Research Paper E-ISSN NO : 2455-295X | VOLUME : 4 | ISSUE : 6 | JUNE 2018

NURTURING THINKING ROUTINES IN ANGANAWADI CHILDREN: PERSPECTIVES OF 21ST CENTURY

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ABSTRACT

The world in the 21st century throws challenges to young people through its complex environmental, social and economic pressures. Responding to these challenges requires young people to be creative, innovative, enterprising and adaptable with motivation, confidence and skills to use creative and critical thinking purposefully. Countries across the world are working towards providing such a goal-oriented education to prepare the young ones for the future. A greater need arises in the developing countries to enable the countries to achieve sustainable development. Several developing countries have changed their educational policies and have brought in a drastic change in the education practices. India is also one among them in implementing a large initiative viz., the Integrated Child Development Services (ICDS) to reach out to the children in every rural corner of the country. However the strategies to develop a thinking society is not yet envisioned. The need of the hour is to devise specific effective strategies and implement efficiently in order to steer the country towards sustainable development. The present paper discusses the strategies for the same through the implementation of thinking routines in young children of Anganawadis.

Keywords: Thinking Routines, Dispositions Of Creative And Critical Thinking, Early Childhood Education, Anganawadis.

INTRODUCTION

The world in the 21st century throws challenges to young people through its complex environmental, social and economic pressures. Responding to these challenges requires young people to be creative, innovative, enterprising and adaptable with motivation, confidence and skills to use creative and critical thinking purposefully. The main goal of education is training thoughtful students who are not only able to identify ambiguous and complex thinking situations but are also able to think actively and independently. All over the world, countries are working towards providing such a goal-oriented education to prepare the young ones for the future. Though this kind of education is required by all the countries, the need to give it a big thrust is more in the developing countries. Several developing countries have changed their educational policies and have brought in a drastic change in the education practices. India is also one among them in implementing a large initiative viz., the Integrated Child Development Services (ICDS) to reach out to the children in every rural corner of the country. A study of the effectiveness of these strategies will guide us towards a better understanding of the need of the hour.

Rao, Sun, Jessie Wong, Brendan, Patrick , Shaeffer, Young, Bray,, Diana Lee (2014) have conducted a rigorous education literature review and have reported the great effect in large scale comprehensive programmes typically funded by the government and which include more than one type of intervention. For example, the ICDS of India .More systematic research is required with respect to the issues related to type of intervention and minimum "dosage" of intervention required to achieve sustainable gains in typical milestones of cognitive development

- The types of early child development interventions that are effective in attaining typical milestones and can be relatively easily scaled up in different developing country context.
- The minimum "dosage" of intervention needed to achieve sustainable gains in children's cognitive development considering their expected milestones.

The researcher in the present study has initiated an experimental study with a set of children belonging to the Anganawadis of ICDS to arrive at a plausible type of intervention keeping in mind the "dosage" of intervention to nurture creative and critical thinking dispositions through thinking routines. Cognitive development involves learning, thinking and language skills and this paper focuses on the thinking aspect of cognitive development, and specifically, the creative and critical thinking dispositions in young children. This research is in-line with the specific recommendations made in the report mentioned above ---

- Invest in comprehensive large-scale programs like Pastoral del Nino programme in Paraguay, ICDS in India and the Integrated Programme in the Philippines.
- Invest in well-designed and properly implemented parent-focussed or child-focussed interventions as they have positive effects on children's cognitive development

Developing creative and critical thinking skills is crucial for increasing a country's capability and effectiveness

(Nagmani And Tripathi 2017) to cope with the changes of a transient economy in the light of globalisation. Some developing countries have already started working towards this. In Singapore, the Thinking Unit in the Ministry of Education(MoE) was set up in 1997 as a vehicle for change in developing a learning environment which includes educational institutions, teachers, parents and industries. In the same year, the "Thinking School, Learning Nation" (TSLN) initiative was launched focusing on strategies such as infusion of critical and creative thinking skills into school curriculum, reduction of subject content and revision of assessment modes such as introduction of project work(Leen, Hong, Kwan, T Ying, 2016). The Australian curriculum is described as a 3-dimensional one which recognises the central importance of disciplinary knowledge, skills and understanding, general capabilities and cross-curricular priorities. Creative and critical thinking takes a major place in the general capabilities.

These initiatives are an inspiration to conduct methodical research to arrive at effective strategies to nurture creative and critical thinking skills in children right from early childhood in India. Good thinkers not only have creative and critical thinking ability but also have motivation, attitudes, values and habits in addition. (Tishmann&Andreade, 1995; Nagamani and Venugopal,2017). Dispositions are cultural phenomena and the result of the interaction between beliefs, values and environment norms. (Perkins &Tishmann, 1998)Enculturation is a suitable pattern to enhance students' thinking dispositions.(Costa, 1991) Also, the thinking dispositions approach is a favourable approach to nurture thinking skills as it pays attention to (Sedaghat, &Rahmoni, 2011) ---

a. Motivational and emotional aspects
b. Improvement of thinking language
c. Appreciation of high level knowledge
d. Development of strategies to manage thinking
e. Improving transfer of knowledge
f. Making thinking visible for children who have not reached the abstract thinking stage
g. Using all class materials and facilities
h. Emphasising on facilitative role of teachers and active role of children

However, it requires a high competency level of the teacher in curriculum management and a strong commitment to higher order thinking.

The present study is based on the concept of incorporating a Thinking Culture by the use of Thinking Routines and the Language of Thinking in a systematic way to nurture creative and critical thinking dispositions in early childhood. As the children at this age have not yet reached the abstract thinking stage, the strategy of making thinking visible is employed and only the dispositions are nurtured (Nagamani and Tripathi, 2017).

METHODOLOGY

The present study is based on the fact that young children develop concepts through concrete experiences using their sensory organs. The implementation of thinking routines in order to nurture creative and critical thinking dispositions in a prosperous culture of thinking environment was implemented. Following random sampling techniques 20 Anganawadi Centres were selected from ICDS Yelahanka of North Bengaluru district consisting of an intact group of 26 children from 2 adjacent Anganawadis. A single group quasi-experimental pre test-post test design was employed with repeated measures during the intervention. The intervention was executed for a period of 90 days and thinking routines were nurtured methodically and in developmentally appropriate stages.

Stage 1 – Process of Visualisation

Stage 2 – Process of Drawing

Stage 3 – Process of Enacting

- ✓ Thinking Routines – Thinking as a routine activity is implemented in an environment where language and culture of thinking is pronounced. This enables children to think in every situation in life as they become habituated to thinking.[5]
- ✓ Logical Thinking – Children are provided opportunities to logically understand and sequence various stages of a situation.
- ✓ Guided Visualisation – Children are trained to visualise situations so that their thinking can be made visible to them in the form of images (art and enacting).
- ✓ Creative Thinking Dispositions – Children are provided with an environment where they are motivated to use innovative ways of trying to work in a particular situation. This enables children to always use new ways of resolving a situation and not come to a dead end in any situation. Also helps them to reason out with ethical behaviour.
- ✓ Critical Thinking Dispositions – Children are encouraged to analyse, be open-minded, be sensitive to others feelings, consider others point of view and change decision based on evidence in various situations. This nurtures their disposition to be critical which helps them in their social, emotional, moral and spiritual development.

The two routines that were used ---

1. Thinking Routine 1 – See, Visualise, Draw
2. Thinking Routine 2 – Listen, Visualise, Enact

Inculcation of thinking routine :

A simple strategy of story narration was used. Narration was accompanied by guided -visualisation so as to make children able to visualise and comprehend the story.

Opportunity was given to create the story, using blocks, clay and sand children's understanding of the story and their thinking was made visible to them. Children were then provided with a platform to enact the story and guide the story in their own direction. Children were encouraged to think of **innovative** end of the story, analyse why each character behaved the way they did and also think of alternative ways of behaviour for each character. This was set as a routine so that children got into the habit of thinking in this direction in every situation (Nagamani and Tripathi, 2017).

Thinking routines not only nurture thinking dispositions but also support in making the children develop self-confidence, self-regulation, executive skills and achieve socio-emotional well-being[7] when collaboration with the parents were utilised to reinforce children's behaviour at home. Also, thinking routines makes thinking a habit among children and enables them to acquire various dimensions of school readiness. Training the change agents viz., the parents and the teachers along with implementation of thinking routines will help the children in achieving learning milestones and developmental milestones even after 1,2,3 years of completing their early childhood education. Hence this can also be used as a strategy for sustainable development.

Components of Creative And Critical Thinking Dispositions

Components of creative and critical thinking dispositions considered were

- Open mindedness
- Sticking to the main point
- Being analytic
- Sensitive to the feelings of others
- Change decision based on evidence
- Try new ways

Each component was assessed before and after the intervention along with repeated measures throughout the intervention at regular intervals and rating was given by the researcher based on the following criteria :

➢ COMPONENT	TANGIBLE BEHAVIOUR OF THE CHILD	RATING
OPEN MINDEDNESS	Not questioning at all	**1**
	Sometimes curious	**2**
	Interacts and questions	**3**
	Questions and perceives	**4**
	Interacts, is curious and questions all the time	**5**
STICKING TO THE MAIN POINT	Unable to relate to the present situation	**1**
	Difficult to respond to the question appropriately	**2**
	Able to respond to the point slowly	**3**
	Able to respond to the point in a reasonable time, does not deviate	**4**
	Quickly responds to the point, no deviations	**5**
BEING ANALYTIC	Not able to comprehend challenging situations	**1**
	Able to only comprehend after suitable explanations	**2**
	Comprehends but does not want to face the challenge	**3**
	Comprehends, wants to face the challenge but analyses with explanation	**4**
	Able to comprehend, faces challenge and analyses on his/her own	**5**
SENSITIVE TO OTHERS FEELINGS	Does not bother about others	**1**

	On instruction will think about others	**2**
	Able to think about others slowly	**3**
	Feels for others most of the times	**4**
	Feels for others all the time	**5**
CHANGE DECISION BASED ON EVIDENCE	Unable to respond to arguments	**1**
	Does not analyse arguments	**2**
	Able to only identify the source, does not look for evidence	**3**
	Focuses on question, needs support in judging credibility of the source	**4**
	Focuses on question, judges the credibility of source, makes decision	**5**
TRY NEW WAYS	Unable to try new ways	**1**
	Follows instructions to try new ways	**2**
	Needs example to try new ways	**3**
	Quickly follows example and tries new ways on his/her own	**4**
	Tries new ways on his/her own	**5**

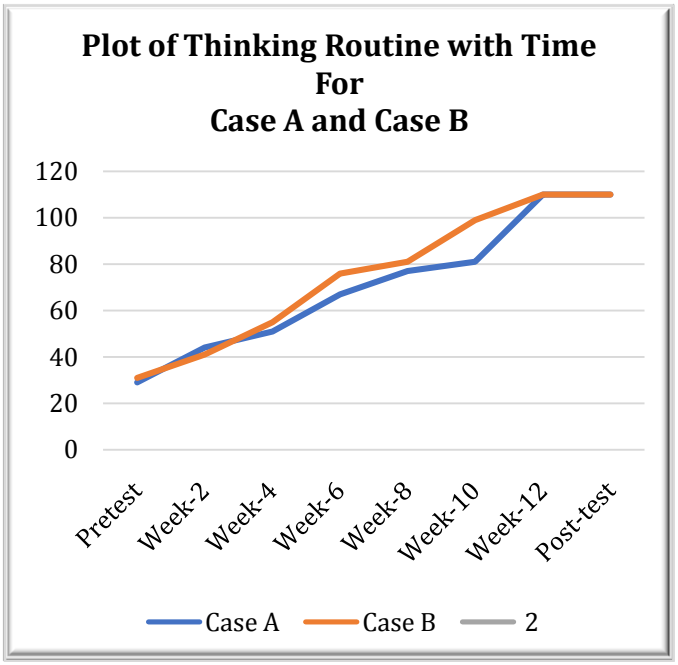
RESULTS AND DISCUSSION

Two cases were of special interest as this girl and the boy showed minimum score in the pre-test but showed steady and vertical progress through the process of intervention reaching almost a high in the post-test. The data collected is given below:

Child	Sex	Age	Pre-test	Int-1	Int-2	Int-3	Int-4	Int-5	Int-6	Post-test
A	F	5	29	44	51	67	77	81	110	110
B	M	5.5	31	41	55	76	81	99	110	110

The minimum score the girls obtained in the pre-test is 29 and that the boys obtained is 30. In case A, this girl showed the minimum whereas in Case B, the boy scored just one above the minimum of 30. A look at the scores through the intervention shows a steady and gradual progress in the thinking routine encompassing both creative and critical thinking dispositions. The maximum post-test score among girls was 119 and among boys was 113. In comparison, both Case A and Case B has shown a significantly high score in the post-test.

A Figure depicting the progress of the children through the intervention is as shown below :



From the figure, it is evident that there is a Vertical & gradual increase in the dispositions from week-1 to week-6 which then suddenly leaps to a higher level and stabilises after the intervention. The minimum "dosage" required must be 12 weeks till when the dispositions go on enhancing. Further research may be required to titre the "dosage" however.

CONCLUSIONS

The implementation of thinking routines has many

implications out of which the nurturing of creative and critical thinking dispositions are discussed here. It is obvious that the intervention has had a positive influence on the dispositions of children towards creative and critical thinking. Other related studies have shown implications in socio-emotional development, self-regulation, executive skills, sustainable development, school readiness and positive mental health when combined with parental collaboration. Hence, a pilot project can be undertaken involving implementation of thinking routines for children and a training and collaboration for the change agents viz., teachers and parents, in a larger representative sample. This could lead us to fine tune the strategies and implement across the entire population of ICDS.

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