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Examining the K-5 Teachers' Perceptions towards Teaching: Traditional and Constructive Approaches

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Abstract

Teachers' views, classroom behaviors, and the learning environment are important for students learning. This study assessed teachers' attitudes toward traditional and constructive teaching and learning concepts. Survey data was collected from 692 in-service teachers at government primary schools through a self-reported Likert-type data collection instrument. Quantitative analysis revealed that most teachers believe in a constructive teaching-learning approach in Bangladesh. However, teachers' previous educational qualifications considerably influenced their teaching and learning concepts. Teachers with post-secondary degrees believe in constructive teaching-learning approaches more than traditional teaching-learning concepts. Therefore, it would be beneficial that attempts are made to improve teacher education from Higher Secondary School Certificate (HSC) to Honours or master's level to achieve constructivist teaching in the classroom.

Keywords: Teaching-Learning, Elementary Education, Teachers Quality, Bangladesh, Teachers' Training

The concept of teaching and learning has been changing around the world since the last century because of the introduction of different kinds of pre-service and in-service training, courses, technology, and literature. It is well-known that teachers are not born but made in a process (Candal, 2015). Good teachers embrace their knowledge and abilities through persistent and purposeful efforts that help to fulfill the learners' needs. One of the required responsibilities of a teacher is to assist their students learning as well as the school's expectations for accelerating students' social and moral development (Sæbø & Midtsundstad, 2018).

Teaching and Learning

The "teaching and learning" process can be defined as transforming knowledge from teachers to students (Munna & Kalam, 2021). Teaching is a series of activities that assist the learners' internal learning process. According to Sequeira (2012), learning is a transformational process that comes through understanding a new skill, comprehending a scientific rule, or

shifting one's mindset. Understanding the teaching-learning process is one of the prerequisite skills for being a successful teacher. The primary role of teachers is to transmit precise information to students who are considered "empty vessels" (Kukari, 2004). Finally, teaching and learning concepts refer to teachers' opinions about their preferred methods and the roles of both teachers and students (Chan & Elliot, 2004).

A teacher is a focal point for learning and plays a key role in an education system known as a teacher-centered approach (Otukile-Mongwaketse, 2018). This paradigm has changed over time, and learners have taken the center concern within the teaching-learning process (Taras, 2010). The shift from a teacher-centered to a learner-centered approach, in which all elements of learning, including objectives, activities, resources, and even learning evaluation methods, should be oriented toward the needs and wishes of students (Hutchinson & Waters, 1993). There are two forms of teaching-learning concepts: the traditional concept of teaching and the constructivist concept of teaching (Cheng et al., 2009). There appears to be a significant transition in teaching and learning today from a conventional to a constructivist perspective (Chai et al., 2009).

The traditional teaching concept finds teachers as a source of information and pupils as passive recipients. Traditional teaching focuses on acquiring information, particularly from teachers and textbooks, to assist students in encountering and understanding well-defined concepts (Howard et al., 2000). In traditional teaching-learning, the teacher's role is directive-oriented and rooted in authority. Teachers behave in a deductive manner, whereas students consider a *"tabula rasa"* and primarily, they work alone. Teachers disseminate the information to the students, and students receive the knowledge. Teachers seek the correct answers to evaluate students' learning.

The constructivist teaching concept promotes active learning settings for critical thinking, exploration, and collaboration. The teacher's role is interactive and rooted in negotiation in the constructive teaching-learning process. Teachers commonly behave interactively, whereas students are considered thinkers, and they work in a group. Teachers have a dialogue with students helping them to construct their knowledge.

To ensure effective, inclusive, and equitable qualities in the students' education, it is important to evaluate the teachers' concept of teaching and learning. As per the guidance of Sustainable Development Goal Four (SDG4), a substantial increase in qualified teachers is needed by 2030. To ensure the supply of teachers, the countries have at least the minimum organized teacher training (e.g., pedagogical training), either pre-service or in-service modality (UNESCO, 2018). Based on these guidelines, countries around the world have been working to confirm pedagogical training to improve teachers' quality.

To ensure the teachers' quality, the present status of teachers' perception towards teaching and learning has to be measured. Researchers from different countries have measured the teachers' concepts about teaching and learning in recent decades. Furthermore, teachers' attitudes toward teaching and learning have been measured in different developed and developing countries, including Turkey (Baş et al., 2021; Bilgin, 2016; Aypay, 2011; Yilmaz et al., 2011); Singapore (Chan et al., 2007); Jordan (Mahasneh, 2018); Iran (Zabihi et al., 2016); Hong Kong (Chan et al., 2004); and Ethiopia (Dejene, 2020; Dejene et al., 2018) in the last decade.

K-5 Teachers In-service Training in Bangladesh

Bangladesh, a South Asian independent country, continues to follow the colonial education system (Salahuddin, 2016; Mizan & Rahman, 2014) as a legacy of the British colony though they celebrated the golden jubilee in 2021. Bangladesh's three types of education systems (General, Madrasah, and English medium) operate in three main streams (primary,

secondary, and higher education). Elementary education is known as primary education in Bangladesh, which children start at the age of six. The five years long elementary education is free and compulsory for all children regardless of gender, race, religion, and ethnicity. More than twenty million students are studying at elementary schools in Bangladesh, alongside nearly one million teachers who are working in the teaching-learning process. Most teachers are female, and the teacher-student ratio is 1:21 (Salahuddin, 2021b).

Teachers are recruited at the elementary school in Bangladesh through a competitive recruitment test followed by a written and oral test that mainly assesses teacher candidates' subject-based knowledge. After graduation (Honors), anybody can join as a teacher without a teaching pedagogy degree. There is no license or teaching-related certification issue to be an elementary-level teacher (Salahuddin, 2021a). However, the government has organized in-service teacher training programs (Diploma in Primary Education known as DPEd) for all elementary teachers, especially those working only in government primary schools (GPS). HSC certification is one of the requirements for DPEd training. The National Academy for Primary Education offered DPEd through 67 primary teachers' training institutes (PTI). This diploma is an 18-month program (12 months of coursework and six months of own school practice) that promotes learner-centered teaching and learning methods (Khatun & Salahuddin, 2010; Breakell, Nishad & Das, 2016). In addition to these programs, other stakeholders, including the Ministry of Primary and Mass Education (MoPME), the Directorate of Primary Education (DPE), the National Academy for Primary Education (NAPE), the Primary Teachers Training Institute (PTI), and the Upazila Resource Center (URC), have organized different types of short-term (3-15 days) in-service training for the K-5 school teachers (Khandaker, 2021; Salahuddin, 2021).

The quality of education depends on the quality of teachers, especially the teachers' teaching capability in a classroom as it relates to creating a learning environment for students (Khusaini, Lestari & Agustin, 2018). Under those circumstances, it is important to know the teachers' concept of teaching and learning through the lens of traditional or constructive teaching-learning approaches because different studies (Karabenick et al., 2004; Ye et al., 2023) identified that teachers teaching beliefs and attitudes had made a positive or negative on students learning.

The Current Study

The overarching objective of this study is to assess teachers' attitudes toward traditional and constructive teaching and learning concepts. There are two research questions were selected:

1) What beliefs do in-service teachers hold about teaching and learning after completing one year of diploma training?
2) Are there any significant differences in the in-service teachers' conceptions about teaching and learning concerning their demographic variables, i.e., gender, age, level of educational certification, and job experiences?

Methods

Participants

Participation in this research was voluntary. Six hundred ninety-two in-service teachers at government primary schools participated in this study working in different geographical regions of Bangladesh. A Likert-type scale assessed them after completing a one-year Diploma in Primary Education (DPEd) course. A web-based questionnaire was sent to 1800 teachers, selected following a systematic random sampling method, and the response rate was 38.4%. Nearly two-thirds of the sampled teachers were female. The participants belonged to different

age groups. Most of the participants have graduate (master) degrees, and one-fifth have undergraduate (Honors/ Degree pass) degrees, while other teachers have a Higher Secondary School Certificate (HSC). More than half of the participating teachers have four to six years of teaching experience, while more than one-fourth have one to three years of teaching experience, and the rest have more than seven years of teaching experience.

Table 1

Demographic information of respondents

Demography	**Category**	**(*n* = 692)**	**%**
Gender	Male	245	35.4
	Female	447	64.6
Age	21-25 Years	30	4.3
	26-30 Years	219	31.6
	31-35 Years	310	44.8
	36-40 Years	119	17.2
	40 Years+	14	2.0
Education Qualification	HSC	87	12.6
	Undergraduate	145	21.0
	Masters/ Graduate	460	66.5
Job Experiences	1-3 Years	207	29.9
	4-6 Years	362	52.3
	7-9 Years	97	14.0
	10-12 Years	13	1.9
	12+ Years	13	1.9

Measure

Chan and Elliot (2004) developed a questionnaire to measure the traditional and constructive concepts of Teaching and Learning. This survey questionnaire included 30 items, where the first 18 items assess the traditional conception of teaching and learning (e.g., "teaching is simply telling, presenting, or explaining the subject matter"). The last 12 items assess the constructivist conception of teaching and learning (e.g., "effective teaching encourages more discussion and hands-on activities for students"). The scaling of this instrument was a Likert-type where responders specify their level of agreement to a statement typically in five points: (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. Cronbach's (α) reliability coefficient for the whole instrument was 0.89, while sub-scale reliabilities were 0.90 for traditional and 0.81 for constructivist items. This measurement scale was used in Bangladesh by adopting a Bangla language translation. The current study scales displayed sufficiently normal distributions (i.e., skewness less than 2.3, Lei & Lomax, 2005; kurtosis less than 7.0, Byrne, 2010) and overall good reliability (i.e., Cronbach's alpha signifiers of adequate > 0.70, good > 0.80; Warner, 2013).

Table 2

Descriptive statistics and reliabilities for study scales

	Item	**Mean**	**SD**	**Range**	**Skewness**	**Kurtosis**	**α**
Traditional Concept	18	3.38	0.69	1-5	0.32	-0.32	.90
Constructive Concept	12	4.58	0.33	1-5	-0.52	-0.43	.81

Analysis

The authors analyzed the collected data following both descriptive and inferential statistics. Mainly, mean (M) and standard deviation (SD) were used in the item-wise analysis.

The authors also did confirmatory factor analysis (CFA) to measure the construct fitness within these contexts. Criteria used to assess the model goodness of ft included: chi-square (χ^2), standardized root mean square error (SRMR<0.05 indicates well-fitting model, Byrne, 2010;<0.08, Hu & Bentler, 1999;<0.10, Kline, 2005), the comparative fit index (CFI>0.95 indicates a well-fitting model,<0.90 requires respecification; Bentler, 1990; Hu & Bentler, 1999), and the root mean square error of approximation (RMSEA<0.08 indicates an acceptable fitting model, Browne & Cudeck, 1993;<0.10 MacCallum et al., 1996).

Moreover, an independent sample t-test and analysis of variance (ANOVA) were also used to test the hypothesis. In addition, the researcher also used a post hoc test (Tukey) to investigate the difference among the variables.

Results

Teachers' attitudes toward teaching and learning

Elementary-level teachers' attitudes toward teaching and learning are presented in Tables 3. Data showed that in-service teachers indicated a moderate level (58.3%) of attitudes toward the traditional conception (M=3.4, SD= 0.7) and a positive level (97.1%) of agreement towards the constructivist conception of teaching and learning (M= 4.6, SD= 0.3). Teachers showed more positive attitudes about constructive teaching concepts than traditional concepts.

Table 3

The traditional and constructive concept of teaching and learning.

Traditional concept	% of Agreement	M	SD
1. During the lesson, it is important to keep students confined to the textbooks and the desks	24.5	2.5	1.2
2. Teaching is simply telling, presenting, or explaining the subject matter	86.0	4.1	0.9
3. Good teaching occurs when there is mostly teacher talk in the classroom	51.2	3.3	1.2
4. The traditional/lecture method for teaching is best because it covers more information /knowledge	40.3	3.0	1.2
5. Teaching is to provide students with accurate and complete knowledge rather than encourage them to discover it	35.2	2.8	1.3
6. A teacher's task is to correct learning misconceptions of students right away instead of verify them for themselves	35.7	2.7	1.4
7. Learning to teach simply means practicing the ideas from lecturers without questioning them	25.5	2.5	1.2
8. Teachers should have control over what students do all the time	54.2	3.3	1.2
9. Students have to be called on all the time to keep them under control	72.4	3.8	1.1
10. Good students keep quiet and follow teacher's instruction in class	73.2	3.9	1.1
11. It is best if teachers exercise as much authority as possible in the classroom	27.0	2.6	1.2
12. No learning can take place unless students are controlled	70.5	3.7	1.1
13. The major role of a teacher is to transmit knowledge to students	72.9	3.9	1.2
14. Learning occurs primarily from drilling and practice	71.5	3.8	0.9
15. A teacher's major task is to give students knowledge/ information, assign them drill and practice, and test their recall	87.8	4.2	0.9

16. Learning mainly involves absorbing as much information as possible	71.1	3.8	1.0
17. I have really learned something when I can remember it later	79.4	3.9	1.0
18. Learning means remembering what the teacher has taught	71.0	3.3	1.2
Overall traditional concept	58.3	3.4	0.7
Constructive concept			
1. The ideas of students are important and should be carefully considered	99.0	4.7	0.5
2. Effective teaching encourages more discussion and hands-on activities for students	99.1	4.6	0.5
3. Students should be given many opportunities to express their ideas	99.6	4.7	0.5
4. In good classrooms there is a democratic and free atmosphere which stimulates students to think and interact	97.8	4.6	0.6
5. Every child is unique or special and deserves an education tailored to his or her particular needs	97.6	4.6	0.6
6. Good teachers always encourage students to think for answers themselves	98.2	4.7	0.6
7. The focus of teaching is to help students construct knowledge from the learning experience instead of knowledge communication	93.1	4.3	0.7
8. Different objectives and expectations in learning should be applied to different students	89.7	4.3	0.8
9. Good teachers always make their students feel important	99.5	4.8	0.5
10. Instruction should be flexible enough to accommodate individual differences among students	96.8	4.6	0.6
11. It is important that a teacher understands the feelings of the students	99.3	4.6	0.5
12. Learning means students have ample opportunities to explore, discuss and express their ideas	95.1	4.4	0.6
Overall constructive concept	97.1	4.6	0.3

** Percent of some form of agreement (strongly agree = 5, Agree = 4).*

The traditional concept of teaching items' confirmatory factor analysis (CFA) showed good factor loading with acceptable fit: $\chi^2(135) = 900.72$, SRMR = 0.06, CFI = 0.83, RMSEA = 0.09. The constructive concept of teaching items' confirmatory factor analysis (CFA) showed good factor loading with suitable fit $\chi^2(54) = 171.89$, SRMR = 0.04, CFI = 0.93, RMSEA = 0.06.

Significant and weak correlations occurred among the teaching-learning concepts and variables (see Table 4). Teachers' traditional teaching and learning concepts significantly correlated with the constructive concepts of teaching and learning r (692) = 0.214, p <.05.

Table 4
Correlation among the variables

Variables	1	2	3	4	5
1. Gender	-				
2. Age	-.441*	-			
3. Educational Qualification	-.290*	.188*	-		

4.	Job Experiences	.077*	.260*	-.170*	-	
5.	Traditional Concepts	.026	-.011	-.113*	.001	-
6.	Constructive Concepts	-.038	.061	.074	-.037	.214*

* p < .05

Demographic effects on teaching-learning concepts

In terms of gender variable, there was no significant difference found for in-service teachers' traditional conceptions t (690) = -0.686, p > .05. Similarly, there was no significant difference noticed for constructivist teaching and learning conceptions of in-service teachers t (690) = 1.00, p > .05. In terms of age groups, there is no significant difference for in-service teachers' traditional conceptions of teaching and learning F (4, 687) = 0.18, p > .05, and constructivist concepts of teaching and learning F (4, 687) = 1.87, p > .05. From teachers' job experience perspective, no significant difference occurred between in-service teachers' traditional concept of teaching and learning F (4, 687) = 0.416, p >.05, and constructivist concept of teaching and learning F (4, 687) = 0.604, p >.05. Under the lens of educational qualification, there is a significant difference found for in-service teachers' traditional concepts F (2, 689) = 4.89, p < .05, and constructivist concept F (2, 689) = 6.14, p < .05.

Table 5

Comparisons of teaching and learning concepts in terms of demographic characteristics

Demography	***Concepts***	***Category***	***M***	***SD***	***t/F***	***p***
Educational Qualification	Traditional	HSC	3.5	0.7	4.886	0.008*
		Honours	3.5	0.7		
		Masters	3.3	0.7		
	Constructive	HSC	4.5	0.4	6.139	0.002*
		Honours	4.6	0.3		
		Masters	4.6	0.3		

* p < .05

Data shows that teachers with an HSC degree are more concerned with traditional teaching-learning approaches (HSC> Honors> Masters). In contrast, teachers with a bachelor's degree were more concerned with constructive teaching-learning approaches (Honors> Masters >HSC). Higher education certification of teachers was influencing the attitude toward teaching and learning.

Table 6

Post hoc test for TLC in the lens of educational qualification

Educational Qualification	Traditional Concepts		Constructive Concepts	
	MD	Sig.	MD	Sig.
HSC vs Honours	0.030	0.938	-0.154	0.002*
HSC vs Masters	0.192	0.047*	-0.114	0.009*
Honours vs Masters	0.161	0.038*	0.040	0.400

* p < .05

Discussion and Conclusion

Generally, most countries offer pre-service teachers' education programs for prospective teachers of the K-12 level. Before entering the classroom as a teacher, a graduate must learn different teaching-learning concepts through a diploma or four years bachelor's degree. That is why many of the studies we have listed (Yilmaz et al., 2019; Dejene, 2020; Dejene et al., 2018; Bilgin et al., 2016; Cheng et al., 2009; Chai et al., 2009; Chan et al., 2007) focused on pre-service teachers' concepts on teaching and learning. Conversely, our study

focused on in-service teachers' issues because no pre-service teacher education program exists in Bangladesh. In Bangladesh, a graduate can be a teacher without teaching learning concepts or prior education-related degrees.

From the context of government primary (elementary) schools in Bangladesh, this study explored the teachers' concept of traditional and constructive teaching and learning in the K-5 grade. The overall in-service teachers' attitude towards constructive teaching and learning concepts was higher than those of traditional teaching concepts. Related results were found in Turkey (Baş et al., 2021; Bilgin, 2016; Aypay, 2011; Yilmaz et al., 2011), Singapore (Chan et al., 2007), Jordan (Mahasneh, 2018), and Iran (Zabihi et al., 2016) though opposite results found in Hong Kong (Chan et al., 2004), and Ethiopia (Dejene, 2020, and Dejene et al., 2018) while these studies conducted on pre-service teachers.

The authors did not find any evidence of gender difference for either traditional concepts or Constructive concepts. Different studies explored similar results (Baş et al., 2021; Bilgin, 2016; Chan et al., 2007). On the other hand, some of the authors (Mahasneh, 2018; Aypay, 2011; Yilmaz et al., 2011) noticed that the concepts of teaching-learning of teachers differed based on the gender identity of teachers.

The age of teachers and the length of teaching experiences are associated with one another. No significant correlation was found between the in-service teachers in the lens of age groups. Similar results were also revealed in some other studies (Baş et al., 2021; Chan et al., 2007) in different countries and pointed out that age variables of teachers did not make any difference in their teaching-learning perceptions. Moreover, the teaching experiences of in-service teachers did not show any difference among the teachers' teaching learning concepts (Baş et al., 2021). These findings compare to those that were found in this study.

A key finding of this study was that in-service teachers with only an HSC (higher secondary school certification) had lower constructive teaching scores than Honours and Master certified teachers. Furthermore, this was the case for new teachers (1-3 years) and more experienced teachers. A similar result was found in a study conducted in Singapore. Chan et al. (2007) stated that a significant level (0.05) of differences concerning educational qualifications was identified in the conceptions of teaching and learning. In particular, , concepts on constructive teaching-learning issues were significantly positive for teachers who have a higher educational certification (honors or masters) than the teachers who have a higher secondary school certification (HSC) degree. Higher education can also lead teachers to feel more self-efficacy, positively impacting their teaching (Siwafu. K. O. & Chesnut; S. R., 2014).

This consideration raises a question: why is the teachers' educational qualification important for measuring their attitude towards teaching and learning? The answer is that the quality of education depends on teachers' quality, especially the teachers' teaching capability in a classroom which may create a positive learning environment for students (Khusaini, Lestari & Agustin, 2018). Hopkins et al. (1996) identified some characteristics of quality teachers, including the commitment to teaching, love of children, mastery of subject didactics and multiple teaching models, ability to collaborate with other teachers, and a capacity for reflection.

Different studies identified that teachers' subject-specific higher degrees positively impact students learning. For example, Goldhaber et al. (1996) explored that subject-specific teacher training significantly affects students' exam results in the fields of math and science. Specifically, a teacher with a B.A. in math, or an M.A. in math, has a statistically significant positive impact on student achievement relative to teachers with no advanced degrees or degrees in non-math subjects. Similarly, a teacher with a B.A. degree in science positively impacts those who teach science but have either no degree or a B.A. in another subject (Goldhaber et al., 1996). Our study has revealed that higher education is associated with constructive teaching and learning methods. After intensive pedagogical training, teachers'

attitudes toward teaching and learning might be positively influenced. This study will open a new window of opportunities for policymakers in developing countries like Bangladesh. They can recruit teachers with a higher education level and will offer intensive pedagogical training to ensure teachers' quality. They can also recruit subject-based teachers with a higher educational qualification in a specific subject area (e.g., math and science).

To the knowledge of the authors, this is the very first study in Bangladesh to measure elementary-level teachers' perception of teaching-learning through the lens of traditional and constructive teaching approaches. After receiving one-year in-service diploma training, teachers perceived traditional teaching concepts as consistent with constructive teaching concepts. This study revealed that higher educational qualification correlated with having a positive opinion of constructive teaching attitudes.

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