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A Study On Constructivism: Facilitator Of Learning Paradigm

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Abstract:

The present investigation aims at studying the contribution of the areas related to a study on constructivism: facilitator of learning paradigm. This paper attempts to make a thorough, comprehensive and analytical study by exploring the effective implementation of constructivist learning theory and practice in their classroom, including discovery learning, critical thinking, cooperative learning, inquiry-based learning, problem-based learning, experiential learning and problem-solving approach of learning. From the results of the research, it is observed that in almost every secondary school teachers in Manipur there is not proper influence of discovery learning, which impacts students' responsiveness in classroom environment, and also the students have not participated in or implemented constructivist theory of learning. It is also identified through this research that teachers and school administrators do not encourage the setting of a constructivist environment in their schools, and they hardly organise or set up a conducive classroom in their school premises.

Keywords: *Constructivism, Facilitator, Learning, Paradigm and Facilitator of Learning Paradigm.*

I. Introduction

Learning is a multifaceted process central to the development of human potential and the transmission of knowledge, skills, values, and behaviours from one generation to the next. It is a dynamic, ongoing phenomenon that is fundamental to education and human progress. In its simplest form, learning is often perceived as the acquisition of new knowledge or the modification of behaviour as a result of experiences. However, a deeper exploration of this concept reveals that learning extends far beyond rote memorisation or the passive reception of information. It is an active, complex, and context-dependent process shaped by numerous factors, including cognitive, social, emotional, and environmental influences.

From an educational perspective, learning is a key objective, and understanding its mechanisms is essential for educators, policymakers, and researchers. Educational research consistently seeks to explore and refine theories of learning, with the ultimate aim of enhancing teaching practices and improving outcomes for learners. Theories of learning provide frameworks for understanding how individuals acquire knowledge and how teaching can be adapted to foster more effective learning environments. Traditionally, behaviourist theories

emphasised external stimuli and responses, focusing on observable changes in behaviour as evidence of learning. However, more contemporary theories, such as constructivism, have emerged to offer a more nuanced view of learning that recognises the active role of learners in constructing their own understanding.

Constructivism asserts that learners are not passive recipients of information but active participants in the learning process. It posits that learning is a process of meaning-making, where individuals build their understanding by connecting new information to their existing cognitive frameworks. According to this theory, knowledge is not transferred intact from teacher to student; rather, learners actively construct their own understanding based on their interactions with the world around them. This perspective challenges the traditional view of the teacher as the sole authority in the classroom, suggesting instead that the teacher's role is to facilitate learning by providing opportunities for exploration, discovery, and dialogue.

Jean Piaget is considered one of the pioneers of constructivism. His theory of cognitive development emphasises that learning is a process that occurs in stages, as individuals move through different levels of understanding. Piaget proposed that knowledge is constructed through interactions with the environment and through active mental processes of assimilation (integrating new information into existing frameworks) and accommodation (modifying existing schemas to accommodate new information).

Piaget's perspective highlights the importance of developmental readiness, suggesting that learners construct knowledge through personal discovery and problem-solving at their own pace. While Piaget focused on individual cognitive development, Lev Vygotsky introduced a more social dimension to constructivism. Vygotsky's theory emphasises the role of social interaction and cultural context in learning, arguing that knowledge is co-constructed through communication with others. A key concept in Vygotsky's theory is the Zone of Proximal Development (ZPD), which refers to the difference between what a learner can do independently and what they can achieve with guidance from a more knowledgeable other, such as a teacher or peer. Vygotsky's social constructivism underscores the idea that learning is mediated by language and social interaction, and that collaboration and dialogue are essential for cognitive development.

Jerome Bruner expanded upon Piaget's ideas by emphasising the role of discovery learning and scaffolding in the learning process. Bruner believed that learning is an active process in which learners construct new ideas based on their current knowledge. He introduced the concept of spiral curriculum, in which complex ideas are revisited at different levels of understanding as learners' progress, building upon what they already know. Bruner also emphasised the importance of scaffolding, where teachers provide temporary support to learners to help them achieve tasks they would not be able to complete independently. Bruner's work highlights the importance of encouraging curiosity and enabling students to explore concepts through hands-on learning.

Constructivism also aligns with contemporary educational paradigms that emphasise 21st-century skills, such as collaboration, communication, critical thinking, and adaptability. By focusing on the active participation of learners and the social nature of learning, it provides a framework that resonates with modern educational goals, promoting lifelong learning and adaptability in an ever-changing world.

In a constructivist framework, learning is viewed as a continuous, evolving process. Students are taught to be curious, open-minded, and adaptable, all of which are essential qualities for navigating the complexities of the modern world. As students take responsibility for their own learning, they develop the confidence and resilience needed to pursue new knowledge and skills throughout their lives. The constructivist approach prepares students not just for academic success, but for personal and professional growth in an ever-changing global environment. By fostering independent thinking, adaptability, and a passion for inquiry, constructivism supports the development of lifelong learners who are capable of meeting future challenges.

In a constructivist classroom, the role of the teacher changes from that of a knowledge transmitter to a facilitator of learning. Teachers guide students through the learning process, encouraging exploration, critical thinking, and problem-solving. This shift requires teachers to adopt new methods of instruction, such as project-based learning, collaborative group work, and the use of open-ended questions that stimulate reflection and discussion. Teacher education programs must emphasise this transformation, helping teachers to develop the skills needed to foster a learner-centred environment.

In a constructivist framework, it is not enough for teachers to simply know the subject matter; they must also understand how to teach it in ways that align with constructivist principles. This requires the development of Pedagogical Content Knowledge (PCK), where teachers are trained not only in the content of their subject but also in methods that facilitate active learning, critical thinking, and student engagement. Teacher education programs must focus on integrating content knowledge with constructivist pedagogical strategies, enabling teachers to make the subject matter accessible and meaningful for students.

The Facilitator of Learning Paradigm represents a transformative shift in the field of education, moving away from traditional, teacher-centred approaches to a more student-focused, collaborative learning environment. This change is heavily influenced by constructivist principles, which emphasise active student engagement, critical thinking, and problem-solving. Education policies play a crucial role in either enabling or hindering the adoption of these constructivist approaches. Policies that support flexible, inquiry-based curricula, comprehensive teacher training, and innovative assessment methods are essential for the successful implementation of the facilitator paradigm.

The Facilitator of Learning Paradigm represents a fundamental shift in educational philosophy, moving away from the traditional model of teacher-centred instruction towards a more student-centred approach. In this paradigm, the teacher's role is redefined, no longer as the primary source of knowledge, but as a guide and supporter of the learning process. This shift is central to constructivist education, where learners are active participants in constructing their own understanding rather than passive recipients of information. The facilitator role encourages a more dynamic, collaborative, and individualised learning experience.

In final considerations, the Facilitator of Learning Paradigm represents a transformative approach to education, one that prioritises student agency, collaboration, critical thinking, and lifelong learning. By reimagining the teacher's role as a guide and mentor rather than a knowledge provider, this paradigm fosters a richer, more dynamic learning experience that better prepares students for the complexities of the modern world. However, for this model to be fully realised, significant shifts in teaching practices, educational policies, and school infrastructure are required.

In this context, the educational research problem, "A Study on Constructivism: Facilitator of Learning Paradigm," aims to investigate the role of constructivist approaches in promoting deeper, more meaningful learning experiences. By focusing on constructivism, this research seeks to explore how educational environments can be designed to support the active engagement of learners and to foster the development of critical thinking, problem-solving, and metacognitive skills. The study will delve into the practical application of constructivist principles in various educational settings and examine how these principles can transform traditional pedagogical practices to align more closely with the natural processes of learning.

Justification of the Study

This study seeks to explore and compare the effectiveness of Facilitator of Learning and Teacher-centred teaching styles in various educational settings. By examining their impact on student engagement, motivation and academic achievement, we aim to provide insights into the most effective teaching practices for today's diverse classrooms. Through a thorough analysis of existing literature and empirical research, this study aims to contribute to the ongoing dialogue surrounding effective teaching methodologies and their implications for student learning outcomes. The rationale of my educational research problem, "A Study on Constructivism: Facilitator of Learning Paradigm," lies in the need to investigate the effectiveness of constructivist approaches in facilitating a paradigm shift in learning.

Constructivism, a learning theory that emphasises student-centred, active, and experiential learning, has gained prominence in recent years. However, its implementation in various educational settings has been inconsistent, and its impact on student learning outcomes is not fully understood. This study aims to explore the potential of constructivism to facilitate a learning paradigm that promotes deeper understanding, critical thinking, and problem-solving skills. By examining the role of constructivism in shaping learning experiences, this research seeks to provide insights into its potential to transform traditional teaching methods and improve student learning outcomes. Ultimately, the study's findings will contribute to the development of evidence-based instructional strategies that can inform educational policy and practice. Keeping all these in consideration, the investigator chooses the topic: "A Study on Constructivism: Facilitator of Learning Paradigm".

Review of the Related Literature

Richardson (2003) studied “Constructivist Pedagogy” and examined the practical application of constructivist teaching methods in contemporary classrooms. His study utilised case studies and observational research in eight schools across the United States to assess the impact of constructivist pedagogy on student learning and teacher practices. Richardson found that constructivist approaches encourage collaborative learning, increase student engagement, and encourage critical thinking. The research also highlighted that students exposed to constructivist methods were more likely to engage in deeper, more meaningful learning experiences. Richardson concluded that constructivist teaching methods, when implemented effectively, lead to significant improvements in both cognitive and social development. His work emphasised the need for ongoing professional development for teachers to fully realise the benefits of constructivist pedagogy in diverse educational contexts.

Windschitl (2002) undertook the study “Framing Constructivism in Practice”, focused on understanding how constructivist principles were applied by teachers in real classroom settings. Through a qualitative research approach that included interviews, classroom observations, and surveys, Windschitl examined the teaching practices of 15 middle and high school teachers in the United States. His findings indicated that teachers who adopted constructivist approaches in their classrooms observed improved student collaboration, critical thinking, and engagement in learning tasks. Windschitl concluded that while constructivist teaching has the potential to greatly enhance student learning, teachers need continuous support and professional development to effectively integrate these methods into diverse and dynamic classroom environments. The study highlighted the importance of providing teachers with the necessary tools and training to successfully implement constructivist strategies.

Joshi, D. (2022) studied "Constructivist Teaching and Student Motivation in Secondary Schools" Joshi's study focused on investigating the impact of constructivist teaching methods on student motivation and engagement in secondary schools. Using a mixed-method research design, the study collected data from a sample of 110 secondary school students in Kerala through surveys and interviews. A motivation questionnaire was used to assess students' intrinsic and extrinsic motivation, while interviews provided deeper insights into their learning experiences. The findings indicated that students taught through constructivist approaches displayed higher levels of intrinsic motivation, engagement, and interest in learning. These students were more eager to participate in class activities, take ownership of their learning, and engage in critical thinking tasks. The study concluded that

constructivist teaching methods have a positive effect on student motivation, as they promote a more learner-centred environment that encourages exploration, inquiry, and self-directed learning.

Objectives of the Study

The present paper is aimed at achieving the following objectives:

- 1) To examine the effectiveness of Cooperative learning in the Facilitator of learning paradigm.
- 2) To investigate the effectiveness of Discovery learning in the Facilitator of learning paradigm.
- 3) To identify the inculcation of Problem-based learning in the Facilitator of learning paradigm.
- 4) To study the reflection and application of Experiential learning in the Facilitator of learning paradigm.
- 5) To establish a cultivation of Inquiry-based learning in the Facilitator of learning paradigm.
- 6) To investigate the development of Critical thinking skills in the Facilitator of learning paradigm.
- 7) To examine the effectiveness of constructivist learning approaches on the development of problem-solving skills in the Facilitator of learning paradigm.

Hypotheses

- 1) There is no significant difference in the effectiveness of Cooperative learning in the Facilitator of learning paradigm.
- 2) There is no significant difference in the effectiveness of Discovery learning in the Facilitator of learning paradigm.
- 3) There is no significant difference in the inculcation of Problem-based learning in the Facilitator of learning paradigm.
- 4) There is no significant difference in the reflection and application of Knowledge of Experiential learning in the Facilitator of learning paradigm.
- 5) There is no significant difference in the cultivation of Inquiry-based learning in the Facilitator of learning paradigm.

- 6) There is no significant difference in the development of Critical thinking skills in the Facilitator of learning paradigm.
- 7) There is no significant difference in the effectiveness of constructivist learning approaches on the development of problem-solving skills in the Facilitator of learning paradigm.

Method of the Study

This study employs the descriptive survey method. The descriptive survey method is typically used when the research focuses on analysing human behaviour, requiring an in-depth and detailed examination. This method allows for a comprehensive analysis of all aspects of the study, making it particularly suitable for exploring complex educational issues.

Under the descriptive survey method, the researcher was adopted survey method of the research. The survey method of research systematically collect data from a sample of individuals through questionnaires to understand opinions, behaviours, and characteristics, allowing researchers to make generalization about a larger population.

Population

The study's population encompassed secondary schools within the Imphal West district of Manipur.

Sample

The present study sample consisted of 120 secondary school students from the Imphal West district of Manipur. These students were drawn from classes IX and X and were selected from a total of 3 government schools and three private schools.

Data collection procedure of sample, out of 120 students, 20 students was selected from each school through a representative and unbiased selection, the simple random sampling techniques was employed for this sampling procedure. This approach provided a diverse and statistically valid sample, facilitating reliable insights into the educational practices being examined.

Tools

To effectively conduct a research investigation, it is essential to collect data using specialised research tools designed to test the formulated hypotheses. The tools for the present study were a questionnaire, which was developed by the investigators, keeping in account the various aspects of constructivism.

The researcher refined the list to 71 key statements, these statements were then categorised into various constructivist learning domains: 11 questions were dedicated to cooperative learning, questions to discovery learning, 11 to problem-based learning, 10 to experiential learning, 9 to inquiry-based learning, 12 to critical thinking, and 8 to problem-solving skills. With the finalized questionnaire in hand, the researcher proceeded to six selected schools situated in Imphal West district of Manipur for the purpose of data collection.

Statistical Technique Used

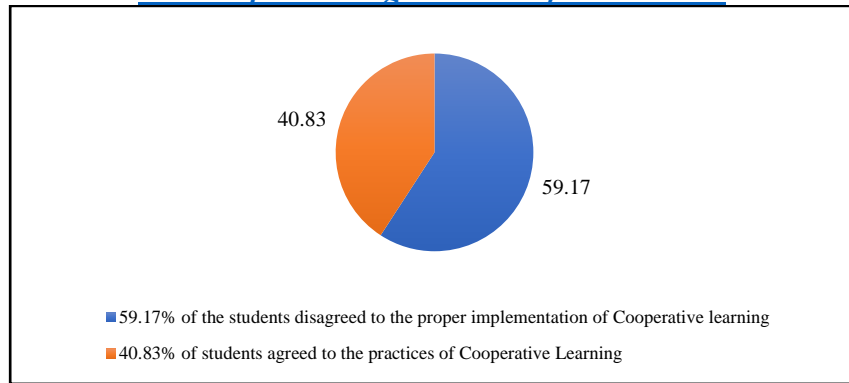
The data analysis for the current study was conducted in alignment with the predefined research objectives and hypotheses established by the investigator. The investigator employed the following statistical methods to interpret the data: Chi-square test, Percentage, Bar graph, and Pie chart.

II. Results and Discussion

Table 1

Students' Effectiveness on the Constructivist Approaches of Cooperative Learning

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	15	24	3.38
Agree	34	24	4.17
Undecided	29	24	1.04
Disagree	26	24	0.17
Strongly Disagree	16	24	2.67
Total	120	120	Obtained = 11.43



Opinions	Categories	Total	Percentage
Positive opinions	Strongly agree (15) and Agree (34)	49/120	40.83%
Negative opinions	Undecided (29), Disagree (26) and Strongly disagree (16)	71/120	59.17 %

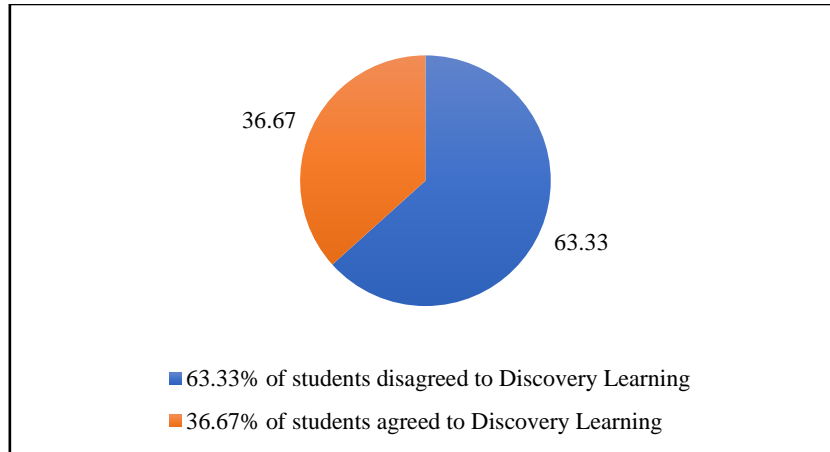
From Table 1, it can be observed that the calculated chi-squared value for the data is 11.43. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. It can be interpreted that there is no proper influence of Cooperative Learning that impacts students' responsiveness in the classroom environment. And after computing the percentage, it is found that 59.17% of the students are of the negative opinion that there is no proper effective implementation of constructivist principles of Cooperative Learning c

Thus, the above-stated hypothesis that there is no significant difference in the effectiveness of Cooperative learning in the Facilitator of learning paradigm must be rejected.

Table 2
Students' Effectiveness on the Constructivist Approaches of Discovery Learning

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	14	24	4.17
Agree	30	24	1.5

Undecided	35	24	5.04
Disagree	24	24	0
Strongly Disagree	17	24	2.04
Total	120	120	Obtained = 12.75



Opinions	Categories	Total	Percentage
Positive opinions	Strongly agree (14) and Agree (30)	44/120	36.67 %
Negative opinions	Undecided (35), Disagree (24) and Strongly disagree (17)	76/120	63.33 %

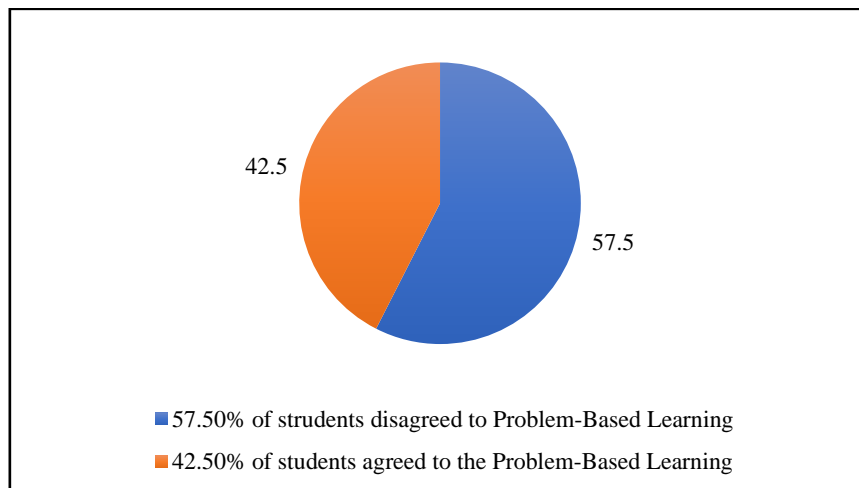
From Table 2, it can be observed that the calculated chi-squared value for the data is 12.75. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. It can be interpreted that there is no proper influence of Discovery Learning, which impacts students' responsiveness in the classroom environment. And after computing the percentage, it is found that 63.33% of the students are of the negative opinion that there is no proper effective implementation of constructivist principles of Discovery Learning. The reasons for the high negative opinions may be because the teachers does not have proper knowledge of Discovering learning and its implementation in the classroom among the Secondary schools.

Thus, the above-stated hypothesis that there is no significant difference in the effectiveness of Discovery learning in the Facilitator of learning paradigm must be rejected.

Table 3

Students' Inculcation in the Constructivist Approaches of Problem-based Learning

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	16	24	2.67
Agree	35	24	5.04
Undecided	21	24	0.38
Disagree	31	24	2.04
Strongly Disagree	17	24	2.04
Total	120	120	Obtained = 12.17



Opinions	Categories	Total	Percentage
Positive opinions	Strongly agree (16) and Agree (35)	51/120	42.50 %
Negative opinions	Undecided (21), Disagree (31) and Strongly disagree (17)	69/120	57.50 %

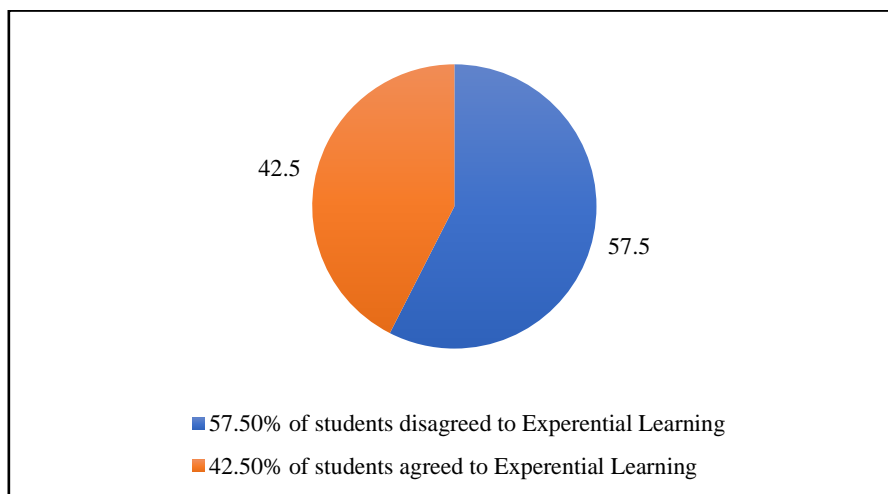
From Table 3, it can be observed that the calculated chi-squared value for the data is 12.17. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is

13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. It means that there is no proper influence of Problem-based learning, which impacts students' responsiveness in the classroom environment. And after computing the percentage, it is found out that 57.50% of the students are of the negative opinion that there is no proper inculcation of constructivist principles of Problem-based Learning among the Secondary schools in Manipur.

Thus, the above-stated hypothesis that there exists no significant difference in the inculcation of Problem-based learning in the Facilitator of learning paradigm must be rejected.

Table 4
Students' Reflection and application of Knowledge on the constructivist approaches of Experiential Learning

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	15	24	3.38
Agree	36	24	6
Undecided	28	24	0.67
Disagree	25	24	0.04
Strongly Disagree	16	24	2.67
Total	120	120	Obtained = 12.76



Opinions	Categories	Total	Percent age
Disagree	Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree	120	57.5%
Agree	Strongly Disagree, Disagree, Undecided, Agree, Strongly Agree	120	42.5%

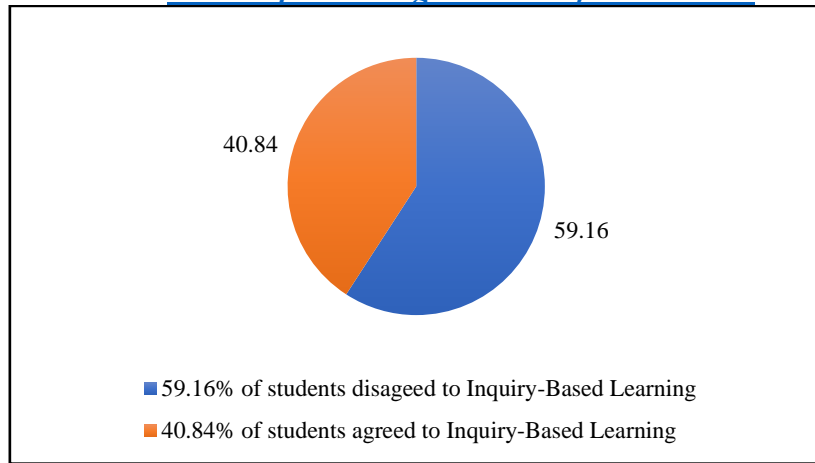
Positive opinions	Strongly agree (15) and Agree (36)	51/120	42.50 %
Negative opinions	Undecided (28), Disagree (25) and Strongly disagree (16)	69/120	57.50 %

From Table 4, it can be observed that the calculated chi-squared value for the data is 12.76. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. It means that there is no proper influence of Experiential Learning, which impacts students' responsiveness in the classroom environment. And after computing the percentage, it is found that 57.50% of the students are of the negative opinion that there are no reflection and application of constructivist principles of Experiential Learning. The teachers having being completed there B.Ed. course may be reluctant to apply the Constructivist principle due the lack of personal interest and proper support system in these schools.

Thus, the above-stated hypothesis that there is no significant difference in the reflection and application of knowledge of Experiential learning in the Facilitator of learning paradigm must be rejected.

Table 5
Students establish an enquiry into the constructivist approaches of Inquiry-Based Learning.

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	17	24	2.04
Agree	32	24	2.67
Undecided	29	24	1.04
Disagree	28	24	0.67
Strongly Disagree	14	24	4.17
Total	120	120	Obtained = 10.59



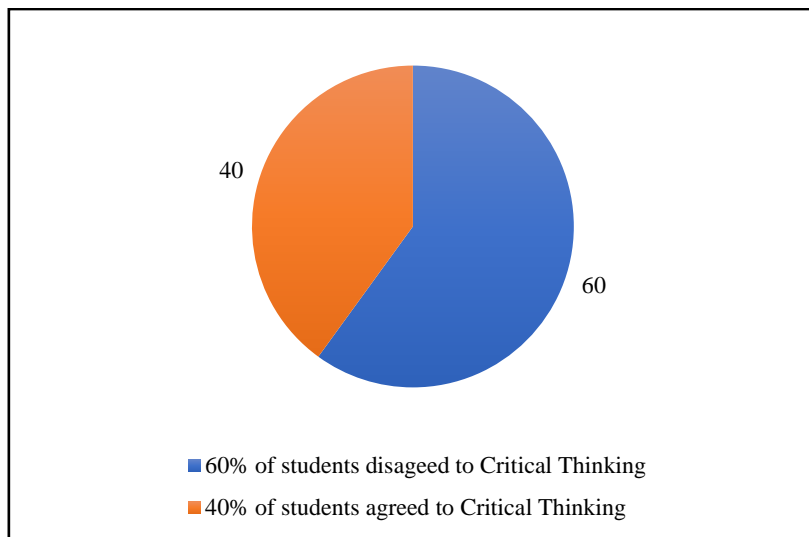
Opinions	Categories	Total	Percent age
Positive opinions	Strongly agree (17) and Agree (32)	49/120	40.84 %
Negative opinions	Undecided (29), Disagree (28) and Strongly disagree (14)	71/120	59.16 %

From Table 5, it can be observed that the calculated chi-squared value for the data is 10.59. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. It means that there is no proper influence of Inquiry-based learning, which impacts students' responsiveness in the classroom environment. And after computing the percentage, it is found that 59.16% of the students are of the negative opinion that there is improper implementation of constructivist principles of Inquiry-based Learning.

Thus, the above-stated hypothesis that there is no significant difference in the cultivation of Inquiry-based learning in the Facilitator of learning paradigm must be rejected.

Table 6
Students' development on the constructivist approaches of Critical Thinking

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	17	24	2.04
Agree	31	24	2.04
Undecided	26	24	0.17
Disagree	31	24	2.04
Strongly Disagree	15	24	3.38
Total	120	120	Obtained = 9.67



Opinions	Categories	Total	Percent age
Positive opinions	Strongly agree (17) and Agree (31)	48/120	40.00 %
Negative opinions	Undecided (26), Disagree (31) and Strongly disagree (15)	72/120	60.00 %

From Table 6, it can be observed that the calculated chi-squared value for the data is 9.67. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. This means that there is no proper influence of critical thinking,

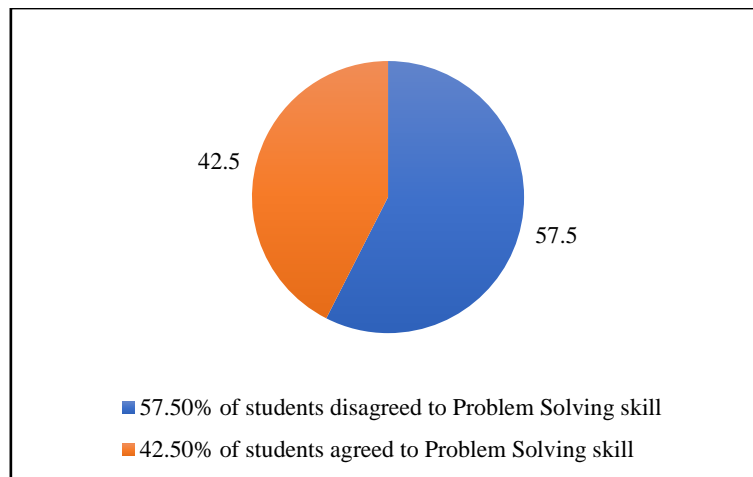
which impacts students' responsiveness in the classroom environment. After computing the percentage, it was found that 60% of the students were of the negative opinion that there was an no proper implementation of constructivist principles of critical thinking. The higher percentage of negative opinion may suggest that teachers may lack in depth knowledge and the effectively implementing the Constructive principles in the classrooms.

Thus, the above-stated hypothesis that there is no significant difference in the development of Critical thinking skills in the Facilitator of learning paradigm must be rejected.

Table 7

Students' development of the constructivist approaches to Problem-Solving Skills

Categories	Observed frequency	Chi-square frequency	Chi square
Strongly Agree	16	24	2.67
Agree	35	24	5.04
Undecided	21	24	0.38
Disagree	31	24	2.04
Strongly Disagree	17	24	2.04
Total	120	120	Obtained = 12.17



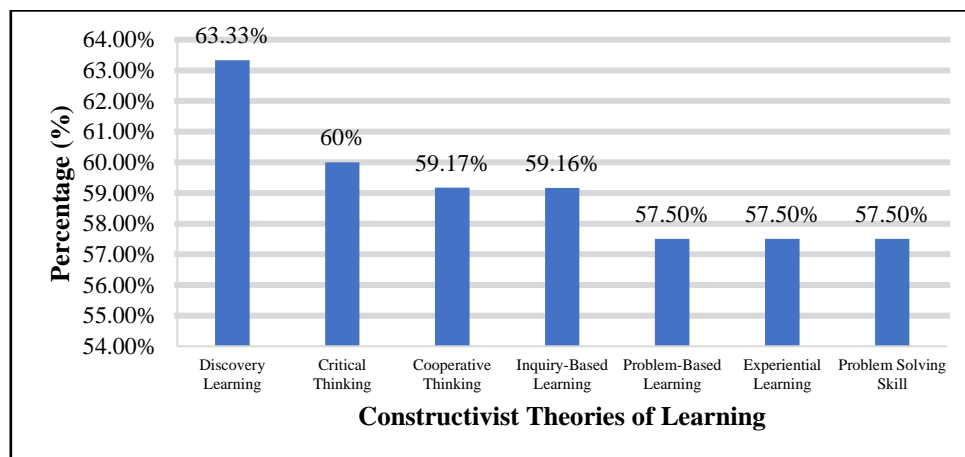
Opinions	Categories	Total	Percent age
Positive opinions	Strongly agree (16) and Agree (35)	51/120	42.50 %

Negative opinions	Undecided (21), Disagree (31) and Strongly disagree (17)	69/120	57.50 %
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From Table 7, it can be observed that the calculated chi-squared value for the data is 12.17. When compared with the critical chi-square values at 4 degrees of freedom (df), the table value at the 0.05 significance level is 9.488, while at the 0.01 significance level, it is 13.277. Since the obtained chi-square is more than the table value of the chi-square, it is significant at the 0.05 level of significance. This means that problem-solving skills are not properly influenced, which impacts students' responsiveness in the classroom environment. After computing the percentage, it was found that 57.50% of the students were of the negative opinion that there was no proper implementation of constructivist principles of problem-solving skills.

Thus, the above-stated hypothesis that there is no significant difference in the effectiveness of Problem-solving skills in the Facilitator of learning paradigm must be rejected.

A bar graph representing the areas that represent the responses of Students not participating in various areas of Constructivist theories of learning



III. Conclusion and Suggestions

1. Discovery Learning

Almost every Secondary school in Manipur does not practice constructivist theory and principles. In this research, it is obtained that Discovery Learning has the maximum responses from students from secondary schools, as there are no practices of

constructivist principles in their classroom environment. Up to 63.33% of students are of the negative opinion that they have not participated in or implemented the constructivist theory and practices in their classrooms and schools. The high negative opinion may suggest that the teachers are not initiating the implementation, there may be lack of knowledge among the teachers and lack proper infrastructures and support system among the Secondary schools.

2. Critical Thinking:

There is no proper implementation of Constructivist theory and principles in Manipur; the students are less aware of such learning theories. In this study, it is obtained that the development of establishing critical thinking in students is less than that of Discovery Learning. Up to 60% of students are of the negative opinion that the students have not participated in or implemented constructivist theory and practices of Critical thinking in their classrooms and schools. The reason for this may be because of the lack of Critical pedagogical knowledge and understanding among the teachers and proper planning and instruction from the higher authorities.

3. Cooperative Learning

Up to 59.17% of the students are of the negative opinion that they have not participated in or implemented constructivist theory of cooperative learning in their classroom and schools. It is also identified through this research that teachers and school administrators do not encourage the setting of a constructivist environment in their schools, and they hardly organise or set up a conducive constructivist classroom in their school premises. And further there may be lack proper and adequate infrastructures required for conducting co-operative learning system.

4. Inquiry-based Learning

Every school has their own rules and regulations to be followed, which include the teaching styles the teachers have to use while they are employed at the school. Most of the time, teachers in schools are not ready to set up a constructivist environment in their classrooms. Here, 59.16% of the students are of the negative opinion that there is no proper channelisation of Inquiry-based learning used at schools by the teachers. There may be multiple factors as resistance to shift from the traditional method of

teaching and learning to the new constructive model, failing to guide the students to use the resource materials and perform experiment and conduct discussion with the students in the classrooms, and lack of student readiness.

5. Problem-based Learning

Almost 57.50% of the students are of the negative opinion on the inculcation of problem-based learning. More than half of the students do not agree on the establishment of Problem-based learning in their respective subjects. This results in less awareness among students of the idea of constructivist theories and principles, and students' lack of participation and adherence to a problem-based learning. As it is time consuming, there may arise the issue of completing the curriculum and misalignment with the existing assessment and evaluation system, the teachers may overladen to implement it.

6. Experiential Learning

Similar to the above case, 57.50% of students are of the negative opinion regarding the reflection and application of knowledge of experiential learning. The students do not agree on the establishment of experiential learning in their classroom on various subjects, according to the responses of more than half of the sample size. The students are less aware of the works of constructivist theories and principles, and have less exposure to the conducive surroundings of constructivist learning

7. Problem-Solving Skills

Liked the above two constructivist approaches to learning, 57.50% of students are of the negative opinion that the students' responses disagree on the development of problem-solving skills in their classroom. Here also, half of the student sample did not agree on the development of problem-solving in their various school subjects in their learning. The students are less aware and have less exposure to such a constructivist environment.

Based on the above situations, it is suggested that the effectiveness of the constructivist approach in facilitating a paradigm shift in learning.

1. Secondary school teachers in Manipur need extensive, ongoing training to fully understand and implement constructivist approaches. Many teachers still rely on traditional, teacher-centred methods due to a lack of familiarity with student-centred strategies like cooperative learning and inquiry-based learning.
2. Professional development programs should focus on introducing teachers to these methodologies through workshops, seminars, and hands-on training sessions.
3. The current curriculum in secondary schools in Manipur is heavily content-driven and focused on rote memorisation, with little room for the active, student-centred learning that constructivist theories advocate. There is a pressing need to redesign the curriculum to prioritise skills like critical thinking, problem-solving, and collaborative learning.
4. Cooperative learning, a key element of constructivist theory, is underutilised in secondary schools. Teachers must incorporate more group-based tasks, where students work together to solve problems, complete projects, and discuss ideas. This fosters not only deeper academic learning but also social and emotional skills like teamwork, communication, and empathy.
5. To encourage this, schools should provide both time and structured activities that support cooperative learning. Group discussions, peer teaching sessions, and collaborative projects must become integral parts of the classroom routine. Teachers should also receive support on how to manage and assess group work effectively, ensuring that each student is engaged and contributing.
6. Experiential learning is often neglected in favour of theoretical, classroom-bound education. However, providing students with hands-on experiences is vital for making abstract concepts tangible and easier to understand. Schools need to introduce more practical learning opportunities such as experiments, field trips, internships, and community projects.

7. By allowing students to apply what they have learned in real-world settings, experiential learning deepens their understanding and retention of knowledge. Teachers should be encouraged to link lessons to practical examples from everyday life, using activities like experiments, simulations, or role-playing exercises to make the learning process more engaging and meaningful.
8. Discovery learning emphasises students taking the initiative to explore concepts and uncover answers through research and experimentation, rather than simply being told information. This method helps foster independence, curiosity, and critical thinking, but is not widely practised in the schools studied.
9. Inquiry-based learning requires a shift from teacher-directed instruction to a model where students are active participants in their own learning process. This approach centres on students asking questions, investigating solutions, and constructing their understanding of concepts through exploration. However, such practices are rarely used in secondary schools in Imphal West. For proper implementation there should be strict instructions from the school Principals to the teachers to adhere to the constructive approaches to teaching and learning.
10. One of the main goals of constructivist learning is to develop students' critical thinking and problem-solving skills, preparing them to tackle complex issues in both academic and real-world contexts. The current teaching practices in the region requires to emphasise on facilitating the students toward active learning and construction of knowledge, analysis and application over memorization and recall.
11. Schools should integrate activities that require students to engage in higher-order thinking, such as debates, case studies, and problem-based learning tasks. In these activities, students analyse information, weigh different perspectives, and come up with solutions, thus enhancing their ability to think critically. Teachers can further encourage critical thinking by challenging students to justify their reasoning, reflect on their learning, and apply knowledge to unfamiliar situations.
12. The successful adoption of constructivist approaches requires strong support from school administrators and policymakers. The administrators and policymakers should prepare a conducive teaching and learning environment where constructivist practices are

encouraged and valued to allow the education system to adapt, develop and reform accordingly with the new paradigm-shift in education system. Without this administrative backing, even the best-trained teachers may struggle to implement these methods.

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