

THE CONCEPTIONS OF IN-SERVICE TEACHERS TOWARDS THEIR TEACHING AND LEARNING

* Zufishan Zafar Farhan,

** Sheeba Irfan Ansari

S.Y.B.Ed, Aishabai College of Education

Abstract:

According to researchers in the field of teacher education, teachers' classroom practices and etiquettes are moulded by various theoretical frameworks and their conceptions towards implementing various pedagogies in the process of teaching. The process of teaching and learning is influenced by various cognitive variables, one of them being teaching - learning conceptions. The present study was conducted to examine the differences in the attitude of in-service teachers towards their conception of Teaching and Learning. A sample of 91 in-service teachers was collected from schools and colleges in Mumbai. The results of the study indicated that irrespective of teachers teaching at school level or college level preferred a traditional approach. When compared, college in-service teachers favoured this approach to a greater extent than school teachers. In the last few years as various new approaches have surfaced in the field of education, a paradigm shift from traditional teaching approach towards the constructivist approach has taken the frontier. Various important steps for transferring from teacher-oriented to student-oriented approach have been taken, irrespective of the educational institute or the students that the teachers are catering to.

Keywords: Traditional Approach, Constructivist Approach, Conception of Teaching and Learning, in-service Teachers

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Introduction:

There is a need to evolve the education system, with evolving times, in order to cater to the needs of today's generation which is a difficult and challenging endeavour. Thus arises the need to evolve the education of today's teachers. For efficiently improving teacher education and the learning process of students, the teacher's beliefs about the process of teaching and learning prove to be a significant instrument (Brophy & Good, 1986; Chant, 2002; Cheng et al., 2015; Cross, 2009; Handal & Herrington, 2003). The teacher's behaviour in classroom settings as a professional is a direct reflection of their belief systems of the process of teaching-learning and their own learning process. According to Koballa et al. (2000), identifying and assessing teacher candidates and their ideas in relation to classroom practices is an essential function of every teacher education program.

Understanding teachers' beliefs and gaining insight into changes of beliefs is the need of hour in order to improve both teacher education and their classroom practice (Pajares, 1992; Richardson, 2003). Northcote (2009) highlights the need to assess and identify the teachers' beliefs regarding the teaching-learning process. The teachers' conception of teaching and learning either facilitates or inhibits translation of curriculum guidelines into the complex and daily reality of classroom teaching. Teachers' conceptions play a prominent role in the acceptance or rejection of educational reforms



(Nespor, 1987; Borg, 2005). Handal and Herrington (2003) contend that if the teachers' beliefs are not harmonious with the beliefs that laid the groundwork of an educational reform, then the repercussion of such a mismatch can affect the achievement of the innovation. On the other hand, if teachers' beliefs are similar in temperament with the innovation then effective implementation of the reform can be expected. For reforms in teacher education to be acknowledged, incorporated, and set in motion in the behavioural repository and practice of teachers, in accordance with Kagan (1992), they have to develop conceptions in resemblance with the new reforms.

Today there is a need to shift to the new generation's style of teaching and teachers. There are two approaches taken by educators today; Traditional Teaching and Constructivist Approach to teaching. Traditionally the teachers prefer using the chalk-and-talk method, which is a teacher-centred method. It relies more on memorization and recitation. Constructivist approach is the belief that knowledge is generated based on one's own ideas and their experiences. It has its premises based on that our understanding is the reflection of the experiences based on which we construct our knowledge and cannot just be transmitted from teachers. It involves active participation of the learners and eventually results in development of higher order thinking skills in them.

The National Curriculum Framework 2005 promotes the use of the constructivist approach in school education as one of its aims in order to cater to the child's inner or naturally curious nature and develop holistically (Chapter 2.4.1- Teaching for Construction of Knowledge) (Ncert, 2007; Surhone et al., 2011). The National Education Policy 2020 gives importance to the development of the creative potential of each individual, by adopting the Constructivist approach (Sarkar & Sarkar, 2021; Verma & Kumar, 2021). NEP 2020 commands the formulation of a new and comprehensive National Curriculum for Teacher Education NCFTE 2021, in consultation with NCERT to ensure passionate, motivated, highly qualified, professionally trained and well-equipped teachers (Kumari, 2020).

The majority of our teachers are still comfortable with using the traditional approach, as Constructivist Approach is a relatively new concept and has only been incorporated lately in the curriculum of teacher education courses across the country. Understanding the conceptions of teachers will allow us to create new pedagogies and policies to help enhance our curriculum to produce productive citizens (Pajares, 1992; Richardson, 2003). Both pedagogical methods have their own benefits and should be implemented according to the need and relevance. Adopting and incorporating constructivism in real classroom situations is going to be an extremely challenging task for teachers and the only way to help alleviate this is to change the outlook of teachers towards it. (Mohapatra et al., 2015). Thus, this study was intended to examine the changes of teachers' teaching approach preference and conceptions of teaching and learning.

Literature Review:

In the past decades, education researchers have been actively studying about teachers' beliefs or conceptions about teaching and learning. Bruner (1996) comments that educational reforms that neglect to tackle issues pertaining to teachers' beliefs are liable to many difficulties. Still, in recent years, studies on teachers' beliefs about teaching and learning have gathered momentum (e.g. Ertmer, 2005; Hoy et al., 2006; Jimoyiannis & Komis, 2007; Teo et al., 2008). Studies of this nature enlighten teacher educators of the issues relating to the design and the evaluation of teacher education and professional development programs.

Various studies conducted about teachers' conceptions on teaching and learning use the traditional and constructive concept of teaching and learning (Entwistle et al., 2000; Kane et al., 2002; Minor, et al., 2002; Samuelowicz & Bian, 2001). According to Chan & Elliot (2004), the teacher's past exposure and beliefs during their training plays an important role in influencing the conception of teaching and learning. Researchers represent teacher's conceptions about teaching



and learning and they are assumed to be belief driven (Clark & Peterson, 1986; Marland, 1995; Marland, 1998; Richardson, 1996). Quantitative studies of those relationships, in particular with the causal relations of different teacher's beliefs and conceptions, have the potential to inform teacher's conceptions and hence theoretical frameworks about the process of teaching and learning. Several studies (Ertmer, 2005; Ertmer, et al., 2012; Sugar et al., 2004) unveil that teachers' educational beliefs tended to be correlated with their use of computers in the classroom. Jacobs and Clements (1999) noted that these two distinct teaching and learning beliefs were either beneficial or obstructive to technology implementation in school. Additionally, teachers preferring constructivist approaches tend to use technology more in the classroom than teachers with a traditional pedagogical belief (Becker, 1999; Becker & Riel, 2000). Further, researchers also noted that teachers with constructivist beliefs tended to use technology to support student-centered curricula whereas those with traditional beliefs used computers to support more teacher-directed curriculum (Hermans, et al., 2008). There are several possible explanations. First, constructivist teachers tend to place "the locus of initiative and control largely within the student, who typically undertakes substantial, authentic tasks, presented in a realistic context, that require the self-directed application of various sorts of knowledge and skills for their successful execution" (President's Panel on Educational Technology, 1997, p. 34). The use of constructivist approaches that allow students to construct their own knowledge through ample learning opportunities connected to real-world experiences is an adequate fit in the broad constructivist philosophy by substantiate use of technology (Jonassen, et al., 2003; Rakes, 1996). Figuratively, technology is deemed as a useful tool for teachers to implement constructivist pedagogies, which, eventually, strengthens their intention to use technology. Teachers with constructivist beliefs were found to use technology more than traditional principle holders (Becker, 2001; Becker & Riel, 2000). Teachers that espouse the use of constructive pedagogical approaches the use of technology becomes an effective tool to engage the learners in cognitively challenging tasks to effectively enhance their thinking, communicating, producing, and presenting ideas (Becker & Ravitz, 1999; Hermans et al., 2008) as a way to advance constructive learning (Vannatta & Fordham, 2004). Attitude (Taylor & Todd, 1995) and facilitating conditions (Venkatesh et al., 2012), the key factors of technology use are further strengthened with increased experience of using technology.

In recent years around the globe, the general trend of educational reforms appears to have been progressing towards constructivist-oriented pedagogy, and since teachers are key agents in most reform efforts, their conceptions towards proposed pedagogy are pertinent on the implementation of such reforms (Leung, 2008). According to Chan (2007), more studies on teacher's beliefs in the Asian context is expedient, as most of the original studies have been conducted in the West. Thus, the present study was undertaken in order to understand the conception of school and college in-service teachers towards their teaching-learning.

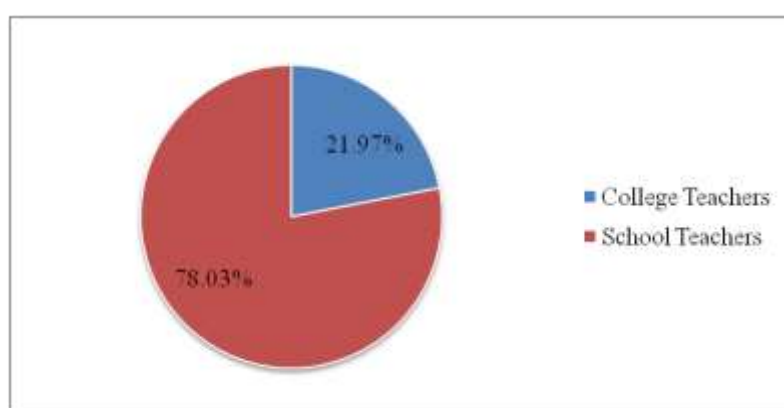
Methodology and Sample of the Study:

A Descriptive survey was carried out in order to study the attitude of in-service teachers towards their conception of Teaching and Learning. Convenient sampling technique was used for data collection. For the purpose of this study data was collected from 91 in-service teachers belonging to Schools and Colleges. A Conception for Teaching and Learning Questionnaire (CTLQ), a two-factor, 30-item questionnaire designed to measure the Traditional Conception and Constructivist Conception of Teaching and Learning was used in the present study. Developed by Chan (2001), the CTLQ uses a 5-point Likert-type format ranging from 1 (strongly disagree) to 5 (strongly agree). The CTLQ yields a total score that ranges from 30 to 150, with a separate score calculated for each subscale: an 18-item traditional conception and a 12-item constructivist conception. A high score for each item represents a positive response. Out of

total in-service teachers, 20 were college teachers and 71 were teaching in schools. The Table 1.1 below depicts the sample size considered for the present study.

Table 1.1: Sample Size for Present Study

	N	Percentage
In-Service Teachers	91	100 %
In-Service College Teachers	20	21.97 %
In-Service School Teachers	71	78.03 %

**Figure 1.1: Pie-Chart Depicting In-service Teachers from Colleges and Schools for the Present Study**

The total sample consisted of 91 in-service teachers out of which 78.03% taught in schools and 21.97 % taught in colleges.

Hypothesis Testing and Interpretation of Data:

1. There is no significant difference in the attitude of in-service teachers towards their teaching - learning conception.
2. There is no significant difference in the attitude of in-service school and college teachers towards their teaching - learning conception.
3. There is no significant difference in the attitude of in-service teachers towards their conception of traditional and constructivist approach.
4. There is no significant difference in the attitude of in-service school and college teachers towards their teaching - learning conception based on school and college
 - Traditional Conception
 - Constructivist Conception

Table 1.2: Relevant Descriptive Statistics

	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
In-Service Teachers	112.98	112	111	14.35	0.36	0.04
Traditional Conception amongst in-service Teachers	75.28	74	72	6.46	-0.028	0.48
Constructivist Conception amongst in-service Teachers	37.70	37	37	9.99	0.015	-0.017

The above Table 1.2 shows relevant descriptive statistical measures that were used to test Hypothesis 1 and 2

Hypothesis 1: The Mean for all in-service teachers was found to be 112.98, Median was found to be 112, Mode was found to be 111 and Standard Deviation was found to be 14.35. The Skewness is found to be 0.36 and hence the distribution is positively skewed. The Kurtosis is found to be 0.04 which is positive and thus the distribution is Leptokurtic.

For Traditional Conception among all the in-service teachers, the mean was found to be 75.28, median was found to be 74, mode was found to be 72 and Standard Deviation was found to be 6.46. The skewness is negatively skewed and found to be -0.028. The kurtosis is found to be 0.48 which is positive, and thus the distribution is Leptokurtic.

For Constructivist Conception among all the teachers, the mean was found to be 37.70, median was found to be 37, mode was found to be 37 and Standard Deviation was found to be 9.99. The skewness is positively skewed and found to be 0.015. The kurtosis is found to be -0.017 which is negative and thus the distribution is Platykurtic.

The below Table 1.3 shows relevant Inferential Data Analysis used to test Hypothesis 2 and 3.

Table 1.3: Inferential Data Analysis

	N	Mean	t value	p value	LoS
In service School Teachers	71	110.47	3.31	0.00034	S
In service College Teachers	20	121.9			
Traditional Conception among in-service Teachers	91	75.28	30.12	<0.0001	S
Constructivist Conception among in-service Teachers		37.70			
Traditional Conception among School Teachers	71	74.45	2.38	0.01	S
Traditional Conception among College Teachers	20	78.25			
Constructivist Conception among School Teachers	71	37.22	0.86	0.39	NS
Constructivist Conception among College Teachers	20	39.4			

Hypothesis 2: The t value of attitude towards conception of teaching and learning of all teachers was found to be 30.12 and the p value was found to be <0.0001 which is less than 0.01 and 0.05, thus it is significant. Therefore, null hypothesis is rejected. There is a significant difference in the attitude of teachers towards their teaching - learning conception

Hypothesis 3: The t-value of in-service school and college teachers preferring Traditional conception was found to be 2.38 and the p value was found to be 0.01 which is equal to and less than 0.01 and 0.05, thus it is significant. Therefore, null hypothesis is rejected. There is significant difference in attitude of school and college teachers preferring Traditional Conception of teaching and learning

Hypothesis 4: The t value of in-service school and college teachers preferring Constructivist conception was found to be 0.86 and the p value was found to be 0.39 which is greater than 0.01 and 0.05, thus it is not significant. Therefore, null hypothesis is accepted. There is no significant difference in attitude of school and college teachers preferring Constructivist Conception of teaching and learning.

Scope and Delimitations of the Study:

In the present study, teachers working in schools and colleges were taken as the sample. Pre-service teachers were not considered. The present study focused on teaching - learning conception with respect to school and colleges. It has excluded variables such as gender, age, experience, qualification, etc. from its purview. The study has adopted the quantitative approach to the study rather than the qualitative approach. Teachers residing in Urban areas were included



and those institutions having English as their medium of instruction were considered. Those institutions having vernacular medium of instruction and located in Rural areas were excluded. Other factors that can affect teaching-learning conception like training provided for use of ICT, availability of resources, the school-climate, culture etc were not considered.

Discussion and Conclusion:

The results of the above study suggest that the attitude of Teachers towards their teaching and learning is inclined towards traditional conception. When compared to school teachers, college teachers show more inclination towards traditional approach, which is a characteristic of the lecture methods adopted in colleges due to shortage of time, resources and insufficient training. Another reason could be the lack of motivation and past experiences of the teachers that influences the typical norm of adopting the traditional approach.

This study is in line (more or less similar) with the findings of Taşkin-Can (2013) and Lyngdoh & Sungoh, (2017) who found that, in general, pre-service science teachers hold teacher centred beliefs. In other words, they favour the traditional approach rather than the constructivist approach. Whereas the findings of Uredi (2013); Hursen and Soykara (2012); Guha and Paul (2014) are in contrast to present study where it was established that teachers predominantly show a positive attitude towards constructivist approach. Very few studies have focused on in-service teachers' attitude towards teaching-learning conception, most study focusing on the attitude of preservice teachers.

Traditional conception in teaching sees the teacher as the source of knowledge and students acquiescent receiver of knowledge. It utilizes teacher-centered teaching strategies in contrast to the constructivist conception which uses student-centered teaching strategies. Thus developing critical thinking and collaboration skills in students enabling them to participate actively in the process of learning. and learning takes place in environments where students are able to participate actively.

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Cite This Article:

* *Farhan, Z., Z. & **Ansari, S., I. (2022)* The Conceptions of In-Service Teachers towards their Teaching and Learning, *Electronic International Interdisciplinary Research Journal*, Volume No. XI, Issue-VI, 88-96.