second and third language courses;

Need And Significance

Protection and uplifting of the children with disabilities is a social responsibility and the most important challenge of an educational society. In the era of globalization society is changing rapidly but in the mist of material prosperity a large section of people suppresses under the grip of discrimination, harassment and uncertainty because they are disabled. The students who are the future citizen have to be trained to respond and adjust with social changes satisfactorily. These goals are envisaged to achieve through the effective implementation of Rights of Persons with disabilities Act. The study aims the awareness of teachers in regard with the educational provisions and features of Rights of persons with disabilities act 2016.

As per the Rights of persons with disabilities act 2016 so many provisions and responsibilities of government and other authorities are mentioned. We are a little late to implement this act in full swing. Now the state government along with the aid of central government undertake an initiative to identify the children with disabilities and to give aid to uplift the children to cope with the necessary educational and social conditions.To achieve these goals the teachers must aware of how the children with disabilities should be identified? How they can help these children? What are the provisions and aids they can avail by the government or other agencies?

Objective

To find out the awareness level of school teachers about the educational provisions and features of RPWD Act 2016.

Methodology

Document analysis and survey are used in the present study. Here the investigator comparing and analyzing the documents related to the selected topic given from different sources and a self-constructed questionnaire is used in the survey purpose. The document analysis and the descriptive survey methods are considered most appropriate for the present study. The present study was conducted on a representative sample of 65 school teachers from various schools of Kerala. The data collected through online google forms method. After collecting the data, the results are analysed statically.

Analysis and Interpretation of the Study

Analysis and interpretation of the data involve the objective material in the possession of the researcher and her subjective reaction and desires to drive from the data the inherent meaning in their relation to the problem. To avoid making conclusions and interpretations from insufficient or invalid data, the final analysis must be anticipated in details when plans are being made for collecting information. The problem should be analysed in detail to see what data are necessary in its solution and to be assured that the methods used will provide the definite answers. The researcher must determine whether or not the factors chosen for the study will satisfy all the conditions of the problem and if the requisite data. Analysis and interpretation of the data is the most important part of research. The envisaged analysis of data varies depending on the type of study part of analysis was a matter of worked out statistical distribution, constructing diagrams and calculating simple.

The table 1 analyze the percentage of awareness level of teachers regarding inclusive Education, Free Education, Identify Card for disabled, Scholarship facilities, Educational and Employment reservation, Law, availability of institution and employment awareness.

Table1:The Table Showing the Percentage of Awareness Level of Teachers Regarding the Educational Provisions and Features of RPWD Act 2016

Areas Selected	Percentage of Right Respondents	Percentage of Wrong Respondents
Inclusive Education	40.2	59.8
Free Education	39.7	60.3
Identify Card for disabled	22	88
Scholarship facilities for the disabled	27	73
Educational Reservation	25.5	74.5
Employment Reservation	26.3	73.7
Law against discrimination of the disable	21.7	78.7
Availability of institutions for the severely disabled	57.5	42.5
Unemployment Allowance	33.7	66.3
Disabilities included	17.5	82.5

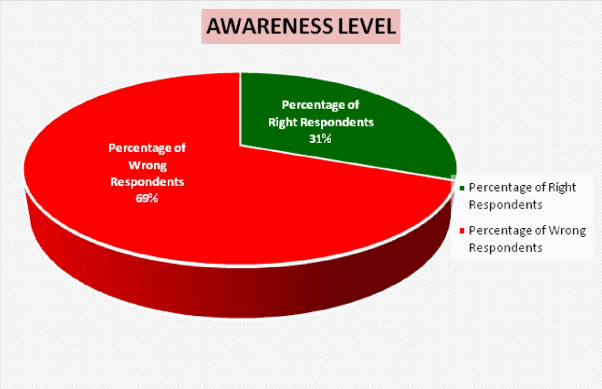

Figure 2
Graphical Representation of Awareness Level of Teachers Regarding the Educational Provisions and Features of RPWD Act 2016

From the Table 1 the it is identified that only 40.2per cent of the teachers are aware of about inclusive education and below 39.7per cent of teachers know the free educational provisions. It is also revealed that22per cent of teachers are aware about Identify Card and 27per cent of the teachers are aware Scholarship facilities. It is also revealed that 25.5per cent of teachers are aware about Educational

Reservationand26.3per cent teachers knows Employment Reservation for the disabled, 21.7per cent of the teachers are aware about Law against discrimination of the disabled, 57.5per cent teachers are aware about Availability of institutions for the severely disabled, 33.7 per cent teachers are aware about Unemployment Allowance and only17.5 per cent teachers are aware about Disabilities included in RPWD Act 2016.

Implications of the Study

The teachers who took part in the survey do not have a clear picture of about RPWD Act 2016 and its educational provisions and features. Particular knowledge about the act was limited. Most of the teachers know that disabled children have their own rights, educational provisions, reservations, grants etc. but they have no idea about when and where the provisions are applicable and how they can help the children with disability.

Conclusion

The research gives light to the actual phenomenon that existed in our teacher population in correspondence with RPWD Act 2016. Only by deep and clear awareness of teachers about rights, educational provisions and aids facilitated by the Government and the society will only contribute to the children with disability. In this study the investigator sincerely taken an effort to ascertain the awareness of school teachers about RPWD Act 2016, which is the last resort of the children with disability in Indian context. The teachers relatively are not interested to update their knowledge about the educational provisions of RPWD Act in a vision to help the children with disabilities.The authorities must conduct training programmes to all teachers in correspondence with the educational provisions and features of RPWD Act 2016. Mere awareness will not help the actual situations faced by the children with disability and their parents. To develop obligation and timely interference to deal with the children with disabilities, the Government and the educational authorities should take adequate measures to educate and familiarize the aspects of Rights of children with disabilities and their educational

provisions. The better way to enlighten our teacher population about RPWD Act 2016 and its educational provisions is to include it in the curriculum for the perspective teacher educators in both T.T.C., B.Ed. and M.Ed. levels.

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Research Article

DEVELOPMENT OF AN INSTRUCTIONAL STRATEGY BASED ON SOCIAL CONSTRUCTIVISM FOR THE BETTER ACQUISITION OF LANGUAGE SKILLS IN HINDI AMONG HIGHER SECONDARY SCHOOL STUDENTS

Jayakrishna K.

Abstract : *Improvised and innovative learning strategies lead to effective learning. Learning strategy based on Social Constructivism is a great way to learn Hindi. Even though most of the students at higher secondary school level have mastered basic language skills in Hindi, but some students are much more effective in the acquisition of these skills than others. The present study was intended to develop an instructional strategy based on social constructivism for the better acquisition of four language skills in Hindi among higher secondary school students.The study revealed that the experimental group shows better performance than that of the control group.This shows that the effectiveness of the instructional strategy based on Social Constructivism is more effectivefor the better acquisition of language skills in Hindi than activity method*

Keywords: Instructional Strategy, Social Constructivism, Acquisition of Language Skills.

Introduction

Education should focus to bring out the capabilities of a child to act progressively. Language develops the process of thinking and expressions. Language is a complex system for creating meaning through socially shared conventions (Halliday,1978). Krashen (1987) distinguishes learning and acquisition. Acquisition refers to the natural assimilation of language rules and is a conscious process. Language teachers should have a sound basis for evaluating and revising current assessment practice for making the purposeful selection of appropriate language testing tools for designating how those tools will be used and for deciding to what extent language assessment is accomplishing the

ISSN 2319 -1709-35

jobs it was intended to accomplish. Teaching-learning is an area which require attention from all sections and need a lot of renovation and re-thinking. Improvised and innovative learning strategies lead to effective learning.

Need and Significance

Group work, sharing and discussion, conducive classroom environment. can help children to maintain social relationships. Students experience difficulty in some major areas while learning Hindi. Mostly students of non-Hindi speaking areas find it difficult to communicate in Hindi language. Interference of mother tongue is a major problem faced by the students while learning Hindi. Therefore, a suitable environment is essential for the nourishment of Hindi language in non-Hindi speaking areas. The Government of Kerala has introduced Social Constructivist Approach as the basis of curriculum construction and transaction at all levels of schooling. Learning strategy based on Social Constructivism is a great way to learn Hindi. Even though most of the students at higher secondary school level have mastered basic language skills in Hindi viz.,listening,speaking,reading and writing, some students are much more effective in the acquisition of these skills than others. Social Constructivism was developed by the post-revolutionary Soviet psychologist Lev Semnovich Vygotsky. Social Constructivism is a sociological theory of knowledge according to which human development is socially situated and knowledge is constructed through interaction with others (Berger & Luckmann,1996). Acquisition is a skill or habit and is the process of learning it or developing it (Collins Cobuild Dictionary,1988;7).In the present study Acquisition is defined as the act of attaining or gaining. Listening, Speaking, Reading and Writing constitute the modes of language use and make up the language arts or Language Skills. One must be able to listen carefully, speak fluently, read with comprehension and write correctly (Rubin,1994). Emmert (1994) define listening as an active process by which students receive, construct meaning from, and respond to spoken and non-verbal messages. Speaking skill requires correct pronunciation and spontaneous use of words and sentence to form in meaningful utterances. Fluency and accuracy are the watch words in speech. Speaking is making use of

words in an ordinary voice, offering words, knowing and being able to use a language expressing one-self in words, and making speech (Homby,1995). Reading can be defined as the ability to interpret linguistic sounds in their graphic and symbolic representation. Reading behaviour is receiving communication, making discriminative responses to graphic symbols and decoding graphic symbols to speech (Gibson,1989).

Objectives

- To develop an instructional strategy based on Social Constructivism for the better acquisition of language skills in Hindi viz.,(i). Listening (ii). Speaking (iii). Reading and (iv). Writing among Higher Secondary School Students
- To compare the mean scores of pre-test and post-test of experimental group
- To compare the mean scores of pre-test and post-test of control group (Activity oriented method group)
- To compare the mean scores of post-test of experimentalgroup and control group
- To find out the effectiveness of instructional strategy based on Social Constructivism for the better acquisition of language skills in Hindi viz.,(i). Listening (ii). Speaking (iii). Reading and (iv).Writing among Higher Secondary School Students.

Hypotheses

H1 There exists significant difference between mean scores of pre-test and post-test of experimental group

H2 There exists significant difference between mean scores of pre-test and post-test of control group

H3 There exists significant difference between mean scores of post-tests of experimental group and control group

H4 Instructional strategy based on Social Constructivism will be more effective for the better acquisition of language skills in Hindi viz.,(i). Listening (ii). Speaking (iii). Reading and (iv). Writing among Higher Secondary School Students when compared to activity-oriented method

Methodology

The present study is conducted by experimental method. Language skills test battery in Hindi comprising of four language skills namely listening, speaking reading and writing was administered as pre-test and post-test.The control group was taught by the activity-oriented method. Developed instructional strategy based on Social Constructivism was transacted to the experimental group.

Variables

In the present study,instructional strategy based on social constructivism was transacted to the experimental group andthe acquisition of language skills in Hindi was considered as the dependent variable.

Sample

132 students studying Hindi as second language for plus one classes at Thiruvananthapuram district was selected as sample for the present study.

Tools and Materials

- Language skills test battery in Hindi comprising of four language skills namely listening, speaking reading and writing
- Evaluation schedule for experts to validate the instructional material deals with the instructional strategy based on Social Constructivism. (Both the tools were prepared and standardized by the investigator). Instructional material
- An instructional material deals with an instructional strategy based on socialconstructivism was developed and validated for the better acquisition of language skills in Hindi viz.,(i). Listening (ii). Speaking (iii). Reading and (iv).Writing for Higher Secondary School Students.
- Lesson transcripts based on activity method

Statistical Techniques Employed

- Preliminary statistical techniques
- Test of Significance of difference between means : Paired t test, Independent t test
- Cohen's d test

Analysis and Interpretation of the Study

Table 1 : Data and Result of Pre-test and Post test scores of Experimental Group

Group Experimental	N	Mean	SD	t	Level of Significance	Effect Size	Cohen's Category
Group Pre test	64	18.3334	4.73254	23.736	0.01	3.964	High
Experimental Group Post test	68	40.6757	8.12823				

The obtained t value is greater than the table value at 0.01 level of significance. Hence it can be interpreted that there exists significant difference between the means of pre-test and post test scores of experimental group.

Table 2 : Data and Result of Pre-test and post-test of control group (activity-oriented method group)

Group Experimental	N	Mean	SD	t	Level of Significance	Effect Size	Cohen's Category
Control group Pre test	64	18.8770	5.5973	9.053	0.01	0.97	High
Control group Post test	68	27.4331	7.4636				

The obtained t value is greater than the table value at 0.01 level of significance. Hence there exists significant difference between the means of pre-test and post test scores of control group.

Table 3 : Data and Result of test of significance of the difference the mean scores of Post-test of Experimental and Control Groups

Group Experimental	N	Mean	SD	t	Level of Significance	Effect Size	Cohen's Category
Experimental Group	64	21.1531	7.55986	9.9924	0.01	1.69	High
Control Group	68	8.3447	5.44187				

The obtained t value is greater than the table value at 0.01 level of significance.This shows that there exists significant difference in the mean scores of experimental group and control group.The study revealed that the instructional strategy is highly effective for the better acquisition of language skills in Hindi.

Evaluation Schedule for Experts

An evaluation schedule was prepared by the investigator and was given to 6 experts for validating the instructional material. An evaluation schedule with 30 statements was prepared as draft form. By consulting with two experts final form of evaluation schedule was prepared with 20 statements. For each item three-point scale viz., 'To A Great Extent, To Some Extent, Not At All' were provided. All the six experts responded that the instructional strategy is very effective To A Great Extentfor the better acquisition of language skills in Hindi viz.,(i) Listening (ii) Speaking (iii) Reading and (iv)Writing

Tenability of Hypotheses

H1 There exists significant difference between mean scores of pre-test and post-test of experimental group.

The obtained t value 23.736 is greater than the table value at 0.01 level of significance and this shows that there exists significant difference between the means of pre test and post test scores of experimental group. Hence hypothesis 1 is accepted.

H2 There exists significant difference between mean scores of pre-test and post-test of control group

The obtained t value 9.05 is greater than the table value at 0.01 level of significance. This shows that there exists significant difference between the means of pre test and post test scores of experimental group. Hence hypothesis 2 is accepted.

H3 There exists significant difference between mean scores of post-tests of experimental group and control group

The obtained t value 9.99 is greater than the table value at 0.01 level of significance. This shows that there exists significant difference in the mean scores ofexperimental group and control group.Hence hypothesis 3 is accepted.

H4 instructional strategy based on Social Constructivism will be more effective for the better acquisition of language skills in Hindi viz.,(i) Listening (ii) Speaking (iii) Reading and (iv)Writing among Higher Secondary School Students when compared to activity oriented method

Effect size shows that the instructional strategy is highly effective for the better acquisition of four basic language skills in Hindi when compared to activity-oriented method.Therefore, hypothesis 4 is accepted.

Major Findings

The mean value ofexperimental group is greater than that of the control group. The experimental group shows better performance than the control group. This can be interpreted that the effectiveness of the instructional strategy based on Social Constructivism ismore effectivefor the better acquisition of language skills in Hindi viz.,(i) Listening (ii) Speaking (iii) Reading and (iv) Writing among Higher Secondary School Students when compared to activity-oriented method.

Educational Implications

Findings emerged from the study will help the teacher community and policy makers to re-design the curricula particularly at higher secondary school level to provide individualized attention to enhance language skills in Hindi among students. By practicing the developed strategy, students can develop social relationships and can enhance language skill acquisition. Principles of Social Constructivism is suitable for language instruction. Prevailing approaches and strategies can be practiced in a better way. Language Skill Test Battery in Hindi can also be used as an instructional material to acquire language skills in Hindi.

Conclusion

Today's educational system confront challenges in raising the standards, strengthening teacher professional development, re focusing schools around the primary goal of student achievement and holding schools accountable for results. In addition, schools continue to experience increased diversity in the classroom than ever before, owing to the growth in the number of students who are challenged and different needs (Jehlen ,2006). A language teacher can facilitate the communication process between the learners in the classroom by guiding the activities and by motivating learners to discover their own ways of learning and thus the teacher can be a facilitator.

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Research Article

IDENTIFICATION OF SELECT LIFE SKILLS AMONG HIGHER SECONDARY SCHOOL STUDENTS

Priya U.V and Maya S.

Abstract: *Life skills are skills that empower people to deal with everyday life, and to evolve and succeed in educational, vocational and social life. In thepresent study the investigator aims to find out the identification of select life skills among higher secondary school students. The sample consisted of 50 students from Government School, Thiruvananthapuram district, Kerala state. Life skills are essentially those abilities that help to promote mental well-being and competence in young people as they face realities of life which in turn empowers young minds to take action and to maintain positive social relationships. The main objective of the Life Skills is to improve the youth's capacity to be responsible for making choices, resisting negative pressure and eschewing dangerous behavior.The studyrevealed that most of the higher secondary school students need to be more aware about life skills and it should be integrated as part of their curriculum.*

Keywords : Lifeskills education, Lifeskills

Introduction

The term education has its own different dimensions according to its application in day-to-day life. Education means the act of teaching or training. Education imparts the acquisition of knowledge and experience as well as the development of skills. Success In work and life in the twenty first century is associated with three domains of competence: cognitive, intrapersonal and interpersonal that allows individuals to adapt effectively to changing situations rather than to rely completely on established procedures .These three domains represent distinct facets of human thinking and build on previous efforts to identify and organize dimensions of human behavior. Generating these competencies is a challenge which could be done

ISSN 2319 -1709-35

only through innovative learning skills and practices. A disciplined vital force is needed for the children for their social and economic development of the nation as a whole. Education is the door way to the outer world where the child can widen their horizon of knowledge and skill formation. It, therefore enhances the efficiency and productivity which in turn paving the way for desired development of educational progress removing the disparities and equalization of educational opportunities.

Need and Significance

Adolescence is a transition period that bridges childhood and adulthood during which major physical cognitive and psychological changes occur which needs to be addressed. According to Gandhian ideology "it is not education the art of drawing out full manhood of the child under training' by education I mean all- round development, drawing out of the best, in the child and man-body, mind and spirit". A constant and continuous learning process including experimentation keeping the ideal as the goal but also knowing that human beings must always keep improving and rising in their skill but can never attain absolute perfection. Present generation is facing many emerging issues such as global warming, natural and man-made calamities, poverty, suicide, population explosion as well as social, emotional, physical and psychological issues. Children are living in a society having social evils like alcoholism, drug abuse, sexual abuse anti-social activities, violence against women etc. In order to mold the best in child, they should be allowed and provided with opportunities to grow up in a healthy socio-cultural environment so that they could become responsible citizens.

The present system emphasizes the importance of subject competency while avoiding skills to handle and stress in their life and work toward better life. Awareness of what one is capable of doing and one's own beliefs, values, aspirations, desires, emotions etc. ignites the way for clarifying objectives and making appropriate decisions. Prospective citizens have to make many decisions in their lives and it appears to be a never ending process. Decision making is a critical

component of not only personal life but also in professional space. In order to stabilize each individual's thoughts on focused goals they need to take appropriate decisions by their own. In pursuance of wide spread psychological misery that stems from inadequate leadership qualities, the failures should be understood and prevented successfully with appropriate learning experiences and perceptions. According to Weber (1978), charismatic leaders are more likely to emerge in crisis situations. Gandhiji's the vision of "Independent India", is likely to have emergence from his leadership quality and non-violence.

Objectives

- To identify Decision making skills among Higher Secondary School students
- To identify leadership skills among Higher Secondary School students.
- To identify the skill of empathy among Higher Secondary School Students.
- To identify emotional stability among Higher Secondary School students.

Methodology

The investigator adopted survey method for conducting the study Tools used for the study: "Questionnaire" prepared by the investigator to find out life skills such as leadership, decision making, empathy and Emotional stability was used to identify life skills among higher secondary school students. Each skill carries 5 items each.

Sample used for the study: Sample consisted of 50 Higher Secondary School students from Thiruvananthapuram district.

Statistical and techniques used in the study: Simple percentage analysis was used to analyze the data.

Analysis and Findings of the Study

Analysis of the data is the heart of research. After the data collection, it was analyzed keeping in view the objectives and

hypothesis of the study and conclusions were drawn out from the raw materials collected. The present study included four major aspects of life skills namely decision-making skill, leadership skill, skill of empathy and emotional stability skill among higher secondary school students.Analysis of Decision Making Skills of Higher Secondary School Students In the first part of the analysis the investigator identified the decision making skills of the higher secondary school students and the details are provided in the table 1

Table 1: Analysis of data with regard to identification of Decision making skills

No	Items	Always	Sometimes	Never
1	I do not believe in facts without solid evidences	82.7	12.3	5
2	I take decisions without any personal bias	59.3	32.1	8.6
3	I jump into conclusions without proper thinking of the situation	76.5	9.9	13.6
4	I am patient enough to take advices from friends before taking decisions	80.2	16.0	3.7
5	I am judgmental while taking decisions	56.8	22.2	21.0

The percentage analysis of the life skill with the component decision making skill of higher secondary school students based on the responses out of 50 students with the statement. “I do not believe in facts without solid evidences” 82.7 percent of the students showed their responses as ‘Always’, 12.3 percent of the students responded as ‘Sometimes’ and 5 percent of the students showed their response as ‘Never’ which indicates that most of the students do not believe in facts without solid evidences. For the statement “I take decision without any personal bias” 59.3 percent of the students responded as ‘Always’, 32.1 percent of the students responded as ‘Sometimes’ and 8.6 percent of the students responded as ‘Never’ which can be assessed that majority of the students will take decisions without any personal bias. To the statement showing “I jump

into conclusions without proper thinking of the situation" 76.5 percent of students gave 'Always' as their responses, 9.9 percent of students gave 'Sometimes' as their responses and 13.6percent of students responded as 'Never', which clearly shows that most of the students jump into conclusions without proper thinking of the situation. Majority of the students are flexible and patient enough to take advices from friends before taking decisions."I am judgmental while taking decisions" 56.8percent of students responded as 'Always' , 22.2 percent of students gave their responses as 'Sometimes' and 56.8 percent of the students showed their responses as 'Never', which indicates that majority of students lacked the ability for decision making

Analysis of Leadership Skills of Higher Secondary School Students

The investigator identified leadership skill of higher secondary school students and the details are provided in the table 2

Table 2: Analysis of data with regard to identification of Leadership skills

No	Items	% of Responses of students		
		Always	Sometimes	Never
1	I usually take action against people who do not obey my orders	7.4	91.4	1.2
2	I take initiatives for conducting programmes in my school	8.6	40.7	50.6
3	I hesitate to participate in activities where my opinions are neglected	56.8	32.1	8.6
4	I don't agree with other's perceptions	35.8	51.9	12.2
5	I exhibit behavior that is trusted and respected by other	60.5	24.7	14.8

The percentage analysis of the life skills with the component leadership quality of higher secondary school students shows that out of 50 higher secondary school students with the statement "I usually

take actions against people who do not obeymy orders" 7.4 percent of the students showed their responses as 'Always' , 91.4 percent of the students gave their responses as 'Sometimes' and 1.2 per cent of the students gave their responses as' Never' which shows that majority of the students take actions who do not obey their orders. In the statement" I take initiatives for conducting programmes in school" 8.6 percent of the students showed their response as 'Always' , 40.7 percent of the students gave their responses as' Sometimes' and 50.6 percent of the students responded as 'Never' which indicates majority of the students hesitate to take initiatives for conducting school programmes. To the statement showing "I hesitate to participate in activities where my opinions are neglected" 56.8 percent of the students responded as 'Always', 32.1 percent of the students gave their responses as 'Sometimes' and 11.1percent of the students responded as 'Never' which indicates the result that majority of the students withdrew themselves from the activities where their opinions are neglected. For the statement "I don't agree with other's perceptions" 35.8percent of the students gave their responses as 'Always', 51.9 percent of the students responded as 'Sometimes' and 12.3percent of the students gave their responses as 'Never' which indicates that majority of students agree with the perception of others. To the statement "I exhibit behavior that is trusted and respected by others" 60.5percent of the students responded as 'Always'percent of the students gave their responses as 'Sometimes' and 14.8percent of the students gave their responses as 'Never' which shows that majority of students are reluctant to exhibit their behavior that is trusted and respected by others.

Analysis of Skill of Empathy of Higher Secondary School Students

In the third part of the analysis the investigator identified skill of empathy of higher secondary school students and the details are provided in the table 3

Table 3: Analysis of data with regard to identification of Empathy

No	Items	% of Responses of students		
		Always	Sometimes	Never
1	I neglect feelings of others without understanding their emotions	6.2	74.1	90.8
2	I respect other's principles and values	4.9	25.9	69.1
3	I forgive others and I help others to forgive	17.3	33.3	49.4
4	I strive to view things through the eyes of other people	23.5	46.9	29.6
5	I rectify other's viewpoints without hurting their beliefs	17.3	8.6	74.1

For the statement "I neglect feeling of others without understanding their emotions" 6.2 percent of the students showed 'Always', 74.1 percent of the students responded as 'Sometimes' and 90.8 percent of the students showed their responses as 'Never' which indicates most of the students accept the feelings of others and their emotions. To the statement "I respect other's principles and values" 4.9 percent of the students gave their response as 'Always', 25.9 percent of the students responded as 'Sometimes' and 69.1 percent of the students showed their responses as 'Never' which indicates that most of the students hesitate to respect other's principles and values. For the statement" I forgive others and I help others to forgive" have the highest percentage of 17.3 percent in which most of the students gave their responses as 'Always', 33.3 percent of the students responded as 'Sometimes' and 49.4 percent of the students responded as 'Never' respectively which indicates that most of the students won't forgive others and help others to forgive. To the statement" I strive to view things through the eyes of other people" 23.5 percent of the students showed their responses as 'Always', 46.9 percent of students responded as, 'Sometimes' and 29.6 percent of the students showed their responses as 'Never' which indicates that very few students try to view things on other's perception. For the item "I evaluate and rectify other's viewpoints without hurting their believes" among which 17.3 percent of the students

responded as 'Always', 8.6 percent of the students gave their responses as 'Sometimes' and 74.1 percent of the students showed their responses as 'Never' which indicates that most of the students hesitate to evaluate and rectify other's viewpoints without hurting them.

Analysis of Emotional Stability Skill

In the fourth part of the analysis the investigator identified skill of emotional stability of higher secondary school students and the details are provided in the table 4

Table 4: Analysis of data with regard to identification of Emotional Stability

No	Items	% of Responses of students		
		Always	Sometimes	Never
1	I lose temper whenever I get agitated	12.3	76.5	11.1
2	I believe I possess quite strong will power	16	34.06	49.4
3	I have the courage to face any worse situations in life	38.3	34.6	27.2
4	I feel upset when I am in stressful situations	76.5	9.9	13.6
5	I will not get perturbed thinking about my misfortunes	17.3.	70.4	12.3

The percentage analysis of emotional stability of higher secondary school students having the statement "I lose temper whenever I get agitated" 12.3 percent of the students showed their responses as 'Always', 76.5 percent of the students responded as 'Sometimes' and 11.1 percent of the students gave 'Never' as their response, which indicates that most of the students lose their temper whenever they get agitated. For the statement" I believe I possess quite strong will power", 16 percent of the student gave their response as 'Always' 34.06 percent of the students responded as 'Sometimes; and 49.4 percent of the students gave their response as 'Never' which shows that most of the students lack strong will power. Most of the students fail to possess courage to face worse situations in life. Most of the students get upset in stressful

situations. Most of the students get perturbed with fear for their up-coming mis fortunes

Implications

The findings from my study indicate that the students especially the higher secondary school students need to be more aware about life skills and it should be given due importance in their curriculum. In order to preserve our culture and tradition young minds should be instilled with skill education and make them well equipped with positive and adaptive behaviors. In the light of the results from the present study the investigator ensures that in an ever growing technology and data driven world life skills should become an integral part of our educational system. The youth should be molded to become responsible for making choices, resisting negative pressure and eschewing dangerous behavior.

Conclusion

Adolescence is a period of creativity, imagination, ideal thoughts and spirit of adventure. Children of today are the citizens of tomorrow. They should be responsible enough to pay back the society of what they have gained through education. Yoga, sports and meditation can be included within the curriculum to make life easier and stress free. It can also aid students in uplifting concentration,learning critical thinking, self-awareness and effective communication.Creative minds should be fostered instead of muddling heads leading them seek opportunities to find effective solutions. Therefore, the adolescent should know about Life Skills" in order to empower them and to take positive and adaptive behaviors. Life Skill Education makes a person "a balanced adult" who contributes meaningfully to the society.

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Research Article

A COMPARATIVE STUDY ON ACADEMIC STRESS OF SECONDARY SCHOOLSTUDENTS OF WORKING AND NON -WORKING MOTHERS

Shiney Jacob

Abstract *In academies life stress may act a negative predictor of academic performance. One of the important sources of academic stress in school children is great expectation of parents for achieving good marks in their examination. In the present study the investigator aimed to explore the relationship between academic stress and parental influence on it. For that investigator tried to find out the reasons of academic stress of the students based on the working status of the mother and the result depicts that academic stress of secondary school students of working mothers is higher than academic stress secondary school students of non-working mothers*

Keywords: Academic Stress, Working and Non-working Mothers

Introduction

The word 'stress' is used in psychology in at least two different ways. First it is defined as the state of psychological upset or disequilibrium in the human beings caused by frustration, conflicts and other internal as well as external strains and pressures. Secondly stress is regarded as a class of stimuli which threaten an individual in some way and thus cause disturbances in his behaviour. Thinking in this way, stresses are the factors or causes that lead to mal -adaptation and disorganization of the behaviour. Etymologically the word stress is derived from the Latin word ‘stringers’ meaning to draw tight. Stress is yet another word for ‘anxiety’. It includes a sense of urgency and a feeling of conflict underlying stress. Being forced to choose between options can cause stress, a fear of possibilities of being hurt or rejected. Adolescents with stress can’t able to deal or adjust with the environment. The effect of stress varies widely from one person to another. Stress lies in the eyes of the beholder, much like the redness of the apple, the blueness of the sky or the greenness of grass. Managed effectively stress can enhance motivation and effort, thus contributing to professional growth and

ISSN 2319 -1709-35

development. Stress is a personal feeling involving a sense of urgency to make a decision from optional courses of action. Ulcers, backache, headache, hypersensitivity to criticism, feelings of paranoia, loss of sleep, loss of appetite etc. are some symptoms of stress. There are various sources of stress. The most important ones are psychological and physiological elements.

Need and Significace

Stress is the leading cause of suicide death among adolescents, and unrevealed depression is a major cause. Academic stress may be contributing factor in depression. This study aimed to explore the relationship between academic stress andparental influence. In the present study the investigator makes an attempt to find out the reasons of academic stress of the students based on the working status of the mother. The investigator tries to find out the differences in the academic stress of higher secondary students on the basis of their age, type of school, their syllabi etc. The findings of the study can be an eye – opener to the mothers and teachers regarding various factors which are responsible for the academic stress of higher secondary school students. So that they can take necessary steps to improve various steps to reduce the academic stress of higher secondary school students.

Definition of Key Terms

The important key terms are defined below Academic stress: Stress is a condition or feeling experienced when a person perceives that demands exceed the personal and social resources that individual is able to mobilize. Working mother: Any mother who is working outside the home. Non-working Mother: Any mother who not employed fora salary, fees, wages, not producing or generatingincome. Secondary school students, Students belongs to classes eighth to tenth.

Objective

- To find out the level of Academic stress of Secondary school students of Working and Non-workingmothers.

Hypothesis

- There is no significant difference in the Academic stress of the secondary school students of working mothers and non -working mothers

Methodology

Normative survey method is used to collect information. In the present study,dependent variable is academic stress and independent variable is the status of mothers as working or non-working. The sample of the present study consists of a representative sample of 200 secondary pupils from Thiruvananthapuram district. In the study the Academic Stress of students is measured with the help of Academic StressScale.In the preliminary analysis arithmetic mean, median, mode, standard deviation, Skewness and kurtosis were calculated of the pretest and post test data. From the mean and standard deviation paired t value was calculated in order to test thehypothesis.

Analysis

This study intended to find the academic stress of secondary school students of working and non-working mothers. The scale was prepared on the based on academic stress elements. The investigator divided the analysis into mainly two session 1 and session 2.

Analysis session 1

Descriptive statistics including arithmetic mean, median, mode, standard deviation, kurtosis and Skewness of scores are calculated to have a general picture into the data. The percentage analysis also done.

Table 1 : The measures of central tendency based on the academic stress of secondary school students of working and nonworking mothers

Statistical Techniques	Non-Working mothers	Working mothers
Mean	29.163	36.8804
Median	28	36
Mode	25.6739	34.2391
SD	7.0917	5.4669
Skewness	1.5198	2.0043
Kurtosis	2.9185	4.2758
SE of Mean	0.7394	0.57

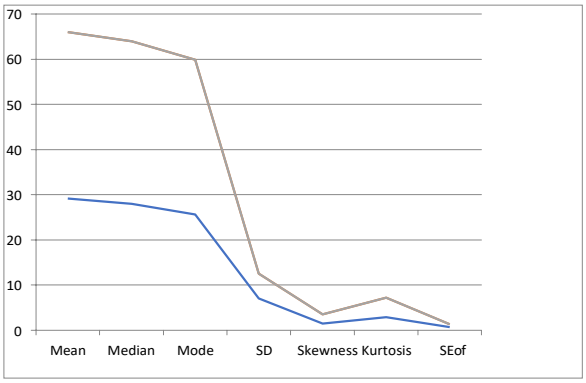

Figure -1
Graphical Representation of Preliminary analysis

Analysis session 2

In this study analysis of the data gathered and is intended to compare the level of academic stress of secondary school students of working and non-working mothers using t- test. The arithmetic mean and standard deviation of the scores were computed and the difference in mean was tested for significance by finding out the critical ration and comparing it with the table value. Each hypothesis was tested for 1% level of significance and 5% level of significance as well. Comparison of scores obtained by using academic stress scale between the students of working and non-working mothers (using t- test). In this session arithmetic mean and standard deviation of total scores (92) are computed and the hypothesis is tested for 1% and 5% level of significance. The below given table explains the analysis.

Table 2 : Comparison of scores obtained by using academic stress scale between the students of working and non-working mothers

	Sample Size	Mean	SD	Critical ratio	Level of Significance
Working mothers	100	36.1630	5.0917	8.2668	.01 and .05
Non-working mothers	100	29.8804	7.4669		

The critical ratio is 8.2668 and it is significant at both 0.01 and 0.05 levels of significance as it lies in the rejection region by being greater than the table value of t with df 90 (n1+n2-2).This shows that there is significant difference between the means of scores. It means that academic stress of secondary school students of working mothers is higher than academic stress secondary school students of non-working mothers

Tenability Hypothesis

The t- test between the scores reveal that there is significant difference in the scores of level of academic stress of secondary school students of working and non-workingmothers.Hence the hypothesis (H1) which states that, there is no significant difference in the Academic stress of the secondary school students of working mothers and non – working mothers is rejected

The arithmetic mean and standard deviation of total scores (92) of pretest and post test are computed and the hypothesis is tested for 1% and 5% level of significance.The critical ratio is 8.2668 and it is significant at both 0.01 and 0.05 levels of significance as it lies in the rejection region by being greater than the table value oft with df 90 (n1+n2-2).This showsthat there is significant difference between the means of scores. It means that academic stress of secondary school students of working mothers is higher than academic stress secondary school students of non-workingmothers

Educational Implications

We are living in the fast-moving world. Parents are busy and stressed and their tensions and worries affect the mental strength of the people especially adolescents. The study reveals that the secondary school students of working mothers suffer more stress compared to non-workingmothers. Both parents and teachers should aware about it and they should take it in to consideration. Stress either academic or nonacademic it will affect the whole physical and mental development of the child. So, from secondary school itself proper counselling is essential for both students and their parent

Conclusion

The study has brought to light the fact that at secondary school level students suffer from academic stress. There should be provision for counselling of parents and for secondaryschoolstudents. Extracurricular activities should be introduced in the school to reduce stress. There should be a sound parent teacher relationship. Work load and examination anxiety should be reduced by giving properguiding.Teachers must motivate students and ask them to clarify their worries ifneeded.

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Research Article

A STUDY ON THE CORRELATES OF LEARNING MATHEMATICS AMONG SECONDARY SCHOOL STUDENTS

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Abstract : *Mathematics is the queen of all sciences. But it is one of the most difficult subjects for the students to learn and score marks. So, there is a need to identify the causes of the difficulty. In this study the investigator is scientifically analyzing the correlates of learning mathematics. The abstract nature of mathematics is one of the reasons for the difficulty of the subject. Poor methodology adopted by teachers inhibit the learners and they fail to identify the real fun of mathematics. The identification of the correlates would enable the teaching fraternity to develop strategies that would enable the students to enjoy and learn mathematics.*

Keywords: Mathematics, Mathematics Education, Correlates of Mathematics Learning

Introduction

Mathematics is the queen of all sciences and it is multi-disciplinary in nature. Mathematics would help the learning of other subjects as well. It lays the foundation for many other fields of enquiry and research. It is very closely related to physics and engineering. It is also related to economics, chemistry, statistics, commerce, etc. The inventions and discoveries of the world are related to Mathematics in one way or other. Therefore the quality improvement in the Learning of Mathematics is closely related to the development of our nation and movement of India to the realm of developed nations. Learning of Mathematics edifies a person and inculcates in him/her noble qualities like accuracy, punctuality, clarity, brevity, preciseness, honesty, etc. Learning of Mathematics would help a person develop life-skills. It is highly categorical that we should make the learning of Mathematics simple, easy and enjoyable since Mathematics and human life are closely interlinked. The exercises of the brain like calculation, predictions etc.

ISSN 2319 -1709-35

are essential in all walks of human life. Mathematics also helps in planning for future.But mathematics is considered by many as a difficult subject. Hence in this study the investigator is attempting to identify the correlates of learning mathematics.

Need and Significance

Mathematics is in fact one of the most engaging and thought-provoking subjects. But it is considered to be a tough subject by many. The analysis of the problems faced by students in learning Mathematics would throw light into the real problems of students. In this study the causes of the difficulty of learning Mathematics are identified with the help of the opinions of the students.Many students have a very irrational fear of Mathematics. Fear of Mathematics or 'mathphobia' is a phenomenon that needs to be addressed. The abstract nature of Mathematics may be the reason why it is considered a tough subject. It is highly imperative that we need to adopt different strategies to help the students befriend mathematics and find out the correlates of mathematics education. Once we identify the correlates of mathematics it will be easy to solve the fear of mathematics.

Objectives

The objective of the study is to identify the various correlates of Learning Mathematics among secondary school students.

Methodology

The investigator chose 247 IXth standard students in the Secondary Schools in Thiruvananthapuram district as the sample of the study.The investigator used a questionnaire to find out the correlates of learning mathematics. The questionnaire consisted of fixed the type of questions and yes or no questions. The investigator prepared 94 items for the pilot study of the questionnaire for finding the problems of students in learning Mathematics. The Pilot study was conducted and data was collected from 79 students (40 Boys and 39 Girls, 34 Government and 45 Aided). The final questionnaire for students in order to find out the problems in learning

Mathematics consisted of 66 questions which included questions related to fear factor, stress, support system, study habits, cognitive and mathematical skills , difficulty of various subjects, interest in various subjects and difficulty of various areas of Mathematics . The survey based on the problems of learning Mathematics was conducted in 247 students (129 Boys and 118 Girls, 105 Government and 142 Aided) from various schools in Thiruvananthapuram district.

Analysis of the Correlates of Learning Mathematics

The analysis is the heart of any piece of research. In this study the investigator used a questionnaire to identify the various correlates of Learning of Mathematics at secondary level in Thiruvananthapuram district. The details are presented under the following heads:

Fear and Stress Related Factor

This section of the analysis is intended to give details about fear and stress related factors which influence Learning of Mathematics at secondary level. The % distribution of the responses given by the studentsis presented in Table1.

Table 1:
Fear and stress related factors influencing Learning of Mathematics

Fear and stress related factors influencing Learning of Mathematics		Responses (%) Yes	No
1.	Stress while solving Mathematics problems	82.2	17.8
2.	Fear of Mathematics	76.1	23.9
3.	Fear of getting low marks	69.6	30.4
4.	Fear of committing mistakes while doing problems	69.2	30.8
5.	Fear of Mathematics examination	63.9	36.1
6.	Giving negative self-talk about mathematics	61.5	38.5
7.	Feeling of boredom while doing Math problems	57.1	42.9
8.	Feeling of exhaustion while doing Math problems	56.7	43.3
9.	Feeling fatigue while doing Math problems	55.5	44.5
10.	Fear of Mathematics teachers	17.4	82.6

The analysis of the data in Table 1 shows that secondary school students have stress while solving Mathematics problems (82.2%), Fear of Mathematics (76.1%), Fear of getting low marks (69.6%), Fear of committing mistakes while doing problems (69.2%) and Fear of Mathematics examination (63.9%). But only 17.4 per cent of students opined that they fear their mathematics teachers.

Support system

This section of the analysis is intended to give details about the support system for Learning of Mathematics available at secondary schools in Thiruvananthapuram district. The analysis revealed that most of the students are not getting a conductive environment at home (69.6%), laptop/computer at home (66.8%), high speed internet facility at home (64.8%), laptop/computer at school (54.3%) and high-speed internet facility at school (50.6%). But most of the students are getting support from teachers (69.2%), extra help from a tutor (69.6%), inspiration from parents (85%), and conducive learning environment at school (87%), sufficient study materials (88.3%) and comfortable classroom and facilities at school (89.9%).

Study Habits

This section of the analysis is intended to give details about the study habits which influence Learning of Mathematics of secondary school students in Thiruvananthapuram district. The analysis reveals that majority of the students don't have meticulous revision (72.9%), strategy for avoiding distracters (70.7%), efficient management of time of study (65.2%) and strategy of taking judicious rest (60%). But 52.6 per cent of the students are organizing their work efficiently, 55.4 per cent are planning the work in advance and 61.3 per cent are asking for help whenever necessity. The percentage distribution of the responses given by the students are given in Table 2.

Table 2: Study habits of students influencing Learning of Mathematics

Study habits of students influencing Learning of Mathematics		Responses (%)	
		Yes	No
1.	Meticulous revision	27.1	72.9
2.	Strategy for avoiding distracters	29.3	70.7
3.	Efficient management of time of study	34.8	65.2
4.	Taking judicious rest (periodic break)	40	60
5.	Having regular time for Learning of Mathematics	41.3	58.7
6.	Regularity in doing homework	45.3	54.7
7.	Searching for problems outside the textbook	45.7	54.3
8.	Maintaining positive attitude of studying Mathematics	46.2	53.8
9.	Organizing the work effectively	52.6	47.4
10.	Planning the work in advance	55.4	44.6
11.	Asking for help when necessary	61.3	38.7

Table 3: Mathematical skills of students for Learning of Mathematics

Mathematical skills of students for Learning of Mathematics		Responses (%)	
		Yes	No
1.	Swiftness in computational skill	27.9	72.1
2.	Precision in computational skill	29.1	70.9
3.	Skill to identify mathematical relationships	30.8	69.2
4.	Expertise to solve Mathematics problems	33.2	66.8
5.	Ability to draw mathematical inferences	36	64
6.	Skill to connect mathematical concepts	37.2	62.8
7.	Ability to apply knowledge	38.9	61.1
8.	Knack to convert problems into mathematical language	40.5	59.5
9.	Ability to link problems with formula	42.5	57.5
10.	Competence to understand statement problems	42.9	57.1
11.	Speed in taking down notes	46.6	53.4
12.	Accuracy in writing	48.2	51.8
13.	Ability of spatial visualization	49	51
14.	Ability of mental calculation	50.6	49.4
15.	Talent of handling mathematical instruments	53.4	46.6
16.	Ability to understand abstract concepts	57.5	42.5
17.	Skill to draw mathematical figures	58.7	41.3
18.	Capability to analyze graphs and charts	65.2	34.8

Mathematical skills

This section of the analysis is intended to give details about the mathematical skills of secondary school students in Thiruvananthapuram district. The Percentage distributions of the responses given by the students are presented in Table 3.

The analysis of the data in Table 3 shows that 72.1 per cent of the students don't have speed in computational skill, 70.9 per cent of the students don't have precision in computational skill, 69.2 per cent of students don't have the skill to identify mathematical relationships and 66.8 per cent of the students don't have expertize to solve Mathematics problems. The analysis reveals that 65.2 per cent of the students have the capability to analyze graphs and charts and 58.7 per cent of the students have the skill to draw mathematical figures and 57.5 per cent of the students have the ability to understand abstract concepts.

Cognitive skills

This section of the analysis is intended to give details about the cognitive skills of secondary school students for Learning of Mathematics in Thiruvananthapuram district. The analysis revealed that 65.2 per cent of students have capacity to retain information, 61.9 per cent of the students have capacity to register information, 59.1 per cent of the students have efficiency in recalling mathematical information and 57.9 per cent of the students have the capacity to think creatively. But 51 per cent of the students don't have the ability to comprehend things fast, 57.9 per cent of the students don't have the capacity to transfer knowledge from one field to another and 61.9 per cent of the students don't have the ability to imagine.

Conclusion

Mathematics is very relevant since it is a core subject and the development and the research in Mathematics lead to latest innovations in the field of space science, communication and technology. Research

is a disinterested endeavor to venture into fundamental questions that has significance to mankind. Research in education has added significance since the findings would pave way for the harmonious development of the future citizens.

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Research Article

A STUDY ON SCREEN TIME STRESS AMONG HIGHER SECONDARY SCHOOL LEVEL DURING COVID 19

Jeena M.V. & Joju John

Abstract : *COVID19 has a significant impact on the global economy, politics, transportation, education, and social ties. Above all, the lives of students have been under severe stress. Prior to the pandemic, pupils gathered in the classroom so that the teacher could draw their attention to the topics using various tactics or practice. However, the situation has altered, and today all teaching and learning activities are carried out via screen-to-screen contact. Students arespending a lot of time in front of the screen. Many people are succeeding at this level, yet screen time stress is still a huge issue today. The goal of this study is to determine the amount of screen time stress that high school students face. Gender, economic situations, and other factors are all taken into account. The study has proved that screen time stress is causing serious damage to the personality of our children.*

Keywords : Screen time stress, COVID 19, Higher Secondary school students

Introduction

The COVID 19 outbreak has posed significant challenges across the globe. Hundreds of millions of people worldwide are required to stay home to protect themselves and prevent the spread of the disease including young people. As of 25 April 2020, around 1.5 billion children have been out of school as a result. Many of them may be spending more time on screens to complete online activities as part of home schooling, socializing with peers or playing video games given that outdoor activities may be restricted due to lock down. Time spent for studies and other activities on screen is increasing during this COVID19 pandemic period. Looking at screens all day long can cause stress on different parts of our bodies and impact physically. On top of the physical stressors that one may undergo emotional stressors are accompanied by increased screen time as well. Today students emerged in viewing screens and not connecting with people in real life.

ISSN 2319 -1709-35

The closure of schools changed life of students. They suddenly started spending much more time watching media on screens. Increased screen time particularly computer use has increased risk of anxiety and depression. So, it is very necessary to study screen time stress among students during this COVID19 period. This paper aims to study screen time stress among higher secondary level students. Virtual learning schedule is not the same as traditional school schedule hence higher secondary level students spent more time in front of screen. This makes stress among them. They have to work more hours on screen during the COVID19 pandemic.

Need and Significance

The COVID 19 pandemic has brought our world to new life experiences today. Everyone is locked up in their home. The government has introduced an online education system for children so that they do not miss outon education. Unlike normal classrooms for children their home has become new classroom. Children are increasingly using digital learning methods. Therefore, studies now show that screen time is having impact among students. Higher secondary level students suffer most from online education. Because all of their theory work and practice is now done online. That is why students in higher secondary level spent more time in front of the screen. In these children it has been shown to increase stress. It is therefore imperative that such a study be conducted in this one situation. This study is very relevant to this condition of students.

Statement of the Problem

The study is entitled as "A STUDY ON SCREEN TIME STRESS AMONG HIGHER SECONDARY SCHOOL LEVEL DURING COVID19."

Definition of Keywords

Screen time

Screen time is the amount of time spent using a device with a screen such as a smart phone, computer, television, or video game console.

Stress

Stress is a feeling of emotional or physical tension. It can come from any event or thought that make you feel frustrated, angry or nervous. Stress is our body's reaction to challenged or demand.

Higher Secondary School Level

Higher secondary education means the education to be imparted in classes eleven and twelve.

COVID19

COVID19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona 'VI' stands for 'virus', 'D' for disease. This disease was referred to as 2019 novel corona virus.

Objectives

1. To find out screen time stress undergone by Higher secondary level students during COVID19 pandemic.
2. To know the difference in screen time stress of male and female Higher secondary level students during COVID19 pandemic.
3. To know whether there is a difference in screen time stress of rural and urban Higher secondary level students during COVID19 pandemic.

Hypotheses

1. COVID19 pandemic creates screen time stress among higher secondary level students because of online education.
2. There will be a significant difference in screen time stress of higher secondary level students because of online educationduring COVID19 on the basis of gender.
3. There will be a significant difference in screen time stress of higher secondary level students because of online educationduring COVID19 on the basis of locality.

Methodology

Methodology refers to the different method and procedure adopted and the tools employed for the study. A brief description of the methods adopted for the study sample and tools used and the procedure of the study are given below.The investigator used survey method for the conduct of study. The sample of present study consisted of 50 students from higher secondary school level.Stress scale for higher secondary school students was used to analyze stress. The statistical technique used for this study are Percentage analysis and Arithmetic mean.

Analysis and Intepretation of Data

1. Analysis of screen time stress of higher secondary school level during covid19. In this part there is an attempt to study the screen time stress of higher secondary students during covid19 pandemic. The responses collected from higher secondary students against the screen time stress scale were analyzed graphically. Percentage and mean of total sample were calculated and is presented below table.1.

Table.1 Analysis of screen time stress of higher secondary school students level during covid19

Level of response	Percentage	Mean response level
5	63.6	4.29
4	17.12	
3	9.36	
2	5.44	
1	4.48	

From the Table.1 it is observed that majority of higher secondary students have very high level screen time stress during covid19 pandemic. 63.6 per cent of the students have opined that they have extreme level of stress(5). The mean value is 4.29 which shows that the screen time stress for higher secondary level students is high.The graphical representation that plots the relation between the response level and percentage of its occurrenceis shown below in Figure1.

Figure 1 : Level of Stress of Students

Analysis of the difference in screen time stress based on Gender

The responses of the male and female students were analyzed separately and percentage response and mean were calculated. The data, percentage and mean are shown in the below Table 2 followed by the graphical representation that easily facilitates comparison on the basis of gender.

Table 2 : Analysis of the difference in screen time stress based on Gender

Level of response	Male		female		Critical ratio (t)	Level of Significance
	percentage	mean	percentage	mean		
5	53.8	4.024	70.13	4.48	0.2	Not significant at 0.01 level
4	15.8		18			
3	16.8		4.4			
2	6.2		4.93			
1	7.4		2.53			

From the table.2, it is clear that majority of the boys as well as girls' students show high screen time stress during covid19 pandemic period. The mean response level of boys is 4.024 and mean response level of girls is 4.48 which show that generally boys have less screen time stress than girls during covid19 pandemic period. There is no siginificant difference between girls and boys. The graphical representation is shown in figure 2.

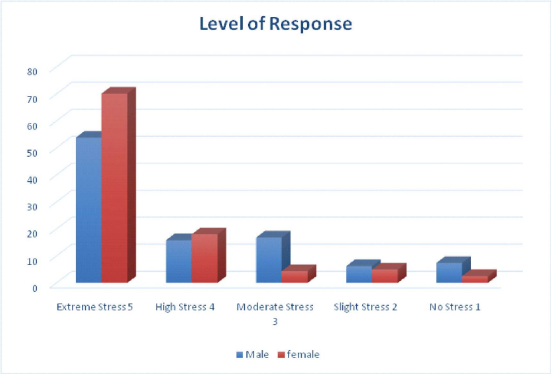

Figure 2 Screen time stress of male and female students

Analysis of difference in screen time based on Locality

The response of students from rural and urban areas were analyzed separately and percentage response and mean were calculated and also it shown graphically. The data percentage and mean are shown in the below table. Analysis of difference in screen time stress of rural and urban students

Table.3 :Analysis of difference in screen time based on Locality

Level of response	Rural		Urban		Critical ratio (t)	Level of Significance
	percentage	mean	percentage	mean		
5	68.8	4.448	51.46	3.952	0.13	Not significant at 0.01 level
4	17.94		15.2			
3	5.714		17.86			
2	4.342		8			
1	3.2		7.466			

From the analysis it has found that majority from both rural and urban shows high screen time stress during covid19 period. The mean response level of students from rural area is 4.448 and from urban area is 3.952. This shows students from rural area has higher screen time stress than students from urban area during covid19 period. There is no siginificant difference between urban and rural students. The graphical representation is shown in figure 3.

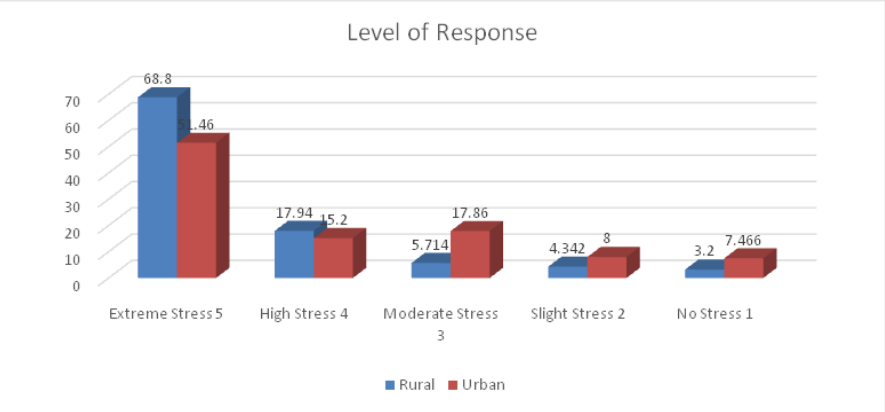

Figure 3 : Screen time stress of rural and urban students

From the tables and figures it is revealed that screen time stress of higher secondary level students during covid19 pandemic is very high. The screen time stress level of higher secondary level students has been analyzed through their gender, their living areas (rural/urban). Screen time stress of high school students is found to be high, in all the categories that has been analyzed in the study. It is found that the mean value is 4.29 which indicates a high stress level on high school students during pandemic period for screen time.

Major Findings

- From the study it is revealed that majority of higher secondary level students have high level of screen time stress (4.29) during the covid19.
- There is a slight difference in mean of each category taken such as the analysis based on gender, living area type etc. Each of them shows the higher level of screen time stress.

- Boys has less screen time stress (mean=4.024) than the screen time stress level of girls (mean=4.48).
- Students from rural areas has higher screen time stress (mean=4.448) than students from urban areas (mean=3.9520) during covid19 period.

Conclusion

From the analysis it is observed that majority of higher secondary level students has high screen time stress during pandemic period. When the covid19 spread and governments enforced school closure as part of containment strategy the screen time stress of higher secondary students increased. This may be due to shift of learning to online platform, increased use of digital devices, social media, over load of works and assignments, online exam, lack of internet access etc. Covid19 has affected many aspects of human lives, including the patterns of digital screen use. But over use of screen causes screen time stress in students. This increased screen time also affect physical and mental aspects of students. Boys has less stress than girls because they are busy with different activities. But girls spent more time in front of screen so they are highly

affected by screen time stress. The students from rural area have more stress than from urban areas because they are affected with lack of internet facilities.It causes spending more time in front of screen. These are some reasons for increased screen time stress in higher secondary level students.

Sugesstion

- Teachers may reduce the duration of online classes.
- Ask children to listen to online classes, instead of looking at the screen.
- Teacher should talk to children on the phone and find time to resolve their problems.
- Advise children to reduce phone use whilesleeping.
- Teacherss hould be careful to provide accurate breaks between online classes.
- Give more time to complete onlineworks.

Educational Implications

Screen time stress a big problem that increased during the period of covid19 among students. Higher secondary level students are mostly affected by this due to their increased duration of online class, exam, assignments, practical record works. Teachers should help students to avoid this screentime stress among students. Proper guidance and help are needed for students to overcome this situation as students are affected with high screen time stress during this pandemicperiod.

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Research Article

COMPARATIVE ANALYSIS OF PHYSICAL FITNESS LEVEL OF COLLEGE MALE STUDENTS FROM DIFFERENT GEOGRAPHICAL REGIONS IN KERALA.

Jiji Kurian & Santhosh R.

Abstract : *The purpose of the study was to analytically compare the physical fitness variables of college level male students from three geographical regions, high land, mid land and low land in Kerala. The study was conducted on one thousand five hundred male students who have studied in aided and government colleges in Kerala. There were five hundred subjects (N=500) belonging to highland region, five hundred subjects (N=500) belongingto midland region and five hundred subjects (N=500) belonging to lowland region. The physical variables [speed(50 m), endurance, standing broad jump, medicine ball throw, 4 x 10 m shuttle run] have been analyzed by descriptive statistics and analysis of variance (ANOVA) for each variable separately to find out if any significant difference exist between the different geographical regions. Since the obtained F-ratio was greater than the table F-ratio at 0.05 levels, LSD post hoc analysis was performed and statistical significance (p<.05) was obtained to identify significant pair wise differences.*

Keywords: Geographical Regions, Physical Fitness Level, Physical variables

Introduction

Geographically Kerala has been divided into three regions, highland (48%), midland (41.67%) and lowland (0.29%) of total area. There is compelling evidence that physical activity can have a positive effect on physical wellbeing as well as emotional wellbeing of young people. The benefit of physical activity, especially for young people, is framed in the context of the future physical health status individual and its consequences for the community.

Objectives

The objective of the study was to analytically compare the physical fitness status of college male students of three geographical regions in Kerala.

ISSN 2319 -1709-35

Methodology

The subjects were randomly selected from the aided and government colleges in Kerala. There were five hundred subjects (N=500) belonging to highland region, five hundred subjects (N=500) belonging to midland region and five hundred subjects (N=500) belonging to lowland region and their age level ranged from eighteen to twenty-one years. The physical variables (speed(50 m), endurance, standing broad jump, medicine ball throw, 4 x 10 m shuttle run) have been analyzed by descriptive statistics and analysis of variance (ANOVA) for each variable separately to find out any significance differences exists between the different geographical regions. Since the obtained F-ratio was greater than the table F-ratio at 0.05 levels, LSD post hoc analysis was performed and statistical significance ($p<.05$) was obtained to identify significant pair wise differences. The descriptive statistics and results ANOVA and post hoc tests of various selected physical fitness variables of college level male students belonging to highland, midland and lowland were presented in the following tables: - The results pertaining to the significant difference between the means of various selected physical variables of highland region, midland and lowland regions was calculated by using one way analysis of variance> it is presented in the following tables:

- Table1: Descriptive Statistics of Physical variable: Speed (Seconds)

Variable	Groups	N	Mean	Std. Deviation	Std. Error
Speed (50m)	Highlands	500	8.021	1.033	.047
	Midlands	500	8.612	1.022	.046
	Lowlands	500	8.930	5.298	.237
	Total	1500	8.521	3.191	.082

The table reveals that male students belonging to the highlands having the better performance of 8.021 seconds (SD = 1.033), followed by midlands 8.612 seconds (SD=1.021) and lowlands with estimated mean of 8.930 seconds (SD=5.298). The average performance was found with estimate mean of 8.521 seconds (SD= 3.191).As per the analysis of data, it was evident that there was a significant difference between the groups in physical variable of speed. The calculated F ratio of 10.572 was greater than the critical F value of 3.00 required for statistical significance at 0.05 at level. To find out

the paired mean differences between the groups, which are the F ratio's significant, the post hoc test (LSD test) was used.

The post-hoc test results revealed that, there is significant difference between students from the highlands and midlands (MD = —.591). Significant difference also found between the students of lowlands and highlands (MD = .909). No significant difference was found between the male students of midlands and lowland (MD = -.318). The mean values clearly show that, students of highlands having the better speed than the students of midlands and low lowlands. The students of the lowlands show the lowest performance among the selected groups of students belonging to different regions in Kerala.

Table 2: Descriptive Statistics of Physical variable: Cardio-respiratory endurance test (Beep test) performance (Levels and shuttles)

Variable	Groups	N	Mean	Std. Deviation	Std. Error
Beep test/ Endurance	Highlands	500	7.373	2.686	.1201
	Midlands	500	6.421	6.020	.2692
	Lowlands	500	6.127	2.289	.1023
	Total	1500	6.640	4.061	.1048

The table reveals that students belonging to the highlands having the better performance of 7.373 (SD = 2.686) and followed by midlands 6.421 seconds (SD = 6.020) and lowlands with estimated mean of 6.127 seconds (SD = 2.289). The average performance of higher secondary school boys was found with estimate mean of 6.640 seconds (SD= 4.061). According to the analysis of data, there was a significant difference between the groups in cardio- respiratory endurance test performance. The tableshows that, the calculated F ratio of 13.071 was greater than the critical F value of 3.00 required for statistically significant at 0.05 at level. To find out the paired mean differences between the groups, where F ratio is significant, the post hoc test (LSD test) was used. The post-hoc test results revealed that, there is significant difference on performance in cardio-respiratory test results of students between highlands and midlands (MD = .952). Significant difference also found between the students of highlands and lowlands (MD = 1.246). No significant difference was found between the students of midlands and

lowland (MD = .293). The mean values clearly show that students of highlands having the better cardio-respiratory endurance than the students of midlands and low lowlands. The students of the lowlands show the lowest performance among the selected groups of students belonging to different regions in Kerala.

Table3: Descriptive Statistics of Physical variable: Standing broad jump (metres) of the students belonging the different regions

Variable	Groups	N	Mean	Std. Deviation	Std. Error
Standing broad jump (metres)	Highlands	500	1.792	.578	.025
	Midlands	500	1.651	.299	.013
	Lowlands	500	1.635	.228	.010
	Total	1500	1.692	.404	.010

Standing broad jump found to be the most reliable test to measure the lower body strength. The table reveals that students belonging to the highlands having the better performance of 1.792 meters (SD = .578) and followed by midlands 1.651 meters (SD=.299) and lowlands with estimated mean of 1.635 meters (SD=.228). The average performance was found with estimate mean of 1.692 meters (SD= .404). According to the analysis of data, there was a significant difference between the groups in physical variable of standing broad jump. The table shows that, the calculated F ratio of 23.352was greater than the critical F value of 3.00 required for significant at 0.05 at level. To find out the paired mean differences between the groups, where F ratio is significant, the post hoc test (LSD test) was used. The post-hoc test results revealed that, there is significant difference between students from the highlands with midlands (MD = 0.141) and lowlands (MD = .156). No significant difference was found between the male students of midlands and lowland (MD = 0.015). The mean values clearly show that, College male students of highlands having the better lower leg strength than the students of midlands and low lowlands. The boy's students of the lowlands show the

lowest performance among the selected groups of students belonging to different regions in Kerala.

Table 4 : Descriptive Statistics of Physical variable: medicine ball throw (meters) of male students belonging to different geographical regions.

Variable	Groups	N	Mean	Std. Deviation	Std. Error
Medicine ball throw (metres)	Highlands	500	3.480	.694	.031
	Midlands	500	3.101	.685	.030
	Lowlands	500	2.875	.760	.034
	Total	1500	3.152	.756	.019

The table reveals that students belonging to the highlands having the better performance of 3.480 meters (SD = .694) and followed by midlands 3.101 meters (SD=.685) and lowlands with estimated mean of 2.875 meters (SD=.760). The average performance was found with estimate mean of 3.152 meters (SD= .7562). According to the analysis of data presented, it was evident that there was significant difference between the groups in physical variable of medicine ball throw. The table shows that, the calculated F ratio of 91.69 was greater than the critical F value of 3.00 required for significant at 0.05 at level. To find out the paired mean differences between the groups, where F ratio is significant, the post hoc test (LSD test) was used.

The post-hoc test results revealed that, there is significant difference between students from the highlands with midlands (MD = .379) and lowlands (MD = .605). Significant differences were also found between midlands with lowlands (MD= .226). The mean values clearly show that, college male students of highlands having the better upper body strength than the students of midlands and low lowlands. The students of the lowlands show the lowest performance among the selected groups of students belonging to different regions in Kerala.

Table 5: Descriptive Statistics of Physical variable: 4 x 10 m shuttle run (seconds) of male students belonging to different geographical regions in Kerala

Variable	Groups	N	Mean	Std. Deviation	Std. Error
4x10m shuttle run(seconds)	Highlands	500	11.131	1.33180	.0595
	Midlands	500	11.6167	.892	.0399
	Lowlands	500	10.8396	1.248	.0558
	Total	1500	11.1958	1.215	.0313

The table reveals that students belonging to the lowlands having the better performance of 10.83 seconds (SD = 1.248) and followed by highlands 11.131 seconds (SD=1.331) and midlands with estimated mean of 11.616 seconds (SD=.892). The average performance was found with estimate mean of 11.195 seconds (SD= 1.215). According to the analysis of data, it was evident that there was a significant difference between the groups in physical variable of 4 x 10 m shuttle run. The table shows that, the calculated F ratio of 56.002was greater than the critical F value of 3.00 required for significant at 0.05 at level. To find out the paired mean differences between the groups, where F ratio is significant, the post hoc test (LSD test) was used. The post-hoc test results revealed that, there is significant difference between students from the highlands and midlands (MD = -.485). Significant difference was found between the students of lowlands and highlands (MD = -.291). Significant difference was also found between the students of midlands and lowland (MD 0m shuttle run than the students of highlands and midlands. The students of the midlands show the lowest performance among the selected groups of students belonging to different regions in Kerala.

Major Findings

The finding of the study showed that there were significant differences in the obtained value of physical fitness variablesof various geographical regions of male college students in Kerala. These geographical regions have significant influence on the physical fitness status of male college students of Kerala state too. It is assumed that socio-economic status and activities conducted in the regions have significantlyinfluence on the health status of college male students. The lesser transportation facilities and the lack of proximity to the colleges and other institutions may force them to do certain

physical activities which may help to improve their basic health status in highland region. The male students from midland regions have better physical capacity than the lowland male college students. Itis evident that the cases of obesity in the highland region is very less as most of students are from low economic back grounds.

Conclusion

The study revealed a few important findings. The data showed significant difference in speed (50 m), endurance, standing broadjump,medicine ball throw, 4 x 10 m shuttle run of highland, midland and lowland college male students. The physical fitness level of highland students is best among these groups. The male students from midland regions have better physical capacities than its peer group from lowland regions.

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General Article

MANAGEMENT OF CHILDREN WITH HEARING LOSS IN MAINSTREAM CLASSROOMS

Jeena Mary Joy

Abstract: *Hearing loss is a hidden disability which adversely affects the holistic development of a child. The surge in technological advancements has helped to identify and manage hearing loss as early as infancy. In the recent times, there are many children with hearing loss who are enrolled in mainstream classrooms and perform on par with their hearing peers. The objective of this article is to unravel the myths associated with the functioning of these children in mainstream classrooms. It also discusses the strategies that can be used by teachers to help these children reach their fullest potential of academic performance.*

Keywords: Children with Hearing Loss, Inclusive Education, Managing Hearing Loss

Introduction

Hearing is one among the five senses that connects humans to the world around them and opens the gateway for effective communication with their fellow beings. Verbal communication is a unique feature of humans which has made them superior to the other creatures on planet earth. The loss of hearing sensitivity can impose a very critical effect on the development of spoken language development and this may limit their ability to communicate effectively in the society. Hearing Loss may also have a social and economic consequences both to the individual and to the society. WHO has estimated that 32 million children of the world population may have disabling hearing loss. The Census of India (2011) estimates that 6.22% of the total population with hearing loss is below 4 years in India and in Kerala, 3.25% of the total population with hearing loss is below 4 years of age. (0.41% of the total- In India and 0.31% of the total in Kerala).

ISSN 2319 -1709-35

History has not always been kind to those born with deafness. Excerpts from Greek history evidences that babies born with deafness were subjected to infanticides whereas, during the biblical age deafness was considered impediments from evil or punishments from God. During the medieval times deaf were considered as irrational and were looked upon as ineducable. After the nineteenth century the social consequences of hearing impairment were shaped by the models of disability, which was conceptualized to describe and understand disability and development.

During the World War II, Charity Model was the principal paradigm to understand disability. Disability was considered as a personal tragedy and "people with disabilities were often "objects of charity" and hence dependent on the society. The Medical model emerged after World War 2, which created a passive and isolationist mentality towards disability. Later political movements by people with disability led to the development of a Social model during the 1980's, which aimed to create a positive attitude towards people with disabilities. This was attained by holding the society more responsible to help overcome the economic, social and environmental barriers towards inclusion of people with disability into the society and be productive citizens. The citizenship model emerged during the mark of 21st century, represents an international development paradigm, in which people with disabilities deserve and aspire to have the same opportunities as other citizens of their community. In the framework described above, the author attempts to provide a thematic description of management of children with hearing loss in mainstream classrooms.

Definition of Loss of Hearing

Hearing loss is the partial or total loss of hearing in one or both ears. The severity of hearing loss ranges from mild to profound degrees depending on the threshold of hearing. The challenges to cope in a mainstream environment increase as the degree of hearing loss is more. For example, a mild hearing loss poses minimal challenge on speech understanding while a profound hearing loss creates significant hinderance in speech understanding. Hearing loss can be majorly classified into three types; conductive, sensorineural and mixed hearing loss. Conductive hearing loss refers to a condition where the pathology lies in the outer

or middle ear. Such conditions are largely reversible through medical management. Sensorineural hearing loss refers to a condition where the sensory cells (hair cells) within the inner ear (cochlea) is damaged. It can also be caused by a pathology existing on the auditory nerve. Such hearing losses are not reversible and are most often managed by hearing aids or cochlear implants. Mixed hearing loss, as the name suggests, is due to a pathology in outer/middle and inner ear. Such hearing losses are managed by medical intervention or hearing aids/cochlear implants.

Consequences of Loss of Hearing in Children

Hearing Loss is often considered a hidden disability and hence poses numerous challenges on children. The most significant of those challenges stems from the hinderance in developing foundational speech and language skills. The challenges are listed in terms of reduced receptive and expressive language (Geers et al., 2011; Nittrouer et al., 2014), speech perception (Davidson et al., 2010; Robinson et al., 2012), speech intelligibility (Dawson et al., 1995; Tobey et al., 2007; Wiggin et al., 2013), reading deficits (Cupples et al., 2014; Goldin-meadow et al., 2001; Mayer et al., 2016), academic and vocational disadvantage and social stigmatisation.

Management of Loss of Hearing

There have been various attempts internationally towards the management of children born with congenital hearing loss (CHL). Developed countries like United States and Australia implemented universal neonatal hearing screening (UNHS) to identify hearing loss at a very young age of not less than 1 month. Research across the globe have proved that early identification and systematic intervention can develop oral language skills in children with hearing loss (Jackson & Schatschneider, 2014; Lund, 2016). The use of digital aids for children with Hard of Hearing and Cochlear Implantation (CI) for children with severe to profound hearing loss has evidenced that these children can acquire verbal language skills on par with typically developing children and lead inclusive life from preschool years and later be productive citizens of the nation (Dettman et al., 2013; Guo & Spencer, 2017). A brief overview of hearing aids and cochlear implants are crucial at this juncture.

Restoration of hearing function is possible with the help of technological solutions such as, hearing aids, cochlear implants, brainstem implants, bone anchored hearing aids and middle ear implants and auditory brainstem implants. These can be electronic or bionic devices which are plugged into any parts of the hearing mechanism and process the sound either acoustically or electrically to stimulate the auditory nerve or higher auditory centre.

Hearing Aids

Hearing aids technology have progressed considerably over the centuries to sail through electronic hearings aids, transistor hearing aids and digitally programmable hearing aids. Over the decades the size of the hearing aids also has evolved from large body worn devices to miniature devices which can be completely inserted in the ear canal.

a) Behind the Ear (BTE's) – Contemporary technology allows two types of BTE options based on the receiver placements, receiver placed within the hearing aid case (traditional BTE's) and the receiver placed at the end of the tubing and placed inside the canal (receiver in the canal aids-RIC). RIC's are recommended for individuals with better hearing at low frequencies. Further they are more cosmetically appealing and better sounding because the open fit eliminates the occlusion effect created by the ear-moulds used along with the traditional hearing aids.
b) In-The-Ear Hearing Aids – These are hearing aids that are placed within the auricle and are largely custom made for each user. There are different sizes available based on how they are fixed within the ear. They are full-shell ITE, half shell ITE, and completely – in- the- canal (CIC). Recent additions to the styles include invisible – in- the canal (IIC) and microphone-in- concha. The IIC's fit further deep into the ear canal and are least visible outside. In MIC the microphone is removed from the hearing aid and is attached to a wire and tubing placed inside the helix. A general thumb rule is that, larger the hearing aid size, larger is the gain it provides and a wider fitting range.

c. Cochlear Implants: Cochlear implants are small, but complex bionic device which are implanted into the cochlea and electrically stimulates the auditory nerve. It consists of two major components; an internal

implant with an array of electrodes which is surgically inserted into the scala-typani of the cochlea and the external portion, the speech processor. These can be a behind-the- ear model or an off-the-ear model which is placed on the mastoid bone on the skull.

Therapeutic Intervention for Children with Hearing Loss

Auditory Verbal Therapy. Auditory Verbal Therapy was developed by Doreen Pollack and is regarded as a holistic early intervention model. It is further described as unisensory, family centered and evidence-based approach which helps very young children with varying degrees of deafness to develop listening and spoken language skills. This is an approach that evolved along with the current trends in paediatric hearing care, like, new born hearing screening, advanced listening devices like hearing aids or cochlear implants and creative service delivery models. It is noteworthy that there is wide acceptance for this approach among parents and professionals who wish to develop unprecedented listening skills, spoken language skills on par with hearing peers, higher levels of academic success and the best quality of life for their children with hearing loss. Use of hearing aids or cochlear implants is a mandate while practicing this developmental approach. AVT sessions are always individualised and tailor made for the specific needs of the child and family and is works within the family culture.

Children with Hearing Loss in an Inclusive Setting

With children getting diagnosed and implanted at very young age, a larger proportion of these children get the opportunity to attend regular schools in an inclusive environment. It is evident from literature that children with hearing loss can achieve impressive outcomes in an inclusive classroom set-up, with the use of optimum listening device (cochlear implants or hearing aids) coupled with Auditory verbal approach(Harris et al., 2017; Sarant et al., 2015). An important distinguisher of AVT from other models of intervention for children with hearing loss is its principle of early integration into preschool. It should be acknowledged that these children who use cochlear implants/ hearing aids perceive acoustically degraded speech signals, which is further degraded due to the presence of background noise in the classroom settings. Many classrooms in India have an average of 35 or more children and the mean

occupied noise levels have been reported to be 62.1dBA and 65.6dBC, with mean unamplified teacher speech to noise ratio of 10.6dB and an estimated reverberation time >2.6seconds (double the standards of ANSI stipulated standards (Sundaravadhanan et al., 2017).

Concept of Mainstreaming vs Inclusion

Mainstreaming refers to the placement of a child with special needs along with typical kids in a regular classroom. In the recent times there is an alternate terminology that is used synonymously with mainstreaming, 'inclusion'. The difference between the two is that, inclusion refers to a broader term which involves the process of providing the adaptations required for the child within the regular classroom. The author intends to use the term 'inclusion' in this paper. The success of a child in an inclusive environment largely depends on his/her speech and language abilities. A well-developed foundation of speech and language skills sows the seeds for social competence and eventually social inclusion. Inclusion becomes successful only with social inclusion or connectedness and this occurs only when the child with deafness can fully participate in all aspects of school environment. Rhoades,Maclever-Lux & Lim(2016) lists the following interpersonal

Skills to be Learnt by Pre-schoolers

Children should develop a sense of connectedness with typically hearing peers and this happens only when they are competent in all domains of language, be it, speech intelligibility, vocabulary or pragmatic skills. The AV practitioner should include social skills as an explicit goal during the course of intervention especially during the transition phase from therapy to inclusive class rooms. This can be achieved through role play during the sessions, enrolment into regular play groups, art, dance or sports events which gives the opportunity for interaction with typical peers.

Management of contextual and environmental factors in school settings

It is important that the teachers are aware about the accommodations to be provided for a child with deafness in an inclusive school setting. The major areas to be considered are classroom acoustics, peer education, teaching strategies & self-advocacy strategies.

Classroom acoustics. A child using cochlear implants or hearing aids need to spent significant amount of energy to process the message that is spoken to them in the presence of background noise. They may lose critical elements in speech, which aids in comprehension of the message. Reverberation time is the time taken by the reflected sound to fade away. A longer reverberation time shall mask the teacher's speech in the classroom. Many strategies can be adopted to reduce the back ground noise, enhance the signal to noise ratio and manage reverberation in a classroom like using carpets inside the class room, using rubber balls beneath the chair, table and desk legs, proper maintenance of electrical equipment like fans, lightings etc in the classroom, provision for air conditioning the classroom, placing plant pots inside the class room, acoustic tiling and use of FM systems, remote microphones Preferential seating. The child with hearing loss can be seated in such a way that the child can optimally make use of the auditory and visual cues. Option may also be provided to move around the classroom based on the different situations in the classroom.

Peer teaching. These include strategies to facilitate the peer for accepting the child with hearing loss in the class room. These are;

- reading books about children who have hearing loss
- asking children to speak without interrupting their face or mouth
- asking them to speak one at a time
- referring to visual information prior to verbal message

Teaching strategies. These are strategies employed to enhance auditory access for learning in the classroom situation. These are;

- consistent use of hearing device and assistive listening device if any
- daily listening checks to ensure proper functioning of the device
- Teacher strategies such as; repeating or rephrasing the spoken message,
- Pre-teaching the lessons
- Positioning the teacher such that she is speaking facing adequate lighting
- Ensuring that the teachers sound is optimum loudness and quality
- Ensuring that the teachers do not talk while walking or his/her back turned to the class.
- Repeating new words and phrases

Self-advocacy strategies. It is imperative that the child is made responsible for his/her listening efforts during the transition phase from therapy to inclusive classroom. Self-advocacy strategies help the child to speak up for themselves, be in positive or negative circumstances. This will also encourage them to find appropriate solution for any sort of listening or communication breakdown they face in the day to day classroom situation. A few examples for self-advocacy strategies are managing their own hearing aids, replacing batteries, reporting break downs in device usage, asking for repetitions if they have difficulty comprehending any spoken message and reminding teachers to use assistive listening device.

It is known fact that the demands and expectations of each child in a regular classroom is unique. All the above strategies listed may not be applicable for each child in toto. The specific requirement needs to be assessed and the interventions and accommodations has to be custom made for each individual.

Conclusion

Considering the surge in technological advancement and emergence of citizenship model of disability management, it is apparent that more and more children with hearing loss will restore their hearing capacity, develop spoken language skills and eventually attend mainstream schools along with their hearing peers. Subtle adaptations in the classroom environment along with individualised interventional strategies can help these children with hearing loss to perform on par with their hearing peers. It is crucial that mainstream teachers are equipped to handle the intricacies associated with hearing disability.

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General Article

TRAVERSING THROUGH STRESS MANAGEMENT MECHANISM

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Abstract: *Managing stress is all about taking charge: taking charge of your thoughts, your emotions, your schedule, your environment, and the way you deal with problems. The ultimate goal is a balanced life, with time for work, relationships, relaxation, and fun – plus the resilience to hold up under pressure and meet challenges head on.Stress is your body's way of responding to any kind of demand or threat. When you sense danger—whether it's real or imagined—the body's defences kick into high gear in a rapid, automatic process known as the "fight-or-flight" reaction or the "stress response." In emergency situations, stress can save your life—giving you extra strength to defend yourself, for example, or spurring you to slam on the brakes to avoid a car accident.It's what keeps you on your toes during a presentation at work, sharpens your concentration when you're attempting the game-winning free throw, or drives you to study for an exam when you'd rather be watching TV. But beyond a certain point, stress stops being helpful and starts causing major damage to your health, mood, productivity, relationships, and your quality of life. This thematic paper presents the overview of stress and the various attributes associated with it.*

Keywords: Stress, life stresses, stress management

Introduction

Stress is actually a normal part of life. The stress response is the body's way of protecting you. At times, it serves a useful purpose. When working properly, it helps you stay focused, energetic, and alert. Stress can also help you rise to meet challenges. Stress can motivate you to get that promotion at work, or run the last mile of a marathon. But if you don't get a handle on your stress and it becomes long-term, it can seriously interfere with your job, family life, and health.Stress management training can help you deal with changes in a healthier way. Effective stress

ISSN 2319 -1709-35

management helps to break the hold stress has on your life, so you can be happier, healthier, and more productive.

Causes of Work Stress

Everyone has different stress triggers. Work stress tops the list.Causes of work stress includes being unhappy in your job, having a heavy workload or too much responsibility, working long hours, having poor management, unclear expectations of your work, or no say in the decision-making process, working under dangerous conditions, being insecure about your chance for advancement or risk of termination, having to give speeches in front of colleagues and facing discrimination or harassment at work, especially if your company isn't supportive.

Causes of Life Stress

Life stresses can also have a big impact. Examples of life stresses are the death of a loved one, loss of a job, increase in financial obligations, getting married, moving to a new home, chronic illness or injury, emotional problems (depression, anxiety, anger, grief, guilt, low self-esteem), taking care of an elderly or sick family member and traumatic event, such as a natural disaster, theft, rape, or violence against you or a loved one.

Other Major Causes of Stress

Sometimes the stress comes from inside, rather than outside. You can stress yourself out just by worrying about things. All other factors which lead to stress are fear and uncertainty, unrealistic expectation and change. When you regularly hear about the threat of terrorist attacks, global warming, and toxic chemicals on the news, it can cause you to feel stressed, especially because you feel like you have no control over those events. And even though disasters are typically very rare events, their vivid coverage in the media may make them seem as if they are more likely to occur than they really are. Fears can also hit closer to home, such as being worried that you won't finish a project at work or

won't have enough money to pay your bills this month.No one is perfect. If you expect to do everything right all the time, you're destined to feel stressed when things don't go as expected.Any major life change can be stressful -- even a happy event like a wedding or a job promotion. More unpleasant events, such as, major financial setback, or death in the family can be significant sources of stress.Your stress level will differ based on your personality and how you respond to situations. Some people let everything roll off their back. To them, work stresses and life stresses are just minor bumps in the road. Others literally worry themselves sick.

Symptoms of Stress

The physical effects of stress includesweating,pain in the back or chest, cramps or muscle spasms, fainting, headache, heart disease, high blood pressure, muscular aches, nervous twitches, sleeping difficulties and stomach upset. Emotional reactions can include anger, anxiety, burnout, concentration issues, depression, fatiguea feeling of insecurity, forgetfulness, irritability, nail biting, restlessness and sadness. Behaviours linked to stress includefood cravings and eating too much or too little, sudden angry outbursts, drug and alcohol abuse, higher tobacco consumption, social withdrawal, frequent crying and relationship problems.

Types of Stress and Treatment

Stress can be acute (short term), episodic (frequent), or chronic (long term). Acute stress, which is the most common type, results from events, pressures, and demands of the recent, past and anticipated in the near future. Acute stress that occurs frequently is called episodic stress. This type of stress is common in people whose lives are extremely busy or disorganized, and in those who tend to worry excessively. Chronic stress is a serious condition. This type, which occurs when a stressful situation is prolonged and continuous, often causes severe physical and emotional symptoms.

Post traumatic stress disorder (PTSD) is a psychiatric condition that can occur following life-threatening events, such as military action, natural disasters, terrorist incidents, serious accidents, and violent personal assaults (e.g., rape). Following severe trauma, some stress reactions do not go away and even worsen over time. People who suffer from PTSD often relive the experience through nightmares and flashbacks, have difficulty sleeping, and feel detached or estranged. These symptoms are often severe and long lasting and they can significantly impair daily life.

Treatment

Treatment includes self-help and, in instances where the stress is caused by an underlying condition, certain medications.Therapies that may help to induce relaxation.Doctors will not usually prescribe medications for coping with stress, unless the patient has an underlying illness, such as depression or a type of anxiety.In that case, the doctor is treating a mental illness and not the stress.In such cases, an antidepressant may be prescribed. However, there is a risk that the medication will only mask the stress, rather than help you deal and cope with it. Antidepressants can also have adverse effects. some coping strategies before stress hits can help an individual manage new situations and maintain physical and mental health. If you are already experiencing overwhelming stress, seek medical help.

Stress Management Mechanism

People can learn to manage stress and lead happier, healthier lives. Stress management starts with identifying the sources of stress in your life. This isn't as easy as it sounds. Your true sources of stress aren't always obvious, and it's all too easy to overlook your own stress-inducing thoughts, feelings, and behaviours. Sure, you may know that you're constantly worried about work deadlines. But maybe it's your procrastination, rather than the actual job demands, that leads to deadline stress.Here are a few lifestyle choices you can take to manage or prevent the feeling of being overwhelmed.

Exercise: Studies have shown that exercise can benefit a person's mental and physical state.

Reducing intake of alcohol, drugs, and caffeine: These substances will not help prevent stress, and they can make it worse. They should be cut out or reduced.

Nutrition: A healthy, balanced diet with plenty of fruit and vegetables helps maintain the immune system at times of stress. A poor diet will lead to ill health and additional stress.

Prioritizing: Spend a little time organizing your to-do list to see what is most important. Then focus of what you have completed or accomplished for the day, rather than what you are yet to finish.

Time: Set aside some time each day just for yourself. Use it to organize your life, relax, and pursue your own interests.

Breathing and relaxation: Meditation, massage, and yoga can help. Breathing and relaxation techniques can slow down the system and help you relax. Breathing is also a central part of mindfulness meditation.

Talking: Talking to family, friends, work colleagues, and your boss about your thoughts and worries will help you "let off steam." You may be comforted to find that you are "not the only one." You may even find there is an easy solution that you had not thought of.

Noticing symptoms is the first step to taking action. People who experience work stress due to long hours may need to "take a step back." It may be time to review their own working practice or to talk to a supervisor about reducing the load.

Find your own destressor: Most people have something that helps them relax, such as reading a book, going for a walk, listening to music, or spending time with a friend or a pet. Joining a choir or a gym helps some people. Online social networking can help, as long as it does not replace face-to-face contact. It can allow you to stay in touch with friends and family who are far away, and this can reduce anxiety.

If the stress is affecting your daily life, you should seek professional help. A doctor or psychiatric specialist can often help, for example, through stress management training.Stress management can help toremove or

change the source of stress, alter the way you view a stressful event and lower the impact that stress might have on your body.

Conclusion

Stress is any physical, chemical, or emotional factor that causes bodily or mental unrest. It produces a number of symptoms which vary from person to person. Moreover, it is a notable fact that an absolute elimination of stress is unrealistic, so it is very important to manage the stress for those undergoing through it.Stress is a complex phenomenon that can be defined in several ways; however, put together; it is the wear and tear of everyday life. Stress is present in all in small or big form. Understanding and managing the stress is inevitable for a successful life. We cannot think of a life without stress. But acting sensibly to stressors is a very important for a healthy life.Stress management consists of making changes to your life if you are in a constant stressful situation, preventing stress by practicing self-care and relaxation and managing your response to stressful situations when they do occur.

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General Article

DISCOURSE - ORIENTED PEDAGOGY OF ENGLISH AND LEARNING OUTCOMES: AN OVERVIEW

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Abstract: *This thematic presentation provides the fundamentals of discourse-oriented pedagogy of English language learning. It also discusses about meaning of discourse, features and effectiveness of DOP, learning outcomes in English and outcome-based evaluation etc. Innovative and effective approaches are employed by the English teachers to help their students to acquire the basic level of competence in the use of English language after the completion of their course. In this context Discourse-Oriented pedagogy has gained wider acceptance and mobility. It is based on constructivist principles, student oriented and practical approach. It emphasizes on the whole language approach, and the teacher role is shifted to a discourse facilitator. It is a holistic approach hence it also considers communicative dimension of language too. Here Language is viewed as a means of communicating ideas and emotions, a tool for expression of meaning, and a collaborative process for maintaining interpersonal relationships.*

Keywords: Discourse oriented pedagogy, learning outcomes, English language Learning, Outcome based evaluation

Introduction

English is now seen as a 'new basic skill' which all children require if they are to fully participate in the civil society of 21st century **(Graddol,2010)**. Developing language competence among children in English is a challenging task for teachers teaching English at the primary, secondary and higher secondary levels of school education. English requires intensive and distinctive focus in the process of its teaching and learning. Learners should get optimum meaningful exposure to English. A course in English is aimed at helping the learner become an efficient user of English. At the end of the course he/she should be able to use English language appropriately, fluently

ISSN 2319 -1709-35

and accurately.The existing approach treats language at the discourse level, which means that language is not viewed as a set of disconnected sentences but as a set of linguistic discourses such as stories, songs, conversations, diary entries, descriptions, narratives, slogans, etc.

Meaning of Discourse

Discourse literally means written or spoken communication. Students express themselves through discourse. Discourse helps a student to make him or her understandable to others. It also enables him to develop his knowledge and understanding. So discourse enables a student to write or, to speak more than a single sentence. There is coherence and cohesion between a numbers of sentences. Discourse involves the study of both form and function. Form helps the written aspect and function helps the spoken aspect. Written text contains a theme and sentences are interwoven, while the spoken language might focus on theme plus opening, and developing and closing sentences. So, a discourse can be defined and analyzed by the analysis of speech units larger than sentences, analysis of linguistic dependencies and analysis of written language units larger than sentences. The teacher provides suitable discourses to the pupils in such a manner that pupils practice learning all the four language skills in an integrated manner. He/she functions as a facilitator.

Discourse Oriented Pedagogy (DOP)

Language exists in different forms-songs, dialogues, poems, descriptions, plays, stories, letters, etc. These are normally used in discourses or situations. A discourse means connected language in speech or writing. If a teacher provides teaching- learning experiences to his/her pupils, his/her teaching may be called Discourse-Oriented Teaching/Pedagogy. The discourse Oriented teaching is in accordance with the constructivist pedagogy suggested in the National Curriculum Framework (NCF) 2005.Among the recent effective approaches in ELT, Discourse Oriented Pedagogy, also known as DiscourseApproach, is actually based on the constructive principles of teaching and learning.

It is more student-oriented and practical approach compared to the traditional methods of teaching.

The Government of Kerala introduced Discourse Oriented Pedagogy for teaching English during the academic year 2006-07.Here discourse is defined as a mode of communicating certain ideas meaningfully in a particular situation. It emphasizes on the use of varied modes of discourses through the basic skills. It nurtures learners curiosity, supports co-operative and collaborative learning, ensures the transaction of English through meticulous spiralling discourses, integrates the various skills of language in a most natural way and bridges the gap between the so called 'good' and 'bad' performers of language. The context of language use is given important. To have holistic language experiences, discourse level processing of activities is inevitable (Anandan, 2006).

Salient Features of Discourse-Oriented Pedagogy

Prasad (2014) explains the features and effectiveness of DOP. Letters, Words, and Sentences are not presented in Isolation; they are properly embedded in a discourse that the learner can experience. Discourse – Oriented Pedagogy can be adapted to suit all levels of learners. Skill development takes place within the context of experiencing a variety of discourses and writing for a variety of purposes and audiences. It is in conformity with the whole language philosophy. The focus is on the process and not on the product. The Input and Output alone do not make a discourse.

Effectiveness of Discourse-Oriented Pedagogy

Written as well as Spoken discourses– help the second language learners to develop their SR skills These skills with the help of previous knowledge make the learner write and speak effective English. Discourse helps to locate errors and facilitates better use of lexical, grammatical and rhetorical aspects of the language. It promotes creative and meaningful use of language rather than mechanical production of

language patterns. It ensures the spontaneous construction of different kinds of oral and written discourse without much teaching. It ensures collaborative learning atmosphere in the classroom.

Learning Outcomes

Learning outcomes are statements that describe the knowledge or skills students should acquire by the end of a particular assignment, class, course, or program, and help students understand why that knowledge and those skills will be useful to them. They focus on the context and potential applications of knowledge and skills, help students connect learning in various contexts, and help guide assessment and evaluation. Learning outcomes inform curriculum, teaching and assessment. Today outcomes are being designed to promote more effective at all levels of education. In the words of Huba& Freed (2000) 'Learning outcomes describe our intentions about what students should know, understand, and be able to do with their knowledge when they graduate' (pp. 9-10).

NEP 2020 also upholds the concept of learning outcome. One of its aims is to reorient the content and process of school education to move the education system towards real understanding and learning how to learn –and away from the culture of rote learning present today. The curriculum will aim at enabling learners to attain learning outcomes relating to curricular areas relating to all curricular areas including sports, science, art, language, literature, and ethics education, thereby ensuring that all children and youth receive an education that helps realize their potential, in all realms, to the fullest (NEP 2020, pp.76-77).

Learning Outcomes and Kerala School Curriculum

As per the rules of the RTE Act, the idea of learning outcome was introduced in the Kerala School Curriculum in 2013. Knowledge of learning outcomes is essential to plan teaching-learning process and evaluation, in a precise and practical manner. Learning outcomes are

the aims to be achieved by the learner during the various stages of school education, precise and accurate statements based on the knowledge, skills, attitudes, values etc. to be acquired by a learner in a particular subject-area are called learning outcome.

The learning outcomes should be stated based on performances that can be observed and measured. An analysis of the learning outcome will help assess the knowledge, skills, values and attitudes that should be acquired by the learner at the end of each unit, class and stage have been acquired or not. Precise and clear assessment activities can be planned, based on specific learning outcomes. Everybody can attain learning outcomes by adopting suitable teaching-learning strategies that consider content and learning requirements of the learner. Each learner should get learning experiences necessary to ensure learning outcomes.

Learning Outcomes in English

Language learning progresses naturally with exposure to and use of language. Language learning becomes meaningful when it is connected with the immediate environment/surrounding of children. The English language is generally taught and learnt as a second language in India, in varied contexts and resources. Broadly, the curricular expectation of English language learning is the attainment of a basic proficiency for meaningful communication.

The main goal of teaching English as a second language is to develop the ability to use it. And the ability to use English requires enhancing LSRW skills in the learners. To achieve these abilities, it is paramount to have a set of academic standards, also termed as linguistic competencies. And these usually describe the educational objectives and define the knowledge and skills that students are expected to learn and use them at a specific stage of learning. And this is only possible through a set of discourses such as narratives, conversations, pictures, diagrams (pie, bar) or passages from the textbook (Khanna and Anandan, 2014).

The aim of producing efficient users of English is achieved throughthe development of language skills, the mastery of language elements, the development of life skills, the development of discourse constructs and the inclusion of literary skills.

Outcome-based Evaluation and DOP

Outcome-based evaluation, "OBE," is the measurement of results. It identifies observations that can credibly demonstrate change or desirable conditions. It is a systematic way to assess the extent to which a program has achieved its intended results. Outcomes-based evaluation – clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of the learning experiences. In outcome-based learning, learning outcomes (knowledge, skills and competences) to be achieved by learners are in the focal point of the learning process. All educational activities and resources need to be related to the intended learning outcomes of a learning module or course, in order to assist the learners in successfully achieving the intended learning outcomes at the end of the learning experience. Outcome based assessment means that the assessment process must be aligned with the learning outcomes. This means that it should support the learners in their progress (formative assessment) and validate the achievement of the intended learning outcomes at the end of the process (summative assessment). It also means that the assessment process should be adapted depending on the kind of outcomes that it is aimed to appraise.The DOP recommends the importance of Continuous Comprehensive Evaluation (CCE) for construction and application of knowledge and for developing the innate potential of the learners through regular feedback. The pedagogy also focus on the developmental procedures for enhancing meaningful learning processes through CCE and its impact through formative and summative assessment on the components of classroom transaction.

Conclusion

The demands made on the users of English in the contexts of today are diverse and focused on learning how to learn. Teaching and learning of English is seen as integrative, experiential, developmental processes for promoting educationin real-life situations.As a result, there is a transformation towards methodology and procedures adopted by the teacher i.e. on what actually happens and how the transactional processes are carried out in the classroom. Discourse oriented pedagogy is a new approach to language learning in this context. The main aim of introducing Discourse oriented pedagogy and outcome based learning and evaluation in the curriculum is to help the children to realize their potential, to the fullest.

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From the news

HYBRID LEARNING - EDUCATION 3.0

The pandemic has disturbed all sectors, especially the education systems. Educators came forward to serve their communities. It was recognized that schools played a vital role beyond learning and could creatively manage the immediate issues with a reimagined education system. For school heads, this was an alien situation and required expert support. After the global school lockdown due to the COVID-19 pandemic, countries have been exploring a variety of hybrid learning modalities as they re-open schools.

Hybrid or blended learning is any combination of in-person and remote learning. By no means it is something new. The approach has been implemented for years in education, especially with the disruption of digital technologies. Given the mounting efforts and interest that countries are devoting to hybrid learning, in this blog (which is part of a series highlighting key lessons from a forthcoming study to understand the perceived effectiveness of remote learning solutions) we examine distinctive features to categorize it, examples from country experiences, and seven enabling factors that should be considered for its effective implementation. Thre are three distinctive features to categorize hybrid learning:

Time (when): which can be synchronous (at the same time, also known as "real time") or asynchronous (sequential, at different times) or it can have a bit of both.

(where): which can be in person (also known as face-to-face, sharing the same physical location) or can be remote (two or more people in different physical locations).

Interaction (how): which can be unpacked in terms of the direction of the communication (one-way; bi-directional or multi-directional) or type of engagement, from no-participation (an individual is learning alone without interaction with others), limited participation (where the

ISSN 2319 -1709-35

interaction with others is limited, structured or controlled) and high participation (active and dynamic exchange with others is regular and essential). Considering these dimensions and their sub-components, there is a variety of hybrid learning combinations. It is tricky to find the best combination that addresses what is being taught, where, by whom, and to whom. For each one of these combinations different technology can be integrated. All these aspects will have strong implications in the kind of hybrid learning provided. Time, space, and interaction should be well-thought-out when designing what subjects, topics and approach need to be considered for teaching and learning in person and remotely. Most of our learning experiences can be considered a continuum of hybrid learning. When we learn we integrate different uses and intensities of these three dimensions.When considering the variability of forms and methodologies for delivering and evaluating hybrid learning, it is difficult to compare its cost effectiveness. There are several constant factors in most of the various forms of hybrid learning. When planning and evaluating different forms of hybrid learning policymakers can take into account:

Effective use of the time: The amount of time invested in face-to-face learning, won't be the same for hybrid environments. Some activities might require more time while others might be faster. Should the length of a remote school day and an in-person school day be the same? What is the ideal duration of a remote lesson?

Basic skills for hybrid learners: Not all students will equally enjoy or have this same proficiency for each one of the combinations of hybrid learning. It is critical to equip learners with the skills to learn by themselves, be motivated, resilient, and empowered. The good news is that those skills can be learned. Guidance on that will be critical.

Level of support that learners receive: Different mechanisms and tools for hybrid learning will require different kinds of help (the support can also be blended, like remote coaching programs, asynchronously contacting students or a simple helpdesk where students can request support). Monitoring and supporting well-being is also a critical component.

Content's adaptation: The same amount and diversity of content usually covered when teaching face-to-face may not be transferred into hybrid learning. Adaptations will be required in terms of volume and type of content selected.

Pedagogical coherence: Switching back and forth between different forms of hybrid learning can be difficult for students and teachers, especially if there is a lack of coherence between the different learning experiences. To enable learning continuity, education systems can ensure that the lessons learned remotely can be also discussed in person or translate them into project-based learning with the students. An effective alignment with the curriculum will require to carefully combine the three dimensions.

Technology: Rather than focus on the lack of access to technology (a well-documented problem), the challenge to address here will be the relevance of the tools chosen. The best technology will not rely on full synchronous multi-directional interaction (a lot has been written about "Zoom fatigue"). To calibrate the combination of the technologies, considering the dimensions and factors mentioned, will increase its relevance and impact.

Hybrid learning offers a wealth of options. However, this flexibility comes with some trade-offs. By trying different degrees of interaction, frequency, and learning at school and home, countries can improve iteratively by documenting experiences, acknowledging the mistakes, improving, supporting teachers and students and adapting quickly. While it is still too early to see the extent to which hybrid learning will become a permanent feature of education post-COVID19, but there are enough trends to say that countries should plan and prepare for hybrid learning to be part of education delivery for the near future.

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An Educator speaks

C.V. RAMAN

CV Raman was the first Indian scientist to receive Noble Prize for Physics in 1930 for his pioneering work related to the scattering of light.When the light traverses a transparent material, some of the light that is deflected changes in wavelength. This phenomenon is now called Raman scattering and is the result of the Raman effect. The compositions of solids, liquids, and gases can all benefit from this effect. It can also be used to diagnose diseases and track manufacturing processes.His complete name was Chandrasekhara Venkata Raman. He was born in Tiruchinapalli, Tamil Nadu as a second child of his parents Chandrasekhar Iyer and Parvathi Amma. He got the studious environment at home as his father was the lecturer in mathematics and physics. He studied from the Presidency College, Madras, in 1902, and passed his B.A. examination in 1904. He was awarded the gold medal in physics. C.V. Raman passed his M.A. in 1907 with high distinction.

After his master's degree in physics at Presidency College, University of Madras, in 1907, Raman became an accountant in the finance department of the Indian government. He became professor of physics at the University of Calcutta in 1917. Studying the scattering of light in various substances, in 1928 he found that when a transparent substance is illuminated by a beam of light of one frequency, a small portion of the light emerges at right angles to the original direction, and some of this light is of different frequencies than that of the incident light.
Probably the most distinguished scientist of the 20th century, C V Raman was selected as the first national professor of India after the independence. The education of CV Raman did not begin at the school but at the time he realized his love for scienceand in 1933 he moved to the Indian Institute of Science, at Bangalore, as head of the department of physics. In 1947 he was named director of the Raman Research Institute there and in 1961 became a member of the Pontifical Academy of Science.

During his lifetime, he published about 21 studies in domestic journals and 146 publications in foreign journals. For his remarkable

ISSN 2319 -1709-35

work in Physics which is known as the "Raman Effect," CV Raman was awarded many prizes which include the prestigious Nobel Prize. His work on the phenomenon of the scattering of light was instrumental in the modern Raman Spectroscopy. In the year 1924, he was elected to the fellowship of the Royal Society of London and in 1929, he was conferred with the knighthood title of 'Sir'. Besides being honoured with Lenin Peace Prize in 1958, CV Raman was awarded the highest civilian honour 'Bharat Ratna' in 1954 by the Government of India.

Apart from inventing the famous Raman effect, he is also known as the discoverer of the atomic nucleus and Proton. In 1932, Raman and Suri Bhagavantam discovered the quantum photon spin. This discovery is further proved the quantum nature of light. Raman after winning Nobel Prize, said, he was inspired by the "Wonderful blue opalescence of the Mediterranean Sea". He was not only an expert on light, he also experimented with acoustics. Raman was the first person to investigate the harmonic nature of the sound of Indian drums such as tabla and mridangam.Raman was honoured with many honorary doctorates and memberships of scientific societies. He was member of the Deutsche Akademie of Munich, Swiss Physical Society of Zürich, Royal Philosophical Society of Glasgow, Royal Irish Academy, Hungarian Academy of Sciences, Academy of Sciences of the USSR, Optical Society of America and Mineralogical Society of America and Romanian Academy of Sciences. Some of his famous books are Scattering of Light, Acoustic, Optica,Optics of Minerals & Diamond,Physics of Crystals and Floral Colours & Visual Perception. That is the reason why we celebrate National Science Day in India on 28 February. On the first death anniversary of CV Raman, the Indian Postal Service published a commemorative stamp of Sir CV Raman with the reading of his spectroscopy and a diamond in the background.He continued his research years until his death. His untimely death was caused by a heart stroke in the year 1970 on November 21.

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From the Cyber Sea

APPLICATION OF METAVERSE FOR PREPARATION OF EDUCATORS OF TECHNOLOGY ERA

The Metaverse is a complex concept. In recent years, the term has grown beyond virtual world, to include aspects of advanced internet, 3D virtual spaces and other modern technologies to construct and interact with virtual environments. Students will soon be able to do many things, even those that wouldn't be possible in the physical world. In the next 20 years, they may become primary tools for learning many aspects of history, for acquiring newskills, for job assessment, and for many of our most cost-effective and productive forms of collaboration. Even Facebook, the world's biggest social network is referred to as Meta. Itwas chosen to reflect the company's focus on the Metaverse. However, the complexity of theMetaverse suggests great uncertainty about how and when its forces and features willmanifest in society. It has got some benefit but it certainly doesn't mean that everything is good about it. People who are addicted to this technology seem to have some sort of distortion in depth perception. Irrespective of its many socially-undesirable outcomes, Metaverse is here to stay. In thiscon text, preparation of educators in the technological realm requires priority.

There are many debates about the necessity of metaverse in a classroom facility. Ineducation, the debate has moved on from this fundamental question to how one might use them most effectively, how implementations can be managed, which types of simulations are useful, and how learning gains can be maximized in the mixed media environments. Invarious disciplines such as medicine, engineering, the natural sciences and engineering, the use of sophisticated simulations is now well established. It is being said by many experts that there will be a race over the next five years about how to equip one's own face, make appearances looklike there alones and produce

ISSN 2319 -1709-35

virtual objects to create effective simulations. Educators can be trained in the 3-dimensional world where avatars are active on behalf of the real users in the real world. Digitalized content can be created by the educators in the virtual world called Prims or primitives which form the digitalized structures in virtual reality. Such simulations are powerful learning tools which can makeeven institution nalvisits across different territorial borders easier. Mutual communication in the metaverse is possible just like there alworld Our surroundings will become filled withpersons, places, objects, and activities that don't actually exist, and yet will seem deeplyauthentic to us. Decades of research has shown that this sense of embodiment improves thequality of online interactions. It is believed that Information access problem isn't the lack of information, but the lack of ability to find the right information. Training in Filters, metadata, tags and search systems may be the most important infrastructure technology that Metaverse offers which can ease information access for both teachers and students.

The virtual worlds which attract students are now dominated by proprietary plat forms and gaming platforms like World of Warcraft. Even though this is the present scenario, many surveys show that the desire for education outweighs desire for gamingcontent. Using avatars and mapped facial expressions, educator scan come together to discuss, synthesize, and learn from one another. Therefore, metaverse gives the opportunity to make learning experiences moreengaging. Currently, the application of the Metaverse for preparing educators is constrained by significant economic and political barriers. However, to revolutionize education, unleashing experiences that are not just engaging and informative but thrilling and inspiring through metaverse is a possibility by training theeducatorsin metaverse.

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Book Review

THE POWER OF THE SUBCONSCIOUS MIND'BY JOSEPH MURPHY

Shiney Jacob

Themeritorious psychological publication 'THE POWER OF THE SUBCONSCIOUS MIND' by Joseph Murphy serves the creative output for upbringing the unknown power inside us which is our own subconscious mind. Joseph Murphy was an Irish-born American author with a degree in Psychology from the University of Southern California. In Los Angeles, Murphy met Religious Science founder, ErnestHolmes. Murphy was ordained into Religious Science by him. In another meeting with Divine Science Association president Erwin Gregg led him tobeingreordained into Divine Science. Instead of being theoretical on his knowledge Murphy comprises the content with simple techniques like story narration and comprehending his views. He divides the book as mentally conquering and manifesting life by satisfying our body, mind and human instincts. The author reminds us how strong is our subconsciousness state. To achieve its benefits, we should train our brain to manifest them by repeating purposeful activities. To make it clearer the author here uses a situation when an opera singer Enrico Caruso who gets nervous before shows about his frequent throat spasms allowing his subconscious fear to devour him in his conscience of negative thoughts.Despite this, he was able to conquer these physical reactions by repeatedly telling his conscious mind to stop interfering with his subconscious mind. This meditative practice allowed him to reduce his fears and perform naturally and automatically.

Now after giving us the key to open this power the author shows us the doors of modus operandi to apply this in our life. Foremost to visualize and think positively. Murphy tells an anecdote about his own life. When one of his relatives developed TB, the parent's son was determined to help him to get better. Joseph Murphy taught the power of the subconscious to millions of listeners on a weekly radio show called Church of Divine Science. He says this 'miracle' is not a unique circumstance. On this radio show, he described

ISSN 2319 -1709-35

the mental movie method. Then, you hold it in your mind until your subconscious makes it in to a reality. Secondly, by utilizing the natural ability to heal.Placebos occur when an individual gets better or feels better after being given a substance that is not a real treatment. The most famous example is giving participants sugar tablets rather than real medication. Even though taking placebos is not a real treatment, doctors have found that this effect has various physical and psychological benefits. When you are in a drowsy state, you allow your subconscious mind to have a more significant influence over your faith in a treatment.Joseph Murphy explains that you do not even have to believe in the genuineness of a treatment for it to work. Instead, if we allow our subconscious field to be open to questioning and challenging standard views, then this is enough.

He also specifies how to overcome fear using subconscious mind, itis an emotion that troubles us throughout our lives. When we were young, we were fearful of monsters under our beds. As we grow up, we continue to have fears in the shape of worrying about money. Staying young isn't about age but about remaining active and doing the things we enjoy. Joseph provides an anecdote of an executive that lived near him and retired at 65. The man had spent almost all of his life in learning by winning the subconscious mind. In this book, Joseph also talks about his father, his father set out to learn French at the elderliness after five years later, he was a specialist in it. He then started to study Gaelic. Joseph Murphy recommends picturing your desired end goal in life. This will feed our subconscious state, which will help us to reach thegoals. Joseph Murphy gives an example of a young Australian boy. This is a perfect example of combining our passions with positive visualization, leading to initial success and motivating us to excel even further.Joseph Murphy explained that positive visualization could even be used to find the perfect romantic partner.

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Institutional - Rs. 1000/- per year. Abroad : $150

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Account No. 0329-00372782-190001, IFSC No CSBK0000329 (Catholic Syrian Bank, Nalanchira Branch, Thiruvananthapuram)

The Journal is biannual - June & December

Payment can be made as Cash / D.D. in favour in ***Publication Wing, Mar Theophilus Training College, Nalanchira, Thiruvannathapuram - 15, Kerala, India. 695015***

Interdisciplinary Research Journal of MTTC
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Publication Wing
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Thiruvananthapuram, Kerala - 695 015
Phone : 0471 - 2530074 Fax : 0471 - 2533518
email : mttctvm15@yahoo.com
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ISSN 2319-1709-35