Constructivist Approach to Teaching and Awareness of Elementary School Teachers in Mizoram

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Abstract

Knowledge is like glue that sticks information as well as learning together. When we have prior knowledge about a topic, we understand it better. The theory of Constructivism advocates the same that knowledge is acquired from experience and knowledge construction takes place through imitation and repetition and is characterised by active engagement, inquiry, problem solving ,and in collaboration with others.With the growth in technological advancements, expansion of theoretical and scientific knowledge, more liberal philosophy (ies) and emerging trends and innovative techniques of teaching-learning pedagogies necessitates that we adopt more comprehensive and broader outlook even towards the method of teaching and learning in our classrooms. Also because the type of future the children will experience is liable to be influenced more by teachers rather than anyone else.The aim of this study is to reveal the awareness/knowledge of elementary school teachers in Mizoram in relation to constructivism. A questionnaire is prepared basing upon four broad underlying components such as concept,classroom climate,process and product considering the levels of the students and the teachers intended for the study. The locality,gender and subject taught by the teachers are taken as independent variables. It is revealedfrom the study that teachers have adequate level of awareness about constructivism.

***Keywords**: Constructivist teaching, Teaching strategy, Awareness/Knowledge*

Introduction

The importance given to education and the various steps taken by the government in our country to ensure "Education for All", and the ever increase and expansion of education definitely highlights the fact that teachers occupy an indispensible role in exerting an escalating amount of authority on everyone's life. As such, what students learn today,the way they learn it, and the manner in which knowledge is presentedtoday will determine how students will solve problemstomorrow. Teachers are, therefore, expected to educate themselves with a rich understanding of facts and theories about learning so that learning can be viewed more

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realistically. Moreover,it is necessary that teachers augment their knowledge and understanding of the different ways to teach students that will be most beneficial and meaningful for their learning.

Teaching based on constructivist philosophy is quite challenging for the teacher. Since the theory of constructivism is based on the idea that children learn by actively constructing knowledge and by reconciling new information with previous knowledge, the teacher's role changes within the constructive paradigm. The teacher becomes more of an investigator who endeavors to understand how the students are constructing knowledge and at the same time acts as a facilitator of learning by encouraging students to take responsibility of their own learning.

Constructivist teaching is based on the constructivist learning theory, according to which learning takes place as a result of the knowledge that a student already has, and is more effective when a student is actively involved in the construction of knowledge, rather than being a passive recipient of information.

According to Constructivist approach, individuals' behaviours and ideas that develop later are based on their previously constructed ideas, and that learning is a process involving association established by learners between their existing knowledge and new ideas and experiences.*(Oludipe&Oludipe 2010; Palmer 2005, inOngowo, 2013, 2).*

Yager*(1991, in Oxford 1997, 55)* concentrated on specific constructivist teaching techniques, which he said were based on Piaget's principles. Yager's list of teaching techniques reflects the role that a constructivist teacher is supposed to play. The teaching techniques include (a) seeking out and using student questions to guide lessons, (b) accepting and encouraging student initiation of ideas, (c) promoting student self-regulation and action, (d) using students' experiences and interests to drive lessons (and thus offering multiple branches of learning), (e) encouraging uses of alternative sources of information, (f) using open-ended questions and encouraging student elaboration when possible, (g) encouraging students to suggest causes for events and situations and to predict consequences, (h) seeking out student ideas before presenting ideas from the text, (i) allowing adequate time for reflection and analysis, (j) facilitating reformulation of ideas in light of new experiences and evidence, and (k) encouraging social interaction.

Rationale of the Study

We are all aware of the idiom "well beginning is half done" and it goes a long way in determining where we land. However, it appears that starting well or beginning well is rarely our concern when we look at our educational systems. It is overwhelming to see that even today in most of our schools especially at the elementary levels behaviouristic approach to teaching-learning is widely practiced. Pre-primary to the higher levels of educationis characterised by rote memorization which is undoubtedly encouragedto secure good grades and marks at the examinations. Unfortunately, such a trend does not contribute to good quality education. Elementary stage of education is the foundation for higher education, sothe study

habits formed at this stage is crucial in deciding the kind of learning approach that a child will develop. Therefore, the choice of teaching strategies adopted at this stage is very important to the shaping of the future progress of learners, and teachers play acentral role in this context. In fact, their knowledge in teaching goes a long way in determining the success or failure of delivery in the classrooms.

Choice of a right teaching approach depends largely on the knowledge and attitude of teachers. If teachers have adequate knowledge (awareness), understand the importance and develop positive attitude towards a teaching approach, then only they can put them in their practices. If we expect that our teachers should prefer constructivist approach to their teaching then it is essential that they should have the right kind of knowledge and attitude; then only they can put them in practice. Therefore, given that constructivist approach to teaching-learning has a lot of importance and implications, the present study is conducted to assess the knowledge of elementary school teachers of Mizoram towards constructivism as a teaching approach with reference to the subject they teach, their gender and their locales.

Objectives of the Study

1. To reveal the depth of knowledge of elementary school teachers in Mizoram relating to constructivism as a teaching-learning approach with reference to their locales.
2. To reveal the depth of knowledge of elementary school teachers in Mizoram relating to constructivism as a teaching-learning approach with reference to their gender.
3. To reveal the depth of knowledge of elementary school teachers in Mizoram relating to constructivism as a teaching-learning approach with reference to the subject they teach.

Hypothesis of the Study

1. Elementary school teachers teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach.
2. Male and female Elementary school teachers teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach.
3. Elementary school teachers of different locales teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach.

Research Methods

The present study employs descriptive survey approach as the research paper tries to find out the knowledge of elementary school teachers in Mizoram towards constructivism as a teaching-learning approach with reference to the subject they teach.

Population and Sample

The population in the present study consists of all elementary government school teachers of Mizoram teaching the four key subjects, viz., mathematics, English, science and social

science. For the present study, the sample selected consisted of 480 elementary school teachers i.e.120 teachers in each of the four subjects. For selection of the sample stratified random sampling technique was followed.

Tools Used

1. Questionnaire to assess the knowledge of elementary school teachers relating to constructivist teaching-learning approach.

Analysis of the Data

For assessing the awareness aquestionnaire containing twenty-five multiple type questions with four alternatives was administered. The maximum and minimum possible scores were 25 and 0 respectively. The mean and standard deviation for different groups of teachers on their awareness were computed to describe the data and are presented in table-1. Further, it was decided to classify the teachers on the basis of their scores on awareness about constructivism as a teaching-learning approach following the criteria mentioned below for meaningful interpretation. The results of classification of teachers in different subjects are given in table-2 and interpretations are made subject wise.

Criteria for Interpretation:

Level	Range	Range of Scores
High	Above Mean+ 1SD	20.7 – 25.0
Moderate	Mean – 1SD to mean + 1SD	12.1 – 20.7
Low	Below mean -1SD	00 - 12.1

Table -1: Mean and SD of Different Groups of Teachers on Knowledge

Sl.No.	Subjects	Groups	N	Mean	SD
1	Mathematics	Urban male	30	16.8	3.54
		Rural male	30	16.57	3.89
		Urban female	30	17.7	4.71
		Rural female	30	16.67	4.03
		Male	60	16.68	3.69
		Female	60	17.18	4.37
		Urban	60	17.25	4.13
		Rural	60	16.62	3.96
		Total	120	16.8	4.3

2	English	Urban male	30	17.93	3.51
		Rural male	30	16.8	4.04
		Urban female	30	16.27	4.16
		Rural female	30	16.23	3.55
		Male	60	17.37	3.99
		Female	60	16.25	3.83
		Urban	60	17.1	3.84
		Rural	60	16.51	3.79
		Total	120	16.7	4
3	Science	Urban male	30	17.07	4.17
		Rural male	30	15.67	4.33
		Urban female	30	14.63	4.39
		Rural female	30	17.2	3.53
		Male	60	16.37	4.27
		Female	60	15.92	4.16
		Urban	60	15.85	4.28
		Rural	60	16.44	3.93
		Total	120	16.1	4.2
4	Social science	Urban male	30	17.27	4.48
		Rural male	30	13.5	4.66
		Urban female	30	16.03	4.15
		Rural female	30	17.17	4.17
		Male	60	15.38	4.91
		Female	60	16.6	4.16
		Urban	60	16.65	4.32
		Rural	60	15.34	4.42
		Total	120	16.1	4.5

5	All subjects	Male	120	16.45	4.22
		Female	120	16.18	4.32
		Urban	120	16.71	4.14
		Rural	120	16.23	4.03
		Grand Total	480	16.39	4.18

Table -2: Locality, Gender and Teaching Subject Wise Levels of knowledge of teachers on Constructivist Teaching - Learning Approach

The figures in the parentheses indicate percentage

SN	Subjects	Level of Awareness	Urban Male (n=30)	Urban Female (n=30)	Total (N=60)	Rural Male (n=30)	Rural Female (n=30)	Total (N=60)	Male (n=60)	Female (n=60)	Total (N=120)
I	Mathematics	Low (0 -12.1)	4 (13.3)	6 (20)	10 (16.7)	5 (16.7)	5 (16.7)	10 (16.7)	9 (15)	11 (18.3)	20 (16.6)
		Moderate (12.1 -20.7)	21 (70)	16 (53.3)	37 (61.6)	20 (66.6)	20 (66.6)	40 (66.6)	41 (68.3)	36 (60)	77 (64.2)
		High (20.7 - 25)	5 (16.7)	8 (26.7)	13 (21.7)	5 (16.7)	5 (16.7)	10 (16.7)	10 (16.7)	13 (21.7)	23 (19.2)
		Total	30 (100)	30 (100)	60 (100)	30 (100)	30 (100)	60 (100)	60 (100)	60 (100)	120 (100)
II	English	Low (0 -12.1)	2 (6.7)	6 (20)	8 (13.3)	6 (20)	4 (13.3)	10 (16.7)	8 (13.3)	10 (16.7)	18 (15)
		Moderate (12.1 -20.7)	18 (60)	19 (63.3)	37 (61.7)	17 (56.7)	23 (76.7)	40 (66.6)	35 (58.3)	42 (70)	77 (64.2)
		High (20.7 - 25)	10 (33.3)	5 (16.7)	15 (25)	7 (23.3)	3 (10)	10 (16.7)	17 (28.4)	8 (13.3)	25 (21)
		Total	30 (100)	30 (100)	60 (100)	30 (100)	30 (100)	60 (100)	60 (100)	60 (100)	120 (100)
		Low (0 -12.1)	4 (13.3)	10 (33.4)	14 (23.3)	5 (16.7)	4 (13.3)	9 (15)	10 (16.7)	13 (21.7)	23 (19.2)
III	Science	Moderate (12.1 -20.7)	18 (60)	16 (53.3)	35 (58.3)	17 (56.6)	20 (66.7)	37 (61.7)	35 (58.3)	37 (61.7)	72 (60)
		High (20.7 - 25)	8 (26.7)	4 (13.3)	11 (18.4)	8 (26.7)	6 (20)	14 (23.3)	15 (25)	10 (16.6)	25 (20.8)
		Total	30 (100)	30 (100)	60 (100)	30 (100)	30 (100)	60 (100)	60 (100)	60 (100)	120 (100)
IV	Social science	Low (0 -12.1)	5 (16.7)	7 (23.3)	12 (20)	13 (43.3)	6 (20)	19 (31.7)	18 (30)	13 (21.7)	31 (25.8)
		Moderate (12.1 -20.7)	16 (53.3)	17 (56.7)	33 (55)	15 (50)	15 (50)	30 (50)	31 (51.7)	32 (53.3)	63 (52.5)
		High (20.7 - 25)	9 (30)	6 (20)	15 (25)	2 (6.7)	9 (30)	11 (18.3)	11 (18.3)	15 (25)	26 (21.7)
		Total	30 (100)	30 (100)	60 (100)	30 (100)	30 (100)	60 (100)	60 (100)	60 (100)	120 (100)

V	Total	Low (0 -12.1)	15 (12.5)	29 (24.2)	44 (18.3)	30 (25.2)	17 (14.2)	48 (20)	45 (18.7)	47 (19.6)	92 (19.2)
		Moderate (12.1 -20.7)	73 (60.8)	68 (56.6)	142 (59.2)	67 (56.3)	80 (66.7)	147 (61.3)	142 (59.1)	147 (61.3)	289 (60.2)
		High (20.7 - 25)	32 (26.7)	23 (19.2)	54 (22.5)	22 (18.5)	23 (19.1)	45 (18.7)	53 (22)	46 (19.1)	99 (20.6)
		Total	120 (100)	120 (100)	240 (100)	120 (100)	120 (100)	240 (100)	240 (100)	240 (100)	480 (100)

Mathematics

From tables 1 and 2, 68.3% of male teachers and 60% of female teachers are found to have moderate level of awarenessrelating to constructivism as a teaching-learning approach. It was also found that 16.7%of male teachers and 26.7%of female teachers belonging to the urban areas, and 16.7%of both male teachers and female teachers belonging to the rural areas have high level of awarenesson constructivism as a teaching-learning approach. On the whole, 16.7% of male teachers and 21.7% of female teachers teaching mathematics are found to have high level of awareness about constructivist approach to teaching-learning. On the whole, irrespective of locale and gender, it is found that 16.6%,64.2% and 19.2% of mathematics teachers have low, moderate and high levels of awarenessrelating to constructivism as a teaching-learning approachrespectively.

English

From table 1 and 2, it can be seen that on the whole 13.3% of male teachers and 16.7% of female teachers have low level of awarenesson constructivism as a teaching-learning approach. Similarly 60% male teachers and 63.3%female teachers belonging to the urban areas, and 56.7% male teachers and 76.7%female teachers belonging to the rural areashave moderate level of awarenesson constructivism as a teaching-learning approach. On the whole 58.3% of male teachers and 70% of female teachers have moderate level of awarenessrelating to constructivism as a teaching-learning approach. It is also found that 33.3%of male teachers and 16.7%of female teachers belonging to the urban areas and 23.3%male teachers and 10%female teachers belonging to the rural areashave high level of awarenesson constructivism as a teaching-learning approach. On the whole 28.4% of male teachers and 13.3% of female teachers have high level of awareness about constructivist approach to teaching-learning. On the whole it is found that 15%,64.2% and 21% of English teachers have low, moderate and high levels of awarenessrespectively relating to constructivism as a teaching-learning approach.

Science

From table 1 and 2, it is found that, among the science teachers of various groups based on locale and gender, 13.3% of male teachers and 33.4% of female teachers belonging to the urban areas, and 16.7% male teachers and 13.3% female teachers belonging to the rural areas havelow level of awarenessabout constructivism as a teaching-learning approach. On the whole 16.7% of male teachers and 21.7% of female teachers were found to have low level of awarenesson constructivism as a teaching-learning approach. While 60% male teachers and

53.3%female teachers belonging to the urban areas, and 56.6% male teachers and 66.7%female teachers belonging to the rural areas have moderate level of awarenesson constructivism as a teaching-learning approach. On the whole 58.3% of male teachersand 61.7% of female teachers were found to have moderate level of awareness relating to constructivism as a teaching-learning approach. It was also found that 26.7%of male teachers and 13.3%of female teachers belonging to the urban areas and 26.7%male teachers and 20%female teachers belonging to the rural areas were found to have high level of awarenesson constructivism as a teaching-learning approach. Only 25% of male teachers and 16.6% of female teachers were found to have high level of awareness about constructivist approach to teaching-learning. On the whole it was found that 19.2% and 20.8% of science teachers have low and high level of awarenessrelating to constructivism as a teaching-learning approachrespectively. The study revealed that majority (60%) of science teachers have moderate level of awareness relating to constructivism as a teaching-learning approach.

Social Science

From table 1 and 2, it is found that, among the social science teachers of various groups based on locale and gender, 16.7% of male teachers and 23.3% of female teachers belonging to the urban areas, and 43.3% male teachers and 20% female teachers belonging to the rural areas havelow level of awarenessabout constructivism as a teaching-learning approach. On the whole 30% of male teachers and 21.7% of female teachers were found to have low level of awarenesson constructivism as a teaching-learning approach. Similarly 53.3% male teachers and 56.7%female teachers belonging to the urban areas, and 50% of both male teachers and female teachers belonging to the rural areas were found to have moderate level of awarenesson constructivism as a teaching-learning approach. On the whole 51.7% of male teachers and 53.3% of female teachers have moderate level of awareness relating to constructivism as a teaching-learning approach. It was also found that 30% of male teachers and 20% of femaleteachers belonging to the urban areas and 6.7%of male teachers and 30%of female teachers have high level of awareness about constructivist approach to teaching-learning. On the whole 18.3%of male teachers and 25%of female teacherswere found to have high level of awareness about constructivist approach to teaching-learning. Overall it is found that social science teachers have moderate (52.5%) level of awareness relating to constructivism as a teaching-learning approach.

It is revealed from table-2 that out of all the elementary school teachers under the study, irrespective of their gender, locale and teaching subjects, 19.2%, 60.2%, and 20.6% have low, moderate, and high level of awareness about constructivism as a teaching-learning approach respectively.

Findings

All the elementary school teachers teaching the four subjects- mathematics, English, science and social science, were found to have adequate /moderate level of knowledge about constructivism as a teaching-learning approach. Hence, the research hypothesis which states,

"Elementary school teachers teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach" is accepted.

All the elementary school teachers teaching different subjects, irrespective of their gender were found to have adequate /moderate level of constructivism as a teaching-learning approach. Hence, the research hypothesis which states, "Male and female Elementary school teachers teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach" is accepted.

All the elementary school teachers teaching different subjects, irrespective of their locales were found to have adequate /moderate level of constructivism as a teaching-learning approach. Hence, the research hypothesis which states, "Elementary school teachers of different locales teaching different subjects in Mizoram have adequate knowledge about constructivism as a teaching-learning approach" is accepted.

Suggestions

- Teacher education programmes,particularly the syllabus needs to be redesigned.
- In-service and pre-service teachers training should focus on constructivist approach.
- Workshops,seminars,symposia should be organized to spread awareness about constructivism.
- Freedom and opportunities should be given to teachers in decision making,planning and implementing their ideas without confining them to their classrooms.
- More researches should be conducted on constructivist approaches to recognize its relevance in different disciplines and allied subjects as well.

Conclusion

Classroom atmosphere is often shaped by the teacher's character and the enthusiasm or dullness of a student often is a result of the teacher's involvement or indifference. This is how indispensible a teacher is and his/her knowledge goes a long way in shaping the future of his/her students. Constructivist teachers serve as facilitators rather than experts by creating atmosphere where students invent their own constructs or solutions by thinking critically, become actively involved in defining questions in their own language and work out answers competently instead of mechanically receiving and reproducing materials presented by the teacher or the textbook. It is felt that there is a need to educate and train teachers in Mizoram from a constructivist point of view because it is more practical for knowledge construction and overall growth and development of the students.

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