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A STUDY ON THE PERCEPTIONS OF SECONDARY SCHOOL TEACHERS TOWARDS PROJECT-BASED LEARNING

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ABSTRACT

Education is an effective means of social reconstruction. It has relevance to the needs and aspirations of the people living in a fast changing society. It is one of the most powerful instruments of social, economic and cultural transformation necessary for the realization of national goals. It helps to increase the productivity, achieve national and emotional integration and accelerate the process of modernization. Curriculum and Pedagogy are two important aspects in the teaching learning process at secondary level. The curriculum should be transacted applying suitable pedagogy in secondary schools. The teachers follow various methods and techniques for teaching different school subjects. The emphasis in the teaching learning process has been shifted from teacher-centered education to child-centered learning. Now, the emphasis is on 'Activity-Oriented Education', wherein the children involve themselves in a good number of activities in the school; and have an exposure to 'Experiential learning'. Project-based learning is an active method that develops the maximum involvement and participation of students in the teaching-learning process. It requires the teacher to energize the learning scenario by promoting the co-operation of students to investigate, make decisions and respond to the challenges of the project. It also requires activating an evaluation system that promotes awareness, reflexivity and a critical spirit, facilitating students for deeper learning. The main purpose behind developing this method is to create effective learning opportunities where learners can work collaboratively in groups to answer a driving question, solve a problem, or tackle a challenge with an aim of creating an end product. In the process of learning, the teacher plays the role of a facilitator guiding the students to work on different projects in the subjects concerned. The present study is an attempt to explore the perceptions of secondary school teachers towards Project-Based Learning (PBL). The researchers used a

well prepared and standardized questionnaire as the tool for collection of data from a sample of 100 teachers selected from 20 secondary schools located in Rajamahendravaram town in Andhra Pradesh using Stratified Random Sampling technique. Mean score values, standard deviations and independent t-tests were used for analysis of data. The findings of the study revealed that the demographic variables – Gender, Age, Marital Status and Length of service of teachers working in Secondary Schools did not show any influence on their attitude towards Project-based learning. The study suggests solutions to the problems faced by the students in Project-based learning.

Key words: *Project-based learning, perceptions, secondary school teachers, teaching-learning process, activity-oriented education, experiential learning.*

INTRODUCTION

Education is the process of facilitating learning, or the acquisition of knowledge, skills, beliefs, habits and values. It is an effective means of social reconstruction. It has relevance to the needs and aspirations of the people living in a fast changing society. It is one of the most powerful instruments of social, economic and cultural transformation necessary for the realization of national goals. It helps to increase the productivity, achieve national and emotional integration and accelerate the process of modernization. It cultivates social, moral and spiritual values among people.

Curriculum and Pedagogy are two important aspects in the teaching learning process at secondary level. The curriculum should be transacted applying suitable pedagogy in secondary schools. The teachers follow various methods and techniques for teaching different school subjects. The emphasis in the teaching learning process has been shifted from teacher-centered education to child-centered learning. Now, the emphasis is on ‘Activity-Oriented Education’, wherein the children involve themselves in a good number of activities in the school; and have an exposure to ‘Experiential learning’.

CONCEPT OF ‘PROJECT-BASED LEARNING’

Project-based learning is an active method that develops the maximum involvement and participation of students in the teaching-learning process. It requires the teacher to energize the learning scenario by promoting the co-operation of students to investigate, make decisions and respond to the challenges of the project. It also requires activating an evaluation system that promotes awareness, reflexivity and a critical spirit, facilitating deeper learning.

In Project-Based Learning (PBL), students plan, discuss and implement projects that have real-world impact and are significant to them (Blank, 1997; Dickinson et al., 1998). They develop interpersonal and team relationship skills with the teacher, who acts as a guide and counselor during the process of learning (Kolmos, 2012; Thomas, 2000). This allows students to think about their proposals, develop them and become aware of the process itself (Brundiens and Wiek, 2013; García et al., 2010).

NEED FOR THE PRESENT INVESTIGATION

It is the need of the hour to prepare the students to enter a knowledge-based economy by helping them to acquire the 21st century skills. In this context, the teachers play a significant role in molding the career of the students. The teacher is an important person for social change. He/she is an innovator and trend setter in the teaching-learning process. He/she is basically a reformer of education and society. The teacher is said to be a friend, philosopher and guide to his/her students.

The teachers working in secondary schools should be well-versed in the content as well as pedagogy relating to their specialization of teaching. It is felt that project-based learning is very useful for the students to comprehend the subject matter in a better way with their active participation and involvement in the process of learning. The researchers felt that it would be useful to know the perceptions of secondary school teachers towards Project-based learning (PBL) in the schools.

The investigators, after going through the literature available in the area of project-based learning, proposes to analyze different factors that influence the perceptions of teachers towards project-based learning in secondary schools. The purpose of the study is to explore the perceptions of secondary school teachers towards implementation of PBL in classroom teaching; and to study the influence of PBL method on collaborative learning, disciplinary subject learning, iterative learning and authentic learning. Such an analysis would provide the basis for a more detailed understanding of the issues and challenges the students come across in Project-based learning in secondary schools. The present study is an attempt in this direction.

OBJECTIVES OF THE STUDY

The study aims at exploring the perceptions of secondary school teachers towards implementation of PBL in classroom teaching; and to study the influence of PBL method on collaborative learning, disciplinary subject learning, iterative learning and authentic learning.

The study also aims at finding out the influence of certain demographic variables such as gender, age, marital status and teaching experience on the attitude of teachers towards Project-based learning in secondary schools.

HYPOTHESES OF THE STUDY

The following hypotheses have been formulated for the present investigation:

- (i) There is no significant difference in the perceptions of male and female teachers working in secondary schools towards Project-based learning.
- (ii) There is no significant difference in the perceptions of teachers aged below 40 years and those aged 40 years and above towards Project-based learning.
- (iii) There is no significant difference in the perceptions of married and unmarried teachers working in secondary schools towards Project-based learning.
- (iv) There is no significant difference in the perceptions of teachers with an experience of less than 10 years and those with 10 years and above towards Project-based learning.

LIMITATIONS OF THE STUDY

The study is limited to find out the influence of four demographic variables, viz., gender, age, marital status and teaching experience on the attitude of teachers working in the secondary schools located in Rajamahendaravaram town in Andhra Pradesh.

METHODOLOGY

(a) **Sample:** The sample of the study consists of 100 teachers selected from 20 secondary schools located in Rajamahendravaram town in Andhra Pradesh using Stratified Random Sampling technique.

(b) **Research Tool:** The researchers used a well prepared questionnaire consisting of 30 items as the tool of research for the present investigation. After selecting the items for the tool, the researchers verified whether the tool prepared for the present investigation is in conformity with the conditions required by a standard measuring instrument. The tool was administered to 20 teachers (5 Headmasters and 15 School Assistants) under Pilot study. The measures of reliability, validity and objectivity of the tool have been calculated. Further, the researchers conducted item analysis for the items included in the tool. Out of 30 items selected for the tool, the discriminating power of 24 items has been found positive and is found negative in respect of 6 items. The items whose discriminating power is negative have been removed; and the final tool consists of 24 items which are pool proof in all respects.

(c) Administration of the Tool

The final form of the questionnaire consisting of 24 items on various issues and challenges the students encounter in Project-based learning has been administered to 100 teachers (20 Headmasters and 80 School Assistants) working in 20 secondary schools being managed by Local Body and Private organizations in Rajamahendravaram town in Andhra Pradesh. The sample selected for the final administration of the tool is exclusive; and the sample taken for pilot study has not been included here.

STATISTICAL INTERPRETATION OF DATA

The data collected has been analyzed using different statistical techniques such as Mean score values, Standard Deviations and t-ratios; and are presented in the following table.

Table showing t-values of different variables relating to the attitude of teachers towards Project-based learning in secondary schools

S. No.	Variable		N	Mean	S.D.	t-ratio	Result
1	Gender	Male	60	83.83	23.42	0.06*	*Not Significant at 0.05 and 0.01 levels
		Female	40	84.65	23.71		
2	Age	Below 40 years	70	84.50	24.04	0.37*	*Not Significant at 0.05 and 0.01 levels
		40 yrs. & above	30	87.16	22.20		
3	Marital status	Married	80	84.78	24.13	0.08*	*Not Significant at 0.05 and 0.01 levels
		Unmarried	20	83.32	23.65		
4	Teaching Experience	Less than 10 yrs	75	84.23	24.18	0.06*	*Not Significant at 0.05 and 0.01 levels
		10 yrs. & above	25	85.04	23.85		

FINDINGS OF THE STUDY

On the basis of the analysis and interpretation of data, the researchers have arrived at the following findings and drawn the conclusions.

1. There is no significant difference in the attitude of male and female teachers working in secondary schools towards Project-based learning.
2. There is no significant difference in the attitude of teachers aged below 40 years and those aged 40 years and above towards Project-based learning.
3. There is no significant difference in the attitude of married and unmarried teachers working in secondary schools towards Project-based learning.
4. There is significant difference in the attitude of teachers working in secondary schools with a teaching experience of less than 10 years and those with an experience of 10 years and above towards Project-based learning.

CONCLUSIONS

From the findings of the study, it is concluded that gender, age, marital status and length of service of the teachers working in secondary schools have no influence on their attitude towards Project-based learning.

EDUCATIONAL IMPLICATIONS

- (i) The study would help the teachers identify the problems faced by their students in secondary schools in learning different subjects through Project-based learning.
- (ii) The present study helps the teachers to bring about the necessary changes in the Pedagogy with regard to the implementation of Project-based learning.
- (iii) The study would certainly help the teachers to select suitable projects to their students in different school subjects.
- (iv) The study would help to enhance the participatory skills of students in the teaching-learning process.
- (v) The study makes the students realize the need for co-operative and collaborative learning in understanding different concepts relating to their school subjects.

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