REVIEW THE COMPARATIVE ASSESSMENT OF CONSTRUCTIVISM AND ITS INFLUENCE OVER TRADITIONAL LEARNING

Dr.Neelam Khare [1], Sahin Mondal [2]

[1]Research Guide , Dept. of Education

Sri Satya Sai University of Technology and Medical Sciences,

Sehore Bhopal-Indore Road, Madhya Pradesh, India

[1]Research Scholar, Dept. of Education

Sri Satya Sai University of Technology and Medical Sciences

Sehore Bhopal-Indore Road, Madhya Pradesh, India

Abstract

The traditional method is utilised rather frequently in the classroom. It pays no attention to the students or the subjects, despite the fact that these things are necessary for the progression of the training and "the mental level of interest of the students". In order to better equip students to make effective use of acceptable English language learning methodologies, the purpose of this research was to examine and contrast the constructivist and traditional teaching approaches. Research methods based on experimentation were used by Quazi. Two 11th grade classes, with a total of 97 students, were chosen at random from among the 20 available options. The first group, which consisted of fifty pupils, was instructed utilising a constructivist method of instruction. The second group of pupils consisted of 47 individuals and was instructed utilising the conventional classroom method. Before and after students were instructed using two distinct methods of instruction, they were given a learning strategy inventory questionnaire. This questionnaire's original source was "strategy inventory for language learning (SILL) L2 students of English, which was" published in Oxford in the year 1990. After receiving sufficient training on both sorts of pedagogical techniques, the real classroom instructor was given the responsibility of teaching for a total of 9 weeks (40 periods). For the purpose of analysing the data, both "Paired Sample and Independent Sample t-tests were" utilised. English language learning methodologies in comparison to those utilised by the conventional student population. It is possible to draw the following conclusion from the findings of this study: students who are taught using a constructivist teaching approach are better able to use appropriate strategies for learning the English language, in comparison to students who are taught using a traditional teaching approach.

Keywords: constructivism, traditional, learning

INTRODUCTION

The traditional form of instruction, sometimes known as the lecture technique, is still widely used "in education, particularly at the university level. The traditional technique disregards the students and, as a result, the mental degree of interest that the pupils have in the subject. The pupils are required to memorise information by heart in addition to learning about the background information. It did not encourage creative thinking among the pupils nor did it encourage their participation in the creative aspects of the activities. The majority of the time, throughout the process of teaching and learning, instruction will stay unilateral, which is something that is considered to be an orthodox activity. The up-and-coming movements altered the status quo and adopted the constructivist approach, which is moral and places a greater emphasis on inventive actions and the acquisition of information". It seems more viable to use a constructivist approach for the teaching of English at the B.Ed. level, and constructivism is more practicable in engaging the students in inventive and creative activities. [Creativity and innovation] This impact has been verified through the development of a module. Constructivism may be summed up as an instructional approach that uses observation as its primary method for determining how individuals learn. Learning is viewed as an active, contextualised, or creative process, according to the constructivist paradigm, which is a theoretical framework. The educational philosophy known as constructivism developed as a response to other pedagogical techniques such as behaviourism and programmed instruction. The role of information function Object() { [native code] } is played by the learner. Knowledge is constructed by students on the basis of their own experiences and assumptions about the surrounding world. Students actively develop or create their own versions of their own subjective or objective realities. Learners continually test their assumptions and develop new information, as well as correct or validate existing knowledge through the process of social bargaining. The learner made connections between the new information and what they already knew. Constructivists claimed that a learner is not a tabula rasa, but rather brings previous experiences and cultural elements into a current setting in order to generate new knowledge. As a result, every student has their own unique understanding and construction of the knowledge process, "which is based on their mental representations (Learning Theories Knowledgebase, 2008). Students are encouraged to explore their innate curiosities about the actual world and how things function via the use of constructivism. Due to the confusion between a theory of pedagogy (teaching) and a theory of knowing, a common misunderstanding regarding constructivism is that teachers should never tell students anything directly but, instead, should always allow them to construct knowledge for themselves. This misconception stems from the confusion between a theory of pedagogy (teaching) and a theory of knowing". No matter how a subject is presented to a student, the constructivist approach to learning begins with the presumption that all information is generated from the student's prior knowledge. Therefore, even passively taking in information such as a lecture entails making active efforts to develop new knowledge. The constructivist point of view

on learning may lend itself to a variety of different pedagogical approaches when used in the classroom setting. It usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge, and then encouraging them to reflect on and talk about what they are doing and how their understanding is changing. This is meant to be the most general sense of what it means to encourage active learning. The instructor makes sure that he has a good understanding of the students' prior knowledge and then organises the activity such that it first addresses those notions and then builds upon them. The job of the teacher is altered by constructivism so that he facilitates and assists pupils in the construction of knowledge rather than the reproduction of a set of facts. Students are able to formulate and test their ideas, draw conclusions and inferences, and pool and convey their knowledge in a collaborative learning environment when a constructivist teacher assists them through problem-solving and inquiry-based learning activities. These activities are led by the constructivist teacher. The learner becomes an active participant in the learning process and moves from being a passive receiver of knowledge under the influence of constructivism. Instead of passively absorbing information from the instructor or the textbook, students actively develop their own bodies of knowledge while being constantly steered by the instructor. The job of the teacher is to convert the knowledge that needs to be learnt into a format that is suitable to the level of comprehension that the student currently has. The curriculum needs to be structured in a spiral fashion so that the learner may continuously build "upon what they have already acquired. According to Bruner (1966), a constructivist theory of instruction should address the following four major aspects: (1) the learner predisposition towards learning; (2) the ways in which a body of knowledge can be structured so that it can be most readily grasped by the learner; (3) the most effective sequences in which to present material; and (4) the nature of rewards and punishments, as well as their timing".

Basic ideas of constructivism learning theory

On knowledge

The only things that knowledge can provide are an explanation and an assumption; it is not the conclusive response to any query. On the other hand, it will be thrown away along with the human process, and a new assumption will emerge in its place. In addition, one's level of knowledge limits their ability to correctly explain the norms of the world. To put it another way, we are unable to immediately apply our knowledge to some difficulties. The practical factors must be taken into consideration while we conduct an analysis of a given topic. Constructivists are in agreement with the idea that knowledge cannot exist in its physical form or be contained within a particular thing. Even if language and signals confer particular forms on knowledge, this does not guarantee that students will have the same understandings with regard to the assertions in question, just as one hundred individuals will each have one hundred unique understandings of Hamlet. These comprehensions are dependent on the experiences and backgrounds of the individual learners, which are in turn determined by the unique learning experiences of the individuals.

On learning

The process through which individuals create their cognitive architecture is known as learning. The term "construction" refers to a form of initiative that is also aware and self-organized in its recognising manner. The "interaction" between the subject and the object is what this term refers to. The building of knowledge is at the heart of the educational process. The act of learning involves both the building of meanings and the creation of new ones. This process is finished when the learners' previous knowledge and their newly acquired information interact with one another. To put it another way, receiving only stimulus from the outside world is pointless. Real learning can only occur when students codify, analyse, and develop their own unique understandings based on their prior experiences.

On students

Students bring a wealth of life experience with them into the classroom with them. They have their perspectives on everyday life as well as topics that affect the entire world. In spite of the fact that they are unfamiliar with some topics and have not had any relevant experiences, individuals may come up with unique interpretations and assumptions regarding such topics based on their prior knowledge and cognitive ability as those topics come up. That is not an irrational guess but rather a logical assumption that is founded on prior experiences. Teaching should therefore consider students' prior knowledge and experience as the development point of new information, and should introduce students to the process of generating new knowledge from the former.

On teachers

As we place more of an emphasis on students as the topic of our study, we should shift the role of instructors away from that of initiator and indoctrinator and instead make them more of an aid and driver for students who are independently building meaning. To put it another way, instructors should be the ones to create the learning environment, serve as the learners' academic consultants, and act as guides for the students' educational pursuits. It casts aside the conventional method of instruction, which places teachers at the centre of the classroom and places an exclusive emphasis on the transmission of information, seeing pupils as the goal for acquiring knowledge. The new instructional approach places the students at the centre of the learning process while maintaining the authority of the professors. Teachers are responsible for organising and guiding the entire learning process.

"Cognitive Constructivism is not a specific theoretical framework, pedagogical strategy, or epistemology;" rather, it is an overarching, metaphorical assumption about the nature of cognition that almost all cognitive educational scholars consider as true. There is a substantial possibility that cognitive constructivism will be able to develop a "conceptual bridge between information processing and radical constructivism". The multidimensional framework developed

by Phillips can be utilised to facilitate improved comprehension of the cognitive constructivist approach. It proposes the existence of three dimensions, namely:

"Individual psychology" "versus Public discipline (p.7) continuum is oriented towards understanding the individual learner".

1. "Second is related to the first and differentiate among theorist according to whether they view knowledge construction as a socially situated or an individual process, a dimension related to debate in the cognitive science and educational research communities (e.g. J.R. Anderson, Reder, & Simon, 1996; Vera & Simon, 1993). Cobb and Yackel (1994 a) argued that cognitive processes and sociocultural one are mutually implicative and cannot be studied in isolation".

2. "The third dimension differentiate constructivist in terms of the degree to which they can, in essence, be characterised as true constructivist theorist. The area of this scale encompassing information processing and radical constructivist views, and including many hybrid views in between, identifies the range of viewpoints within mainstream cognitive constructivism".

Pedagogy is the study of learning. It has been suggested by Millar (1989) that certain perspectives on learning do not always require particular educational techniques. [Citation needed] The constructivist method was first created by Jean Piaget, and its primary focus was on analysing the cognitive development of children, particularly the development of their conceptual knowledge. A dedication to the concept that mental structures indeed exist, that such structures impact the way that individuals experience the world, and that people form such structures via interactions with the world around them is what the constructivist approach often stands for. Both learning and invention are influenced by their respective contexts, with the latter also being influenced by contact with others. One of the most influential theories in contemporary scientific teaching is constructivism. Knowledge has a concrete existence in the world, and it is within each person's power to acquire more of it. The options for learning methodologies include things like discovery, hands-on experience, group work, learning via projects or tasks, and so on. In this context, Vygotsky (1978) wrote that "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter-psychological), and then inside the child." (Every function in the child's cultural development appears twice) (Intra-psychological). This holds true for both the process of voluntarily attending to something as well as the storage of logical information and the construction of concepts. Every one of the higher functions has its roots in the concrete interactions that take place between persons. Therefore, scientific knowledge is a product of social construction, which incorporates both individual and collective processes. Doolittle and Camp (1999) made the observation that behaviourism is still having a significant impact on technical education, despite the fact that it is gradually shifting toward conceptual, problem-solving-based courses and making progress toward cognitive constructivism. Learners should actively develop their own knowledge based on their own experiences, according to the basic

premise of the constructivist educational philosophy known as constructivism. They stated that constructivism is not a single, unified theoretical viewpoint, but rather that it should be viewed as a continuum instead. They argue that, within this continuum, the educational philosophy of cognitive constructivism is the one that most closely corresponds to technology education. To put it another way, knowledge, or learning, is the product of successfully internalising and rebuilding some aspect of the external world.

Another type of constructivism is known as social constructivism Social constructivism places an emphasis on the social environment, culture, and collaborative aspect of learning. Vygotsky's concepts are frequently utilised as an educational and explanatory tool by social constructivists (Palmer, 2005). Vygotsky's primary area of concentration was on the ways in which social interaction, language, and culture all play a role in the learning process. Vygotsky (1978) suggests that cultural influences are to blame for the origin of metacognitive processes. According to him, the only way for a youngster to fulfil their capacity for learning is if they are around "other informed adults." When we work together with other people, rather than by ourselves, we have a far better chance of being successful. These kinds of "cooperative" acts are largely responsible for the successes that have been attained by human beings (Liang and Gabel, 2005). The classroom is viewed as a learned society in the social constructivist approach to education. Peer contact (collaboration), student ownership of the curriculum, and educational experiences that are real to the students are the three pillars on which the social constructivist theory is founded. According to this theory, learning takes place when these three pillars are present Recent developments in the fields of cognitive science, learning, and human development have provided fresh insights that may be used to inform the creation, administration, and utilisation of academic success tests. Assessment techniques need to be founded on modern understandings and suitable criteria about the acquisition of competency and knowledge in certain academic topic domains in order to achieve such a goal. Assessment might then have a large beneficial impact on what students learn "in classrooms and on how students display their knowledge and competence in a variety of educationally meaningful situations, ranging from the classroom to state and national examinations of educational achievement".

The Constructivist Classroom:

"A constructivist classroom has to provide a choice of activities for students to choose from so that they may be challenged to embrace individual differences, develop their willingness to learn, find new concepts, and create their own knowledge. Jonnavithula and Kinshuk (2005) make the observation that schools are still organised in" the same manners as in the past. The textbooks and the instructor are considered to be the only valid sources of information, and students are considered to be unactive participants in the learning process. According to the findings of research conducted by Dollard and Christensen (1996:1), the constructivist theory plays an important role in the administration of classrooms. According to the findings of Henning's (1995:128) research on classrooms (conducted from the perspective of social constructivism), methodology and classroom management have not been subjected to rigorous investigation. The

belief held by constructivists is that human reality is, in a way, "made" via the interpretative and dialogic processes (discursive practises) that individuals engage in to establish and change meanings. Constructivists think that humans are constrained and influenced by the environment of their existence (Jordaan & Jordaan, 1998:60). Not only is constructivism a theory of education, but it is also a theory of the body of human knowledge (Confrey, 1998:106). Therefore, in a classroom setting, students should be given the independence and liberty to build their own opinions and databases, as well as the opportunity to conduct experiments on those databases in order to construct their own bodies of knowledge. According to MacMahon (1997:3), learners do not store information from the external world in their memories; rather, they construct interpretations of the world based on their prior experiences and the ways in which they engage with the environment. On the other hand, in more conventional modes of education, the only sources of learning that are acknowledged as legitimate are the students' interactions with their instructors and the contents of their textbooks. Learning was only considered valid if it was obtained by traditional means such as listening to a lecture, observing a demonstration, performing experiments in laboratories, etc. Every level of the learning process calls for the use of new strategies and approaches to teaching. Concrete learning experiences, such as sketching, acting, creating models, and going on field excursions that provide students with opportunity to see, hear, touch, taste, and smell, are absolutely necessary in a classroom setting for primary school students. These early exercises, together with the utilisation of physical manipulatives "and visual aids, serve as the foundation for more complex tasks, such as reading comprehension. Knowledge is not only the transmission of information from one person to another; rather, it is the reconstruction of knowledge via the learning and unlearning of concepts as well as the critical critique of learning with the pedagogy allowing for freedom of liberal thought".

Objectives

1. "Investigating whether there is a difference in students' learning strategies between the two groups of students taught through traditional and constructivist approaches".
2. "Investigating whether there exists significant difference in students' use of learning strategies before and after intervention".

"RESEARCH METHODOLOGY"

"The Research Design"

The researchers utilised a quantitative methodology for their investigation. This type of study design, known as quasi-experimental, was utilised. The researchers chose to employ "this design since it is difficult to pick students at random and then assign them to either an experimental study or a control" group in order to teach for an extended length of time. As a direct consequence of this, pupils were plucked from the classes that already existed.

Population and sampling

Students who were enrolled in grade 11 at Miss Hill Higher Secondary School were selected to participate in the study as the target population. The selection of Grade 11 was made since the teacher at this school was the sole willing participant in the research who could also teach both of the different classes. The researchers provided the instructor with training on the "nature of the two teaching techniques, traditional and constructivist" prior to the instructor beginning his career as an educator. In this particular investigation, a technique known as simple random sampling was used. Only two of a total of twenty sections, with a total of ninety-seven pupils, were chosen. One set of students (the experimental group, with a total of N=50), who were taught using a constructivist teaching style, were compared to another group of students (the control group, with a total of N=47), who were taught using a more traditional method of instruction. A random drawing was used to decide who would be in the experimental group and who would be in the control group.

Data Collection Instruments

As methods of data collection, this study included a questionnaire about learning methodologies, as well as the participation of focus group discussions and observations.

Data Collection Procedures

For the purpose of this study, data were collected twice: once before therapy, and once again "after treatment. Before the instructor began teaching both groups by utilising constructivist and conventional methods of instruction, he received instruction on how to effectively deploy constructivist and traditional methods of instruction. Before teaching the students using" either of the two methods, a learning techniques inventory questionnaire was provided to both groups of students (the experimental group and the control group). After that, the data was compiled and subjected to a quantitative examination. Following the administration of the medications (which took place after nine weeks), a second learning method questionnaire was distributed to the participants in both groups. In relation to the "FGD data, the researchers gave the instructor training as a facilitator, had him lead the focus group discussion, and required him to record the conversation".

Method of Data Analysis

"The pre-test and post-test scores of the students were statistically analysed, with the teaching approach serving as the independent variable and the students learning strategies acting as the dependent variables. This was done in order to determine whether or not constructivist teaching is effective at improving students' learning strategies. The pre- and posttest mean values were compared in order to determine whether or not there is a significant difference between the constructivist and traditional approaches to teaching on the students' use of learning strategies. On the other hand, the paired sample t-test and the independent sample t-test were used in order

to determine whether or not there is a significant difference between the constructivist and traditional approaches to teaching on the students' use of learning strategies. In the end, a qualitative analysis was performed on the data collected through FGD and observation in order to corroborate the findings that were discovered using the questionnaire".

"Table 1: Independent Sample t-test of Pre-test Results of Both Traditional and Constructivist groups"

	Traditional		Constructivist			
Sources	mean	SD	mean	SD	df	Sig.
Pre-test reading	20.60	2.52	20.42	2.28	95	.736
Pre-test writing	19.50	6.88	20.46	2.74	95	.414
Pre-test vocabulary	20.95	2.51	20.92	2.41	95	.966
Pre-test Total	21.25	2.95	20.53	2.40	95	.714

Before beginning the experiment, students were given a questionnaire that was designed to assess the learning techniques they employed when acquiring knowledge of the various language domains. Four separate t-tests were carried out in order to determine whether or not there is a significantly different mean between the students who were taught using constructivist teaching methods and those who were taught using standard teaching methods. According to the findings shown in Table 1, there is not a statistically significant change in mean performance when implementing "language learning methodologies (reading, writing, vocabulary and English language as a whole). This demonstrates that prior to the intervention, students in both groups utilised techniques for learning the language that were similar".

Table 2: Paired Sample t-test on Pre-test Post-Test Comparison of Traditional

	Pre test		Post test			
Sources	mean	SD	mean	SD	df	Sig.
Reading	20.52	2.61	20.82	2.89	47	.736
Writing	19.50	6.88	21.51	2.72	47	.000
Vocabulary	20.95	2.51	21.53	2.95	47	.414
English	21.25	2.84	21.53	2.45	47	.431

Teaching Approach

After the experiment, the same questionnaire that was "used before the experiment was provided to both groups of students (traditional and constructivist") so that it could be determined whether or not the intervention brought about changes in the way language acquisition techniques were employed. As a consequence of this, four separate Paired sample t-tests were carried out in order to determine whether or not there were significant mean differences between the traditional group's pre-test and post-test findings. The findings shown in the table that was just above it suggested that children did not demonstrate any modifications in their use of suitable language learning techniques across the board, with the exception of learning strategies to acquire writing.

"Table 3: Paired Sample t-test on Pre-test Post-Test Comparison of Constructivist Approach"

	Pre test		Post test			
Sources	mean	SD	mean	SD	df	Sig.
Reading	20.42	2.28	27.55	2.31	48	.000
Writing	20.46	2.74	24.47	1.58	48	.000
Vocabulary	20.92	2.41	27.70	2.01	48	.000
English	20.53	2.40	23.25	1.37	48	.000

"The comparison of the students in the constructivist group use of learning strategies to learn reading, writing, vocabulary, and the English language as a whole" before and after they took the pre-test and post-test showed that significant mean differences in favour of the post-test were observed between the pre-test and post-test results. This suggests that the intervention, which was a more constructive approach to teaching, resulted in substantial modifications in the utilisation of multiple learning modalities. That is to say, the students in this group have asserted that they shown substantial changes in their use of acceptable learning techniques in the process of acquiring reading, writing, vocabulary, and the English language as a whole.

"Table 4: Independent Sample t-test of Post-test Results of Both Traditional and Constructivist groups"

	Traditional		Constructivist			
Sources	mean	SD	mean	SD	df	Sig.
Post-test reading	20.82	2.89	27.55	2.31	95	.000
Post-test writing	21.51	2.72	24.47	1.58	95	.000
Post-test vocabulary	21.53	2.95	27.70	2.01	95	.000
Post-test English	21.53	2.45	23.25	1.37	95	.000

"The results were compared with the changes noticed in the conventional group students for the same purposes in" order to determine whether or not the shifts in students' use of acceptable learning techniques brought about by the constructivist teaching style are substantial. In order to do this, four separate independent sample t-tests were utilised. There were substantial mean differences found in each of the four domains of English language learning, and these disparities favoured the children in the constructivist group.

DISCUSSION

The primary objective of this experimental study was to investigate whether or not a constructivist instructional method is successful in guiding students to make effective use of appropriate techniques for learning English language content. A comparison of the constructivist approach with the more conventional method of instruction was carried out in order to evaluate the degree to which the former was superior. The findings of the experimental study demonstrated that prior to the implementation of the intervention, students who were exposed to either traditional or constructivist methods of instruction utilised comparable English language

learning strategies. In other words, the findings of the "independent sample t-test revealed that there were no significant mean differences in the pre-tests with relation to reading, writing, vocabulary, and learning English as a whole. Following that, one group of students was instructed using the conventional method of instruction for the subsequent nine weeks, while the other group of students was instructed using" the constructivist method of instruction (40 periods). Following the completion of the session, a questionnaire regarding learning strategies was distributed to both groups. After that, the data that had been acquired were subjected to three different t-tests: "two Paired sample t-tests and one Independent sample t-test". The findings indicated that in the comparison of traditional students' performance on pre-tests and post-tests, the mean differences "in three variables (learning strategies with regard to reading, vocabulary, and learning strategy in learning English as a whole) were found to be nonsignificant. These variables included learning strategies with regard to reading, vocabulary, and learning strategy in learning English as a whole". This suggests that the intervention, which in this regard refers to the typical teaching technique, did not bring about improvements in the students' utilisation of suitable language acquisition strategies.

CONCLUSION

As can be seen rather plainly from the findings of this research, the students in the experimental group (who were instructed utilising a constructivist teaching technique) obtained significantly higher scores on the "post-test when compared to the students in the control group (students taught using traditional teaching approach). Therefore, it is possible to draw the conclusion from the findings of this study that the constructivist teaching approach is a more effective method to improve students' utilisation of appropriate English language learning strategies when compared to the traditional teaching approach. This conclusion can be drawn because the constructivist teaching approach was found to be significantly more effective than the traditional teaching approach".

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