

A Study of Techno-Pedagogical Competence among Secondary School Teachers

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ABSTRACT

To attain efficiency in every aspect of teaching, a teacher must have a high level of professional commitment. Teachers having appropriate techno-pedagogical skills can make teaching a more pleasurable experience without feeling much pressure. Techno-pedagogy has three ranges of information such as content, pedagogy and technology. Techno-pedagogical competence is teachers' ability to use technology technology effectively in teaching. A teacher with competency in technology and pedagogy must know the existence, components, and capability of various technologies used in teaching and learning settings.

Keywords: Content, Pedagogy, Technology, Techno Pedagogical Competence

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INTRODUCTION

Education is a process of human enlightenment and empowerment for the achievement of a better and quality life. Every teacher has the content knowledge of their subject or discipline. Also, they have some pedagogical competency related to their field. But with this changing world, technology integration is a very important aspect. It has become a necessity for teachers to have techno-pedagogical competency, i.e., a combination of technology integration and pedagogical competency in their field. Adding technological knowledge to the knowledge of teachers' pedagogical competency is a need today (Arslan, 2015). Teaching is a unique and complex activity because it requires considerable knowledge, a wide variety of interests and the skill of the teacher. Techno-pedagogical competence is teachers' ability to use technology effectively in teaching. A physical education teacher with competency in technology and pedagogy must have knowledge of the existing and use of various technologies in teaching and learning settings. Technology is closely associated with innovations, the transformation of ideas into new and useful products or processes. Education and technology are interrelated with each other. The techno-pedagogical competency of the teachers can be examined through the following techno-pedagogical skills, given by Sana, Adhikary and Chattopadhyay (2018):

These techno-pedagogical competencies of teachers can be developed and enhanced using the following strategies (Sana, Adhikary&Chattopadhyay, 2018) (Figure 1):

- Enhancing proficiency in the English language and online content
- Developing techno-pedagogic skills in teachers
- Creating eternal techno-pedagogy supportive resources
- Developing techno-pedagogical e-content
- Establishing computer-based learning resources management systems
- Scope of research and development

Objectives of the Study

- To study the difference in techno-pedagogical competence secondary school teachers.

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Research Questions

- Are there any differences in techno-pedagogical competence of male and female secondary school teachers working in private schools?

METHODOLOGY

The present study is descriptive and the survey method used to collect data. Descriptive research gathers the data on a particular

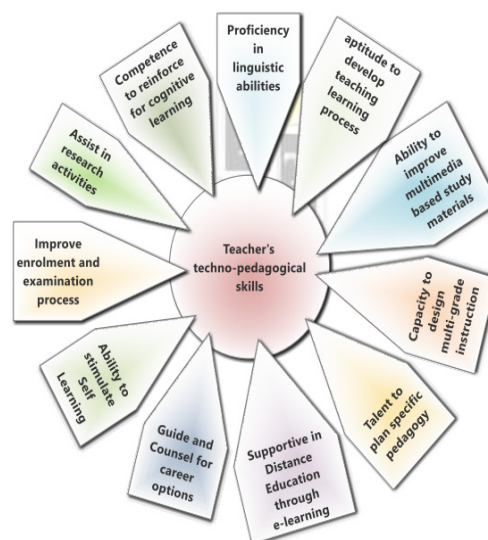


Figure 1: Showing Skills that Support Techno-Pedagogical Competence

event and then organizes, tabulates, depicts and describes the data. All secondary school teachers are working private schools in the Gurugram district of Haryana constitute the population for the present study. The investigator has selected 120 teachers from 12 secondary schools (60 male and 60 female) as a sample by using simple random sampling technique. The detail classification of teachers as the sample is given in Figure 2:

Research Tool used for Collection of Data

The investigator used a techno-pedagogical competence scale standardized by S. Rajasekhar and K. Sathya Raj in 2013 for data collection. The scale is 40 items divided into four areas:

- Technology in preparation for teaching.
- Technology in providing motivation.
- Technology in presentation.
- Technology in evaluation.

Statistical Techniques Used for Analysis of Data

For analysis and interpretation of data t-test has been used.

RESULT ANALYSIS

A result pertaining to the difference in techno-pedagogical competence of male and female teacher working in private schools

To find out the difference in techno-pedagogical competency of male and female teacher working in private schools, t-test is applied and the result is presented in Table 1.

It is evident from the Table 1 that the obtained t-value is 1.34 which is found to be not significant. Therefore, it can be interpreted

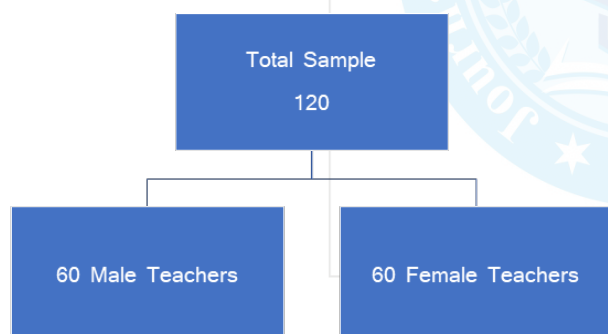
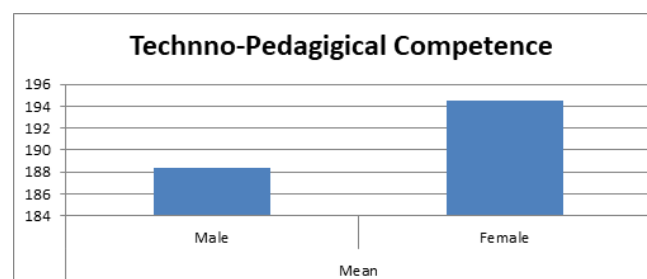


Figure 2: Showing classification of teachers as sample for the collection of data



Graph 1: Showing difference in techno-pedagogical competence of male and female teacher working in private schools

Table 1: Difference in techno-pedagogical competency of male and female teachers working in private schools

Type of School	Variable	Gender	N	M	SD	SEd	t-ratio
Private Secondary Schools	Techno-Pedagogical Competence	Male	60	188.35	25.52	4.59	1.34
		Female	60	194.51	24.81		

(Table value at 0.05 and 0.01 level of significance is 1.98 and 2.62)

that there is no difference in techno-pedagogical competence of male and female teacher working in private schools. The difference in means scores is graphically presented in Graph 1.

CONCLUSION

Effective teachers possess several essential competencies, such as techno-pedagogical competencies, professional commitment, capabilities to handle stress, etc., irrespective of their subjects. It is observed that the level of techno-pedagogical competence between male and female secondary school teachers working in private secondary schools is moderate. The study also revealed no difference in the techno-pedagogical competence of male and female teachers working in private schools.

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