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RESEARCH ARTICLE

CURRICULUM TRANSACTION AT THE SECONDARY SCHOOL STAGE IN EAST KHASI HILLS DISTRICT OF MEGHALAYA

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Abstract

This study examines curriculum implementation in the East Khasi Hills District by examining the practices of 40 secondary school teachers through a descriptive survey method. Findings indicate a variety of teaching methods, with English, Sciences, and Social Sciences teachers mainly using lectures and discussions, while Mathematics educators rely on demonstration techniques for complex concepts. However, challenges persist as 60 per cent of science teachers are hesitant to conduct practical demonstrations due to inadequate laboratory facilities, and 60 per cent of Social Sciences teachers lack interactive engagement, limiting experiential learning. Instructional material usage shows that 50 per cent of teachers use pre-made aids, with only 20 per cent creating their own, and 40 per cent employing visual aids. Despite actively questioning students, there is a notable lack of periodic assessments, as none of the teachers conduct quarterly tests. This study highlights both the effective teaching strategies and the significant barriers faced by educators in the region.

Introduction:-

The term "curriculum" originates from the Latin word "currere," meaning 'racecourse,' representing the educational path students navigate. It encompasses not just traditional academic subjects but the totality of experiences students receive through various school activities, including classroom interactions, libraries, and playgrounds (Sharma, 2012). However, when we speak of curriculum transaction, it denotes the process by which intended curricular content is imparted to students efficiently and engagingly. It involves the implementation of the curriculum through various teaching-learning strategies, instructional methodologies, and evaluation techniques. The learning outcomes and the overall educational experiences of the students are strongly impacted by the quality of curriculum transactions (NCERT, 2005). J.K. Davies has defined this term as the management of the teaching and learning process, positioning the teacher as a manager. Further, J.K. Davies has developed a managing teaching-learning approach that comprises four steps such as planning to teach, organizing teaching, leading, and controlling teaching. The final step, known as controlling, involves evaluating objectives and providing feedback to enhance the previous steps (Cited in Sharma, 2012).

Effective curriculum transaction depends on the instructional strategies employed by teachers, which may include lecture-based teaching, interactive discussions, experiential learning, project-based activities, and digital technology

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integration (Sharma, 2018). A well-planned curriculum transaction ensures that learners actively participate in the process rather than being passive recipients of knowledge (Taba, 1962). Teachers play a pivotal role as facilitators of learning, with their pedagogical knowledge, subject expertise, and ability to adapt to students' needs determining the success of curriculum implementation (Bruner, 1960). They must align their instructional strategies with the objectives and competencies outlined in the curriculum. Modern approaches emphasize student-centred learning, where learners engage in problem-solving, critical thinking, and collaborative activities, fostering deeper understanding and retention of concepts (Vygotsky, 1978). The effectiveness of curriculum transaction is assessed through formative and summative evaluations, with formative assessments such as quizzes, classroom discussions, and peer reviews helping monitor progress, while summative assessments, including standardized tests and examinations, evaluate overall learning achievements (Bloom, 1956). The integration of technology further enhances accessibility and engagement. Digital tools like online learning platforms, multimedia resources, and virtual simulations facilitate interactive learning experiences (Mishra & Koehler, 2006). Curriculum transaction, however, confronts several problems despite its significance, such as poor teacher preparation, a lack of resources, rigid assessment methods, and reluctance to embrace innovative teaching approaches (Aggarwal, 2010). Teachers must understand that the secondary school-level curriculum transition process is dynamic and complex, requiring careful preparation, efficient teaching methods, and constant assessment as students' academic and personal development are greatly influenced by it.

Methods and Strategies for Implementing the Curriculum

A well-constructed curriculum cannot achieve its goals without effective implementation and transaction. This involves clear communication, understanding learners, and managing time effectively. Teachers must adopt suitable instructional techniques to enhance curriculum transactions. Four key techniques are: Teacher-Centered Learning, Learner-Centered Learning, Experiential Learning, and Group Learning(Vijayalakshmi, 2021). In a teacher-centered approach, learning emphasizes content delivery, with the teacher controlling instruction through lectures, demonstrations, and team teaching, often leading to passive learning. Whereas in a learner-centered technique, it focuses on student needs, promoting self-paced and interactive learning through personalized instruction, distance learning, programmed learning, computer-assisted learning, and project-based teaching. Concerning experiential learning, it prioritizes hands-on experiences, using methods like discovery learning, simulations, role-play, and case studies to foster critical thinking, and in group-learning techniques, it encourages collaboration with activities such as tutorials, seminars, discussions, and projects, enhancing engagement and deeper understanding. Each method plays a crucial role in shaping effective education.

Need for the Study:-

The need for this research stems from the evolving nature of curriculum transactions and the necessity to adapt instructional techniques to changing societal demands and learner expectations. Vijayalakshmi (2021) emphasized that instructional techniques are continuously evolving, and their effectiveness directly influences curriculum objectives, making the selection of appropriate methods crucial in today's digital age. However, Omprakash, Dereso, Nefa, and Dulo (2020) identified significant challenges in curriculum transactions, particularly in developing countries, where factors like large student populations and multi-grade classrooms necessitate diverse instructional strategies. While Sharma (2013) ranked various teaching methods based on their effectiveness, the preference for traditional approaches, such as textbooks and lectures, remains dominant, as seen in Jishtu's (2003) findings. Despite the availability of innovative techniques like project-based learning, seminars, and interactive discussions, many educators still rely on conventional methods, leading to reduced student engagement and performance. Moreover, Omprakash et al. (2020) highlighted the importance of teacher training and the integration of ICT tools in enhancing curriculum delivery, yet many teachers continue to struggle with their implementation. Given these gaps, this research aims to explore effective curriculum transaction methods, addressing the need for adaptive instructional strategies and the integration of modern teaching aids to improve educational outcomes. Specifically, in the context of the East Khasi Hills district, it is essential to examine the instructional practices employed by secondary school teachers across core subjects such as English, Mathematics, Sciences, and Social Sciences to highlight the delivery of the curriculum that can significantly influence students' academic progression and future aspirations. This study is also grounded in the belief that the findings from this research will provide valuable insights for educators, policymakers, and stakeholders, guiding the development of targeted strategies to improve secondary school students' academic achievements and contribute to broader educational advancements.

Research Question:-

What strategies and methods do secondary school teachers employ to implement the curriculum in English, Mathematics, Sciences, and Social Sciences within the East Khasi Hills District of Meghalaya?

Purpose of the Study:-

This study aims to examine the methods and strategies employed by secondary school teachers to implement the curriculum in English, Mathematics, Sciences, and Social Sciences within the East Khasi Hills District of Meghalaya.

Methodology:-

In alignment with the purpose of this study, a descriptive survey method was employed to assess the different methods and strategies secondary school teachers use to deliver the curriculum. The study targeted all secondary school teachers in the East Khasi Hills district of Meghalaya, which includes 584 schools under the Meghalaya Board of Secondary School Education (MBOSE). To select the sample, the researchers utilized a stratified random sampling technique. First, four blocks from the East Khasi Hills district were randomly chosen. Then, 10 schools were randomly selected from the 339 schools within these blocks. A total of 40 teachers teaching English, Mathematics, Sciences, and Social Sciences from these four blocks participated in the study. A self-made questionnaire was employed to collect the data.

Analysis and Results:-

The data has been analysed subject-wise based on the methods used, and is presented below.

Figure 1: Methods Used for Teaching English Subject

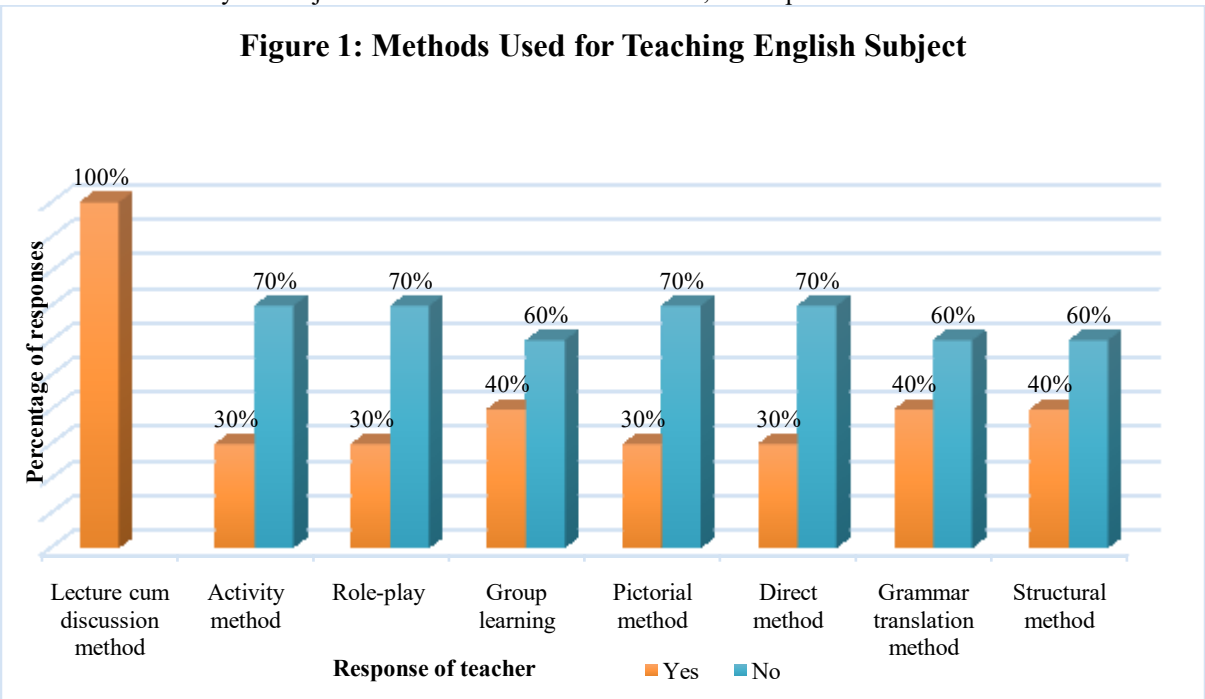


Figure 1 depicts that secondary school teachers employed various methods for teaching English. It is noteworthy that cent percent of the teachers utilize the lecture cum discussion method, highlighting its significance as a foundational pedagogical approach. Additionally, 30 per cent of the teachers incorporate the activity method, which enhances students' understanding of the lessons and enriches their ability to read and recite poetry effectively. Furthermore, 40 percent of teachers engage students through role-playing, a strategy designed to make the learning experience more dynamic and relatable, particularly in the context of dramatic literature. Group learning is another approach used in the transaction of curriculum, although it is less prevalent; only 30 per cent of teachers adopt this collaborative method, leaving 70 per cent who do not utilize it.

In grammar instruction, 40 per cent of teachers apply the direct and grammar translation method, facilitating clarity in understanding complex grammatical concepts. Meanwhile, 30 per cent of teachers employ the pictorial method to

provide students with a visual representation of various content areas, which is particularly effective when teaching poetry. Lastly, only 30 per cent of the educators implement the structural method when teaching English, indicating a varied landscape of teaching strategies in the district.

Figure 2: Methods Used for Teaching Mathematics

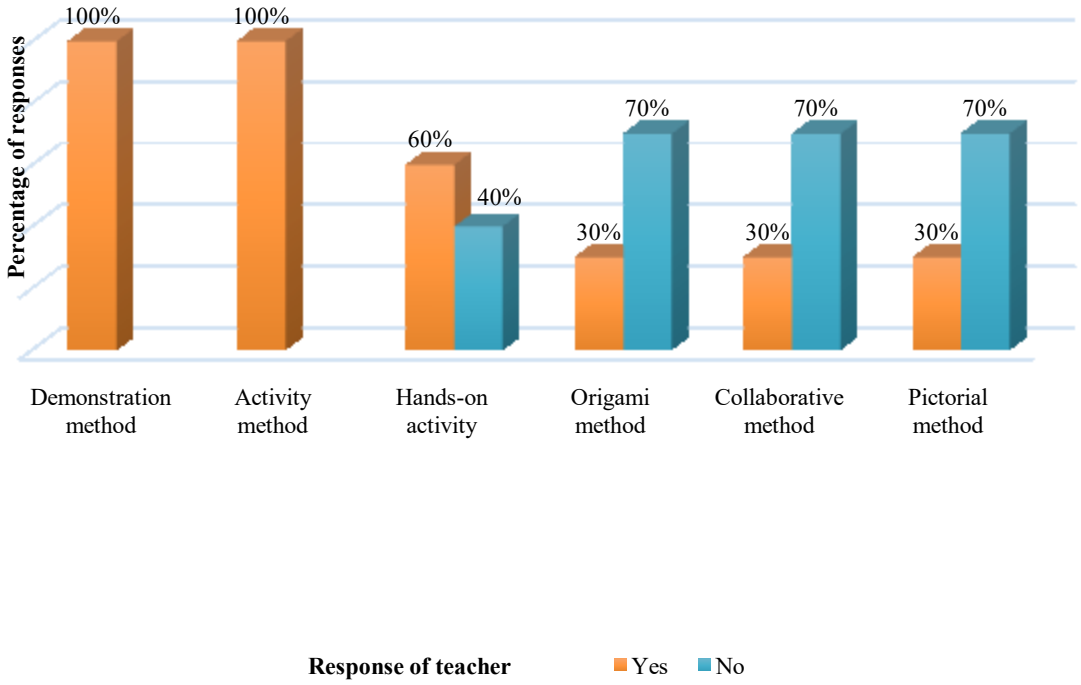


Figure 2 reveals that cent percent of secondary school teachers utilized the demonstration method as their primary teaching technique. This approach involves instructing students on various mathematical processes and then allowing them the opportunity to practice independently, fostering a hands-on learning experience for all students. When it comes to teaching geometry, 60 per cent of teachers implement hands-on activities, where students actively draw various geometrical figures. This tactile approach enhances students' understanding of geometric concepts, although 40 per cent of teachers do not incorporate this method into their lessons.

Furthermore, 30 per cent of teachers introduce students to mathematics through the origami method. This innovative technique not only presents mathematical concepts in a fresh light but also encourages students to explore geometric reasoning creatively. Similarly, 30 per cent of teachers advocate for collaborative learning by allowing students to work together on solving mathematical problems, thereby promoting an environment where they can learn from one another's insights and diverse perspectives. Furthermore, 30 per cent of teachers use pictorial methods to visualize mathematical concepts, yet it is notable that approximately 70 per cent of teachers do not employ origami, collaborative, or pictorial methods in their instruction. This data highlights the varied pedagogical strategies in use and sheds light on potential areas for development within the teaching practices in the district.

Figure 3: Methods Used for Teaching Sciences Subject

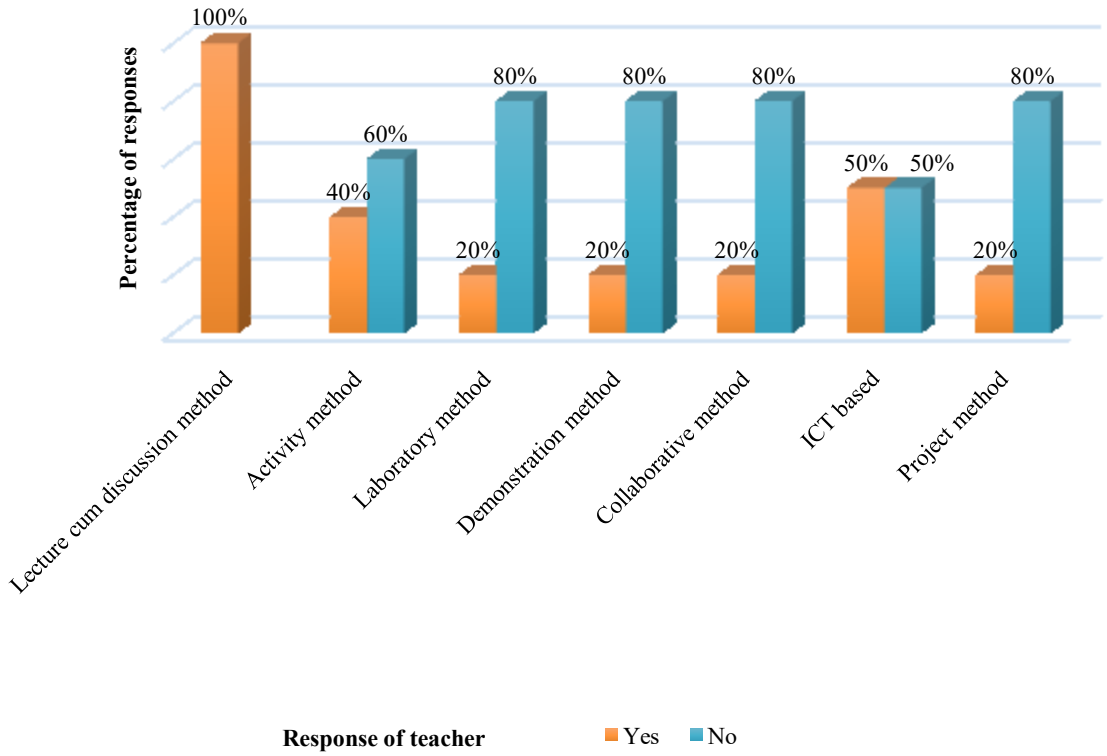


Figure 3 depicts that a cent percent of the teachers utilized a lecture cum discussion method during their sciences lessons. This traditional approach is complemented by a more engaging strategy, as 40 per cent of the teachers incorporate activity-based methods, allowing students to participate in hands-on tasks either within the classroom or as homework assignments. In efforts to deepen students' understanding of scientific experiments, 20 per cent of the teachers effectively employ practical demonstrations. However, it's noteworthy that 60 per cent do not adopt this method, primarily due to the lack of proper laboratory facilities and adequate equipment, which hampers the ability to conduct experiments effectively. Additionally, 20 per cent of the educators take advantage of the demonstration method, while a significant 80 per cent do not.

Collaborative learning is also a focus in this teaching landscape, with 20% of teachers advocating for students to learn from one another through cooperative methods. Furthermore, the integration of technology into the classroom is evident, as half of the teachers, 50 per cent, utilize Information and Communication Technology (ICT) in their teaching practices, thereby enhancing the learning experience. Lastly, a smaller subset of 20 per cent of teachers employ the project method to facilitate deeper exploration of scientific concepts. The varied approaches outlined in this table reflect a blend of traditional and innovative teaching strategies aimed at fostering student engagement and understanding in the Sciences curriculum.

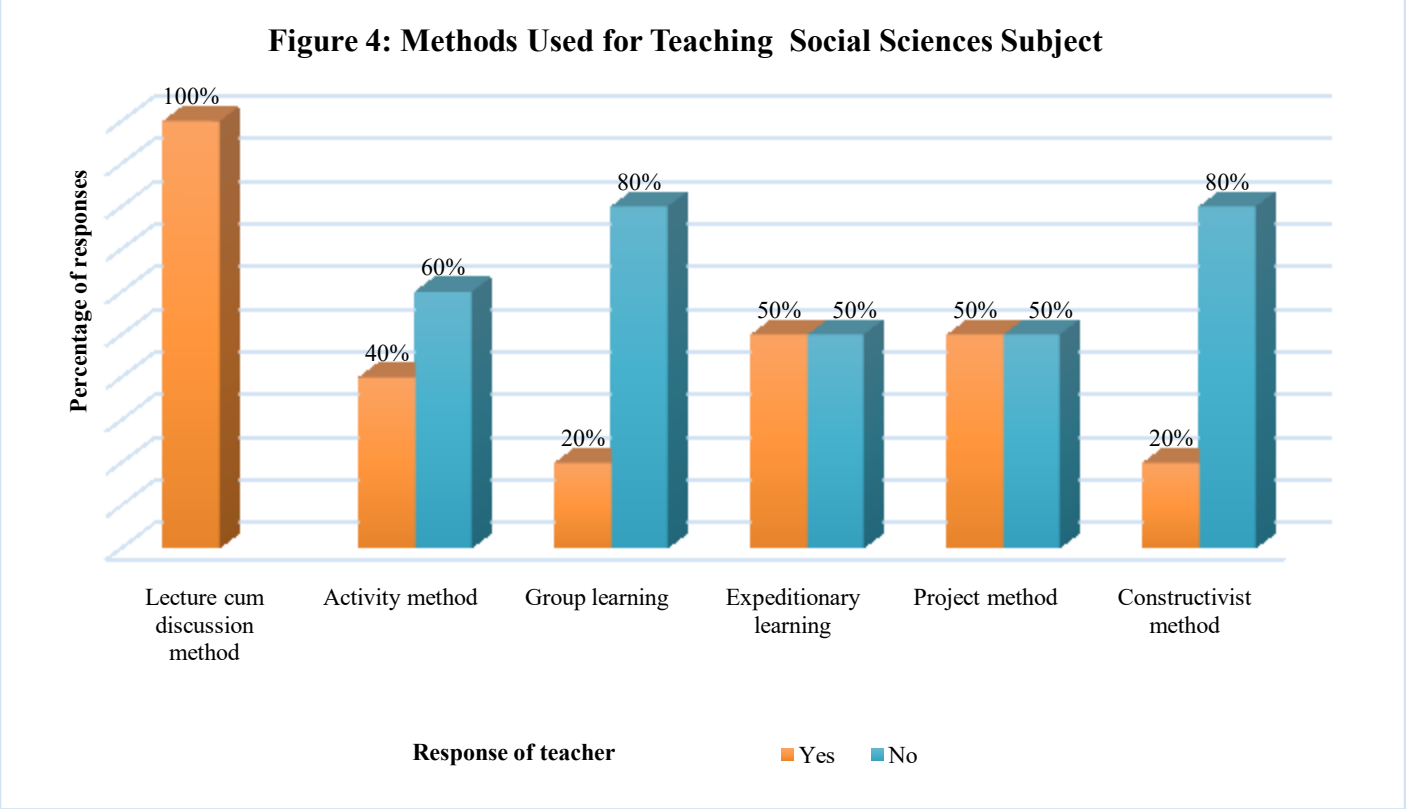


Figure 4 indicates a dominant reliance on the lecture-cum-discussion method in teaching of Social Sciences subject. Cent percent of teachers utilized this method. This method often fosters an interactive classroom environment where educators deliver content while simultaneously engaging students in discussions. Furthermore, 40 per cent of the teachers incorporated activity-based learning, allowing students to participate in various hands-on activities related to the subject matter. In contrast, 60 per cent did not adopt this interactive approach, which may limit experiential learning opportunities for their students.

The group learning method was employed by 20 per cent of teachers, who organized students into small groups to collaborate and share ideas. However, a significant 80 per cent of educators opted not to use this method, potentially missing opportunities for peer-to-peer learning and cooperation. Furthermore, half of the teachers (50%) took an innovative approach by using the expeditionary method. This involved facilitating excursions to significant locations such as historical sites, geographical landmarks, parks, and monuments, all relevant to the curriculum. Such field experiences are likely to enhance students' understanding of real-world applications of their studies. 50 per cent of the educators also favored the project-based method. This method enables students to delve into different topics and learn through exploration and independent research, encouraging creativity and autonomy in learning. Lastly, 40 per cent of teachers embraced the constructivist method, which promotes active learning by encouraging students to construct their own knowledge through inquiry and exploration of their interests. This approach emphasizes the importance of asking questions and engaging actively with the material, fostering a deeper understanding of the subject matter among students. Overall, these varied approaches reflect the diverse strategies teachers in this region employ to enhance student learning in Social Sciences.

Figure 5: Types of Teaching Aids Used in English, Mathematics, Sciences, and Social Sciences

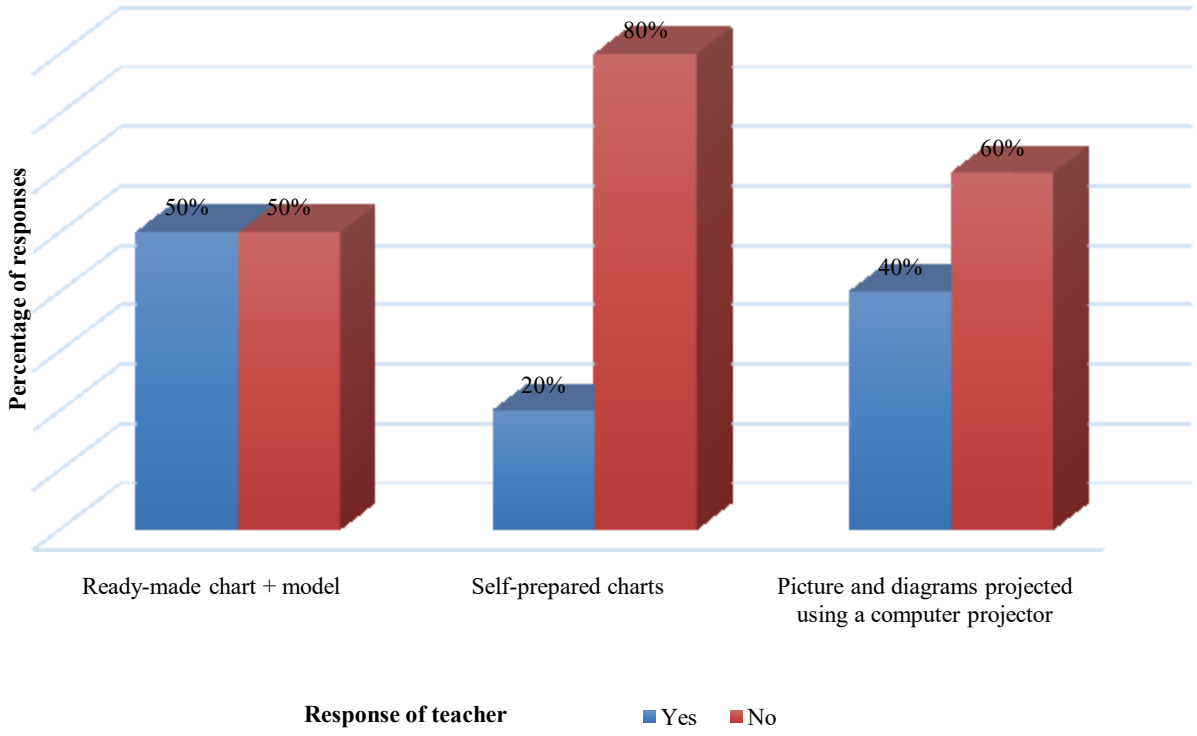
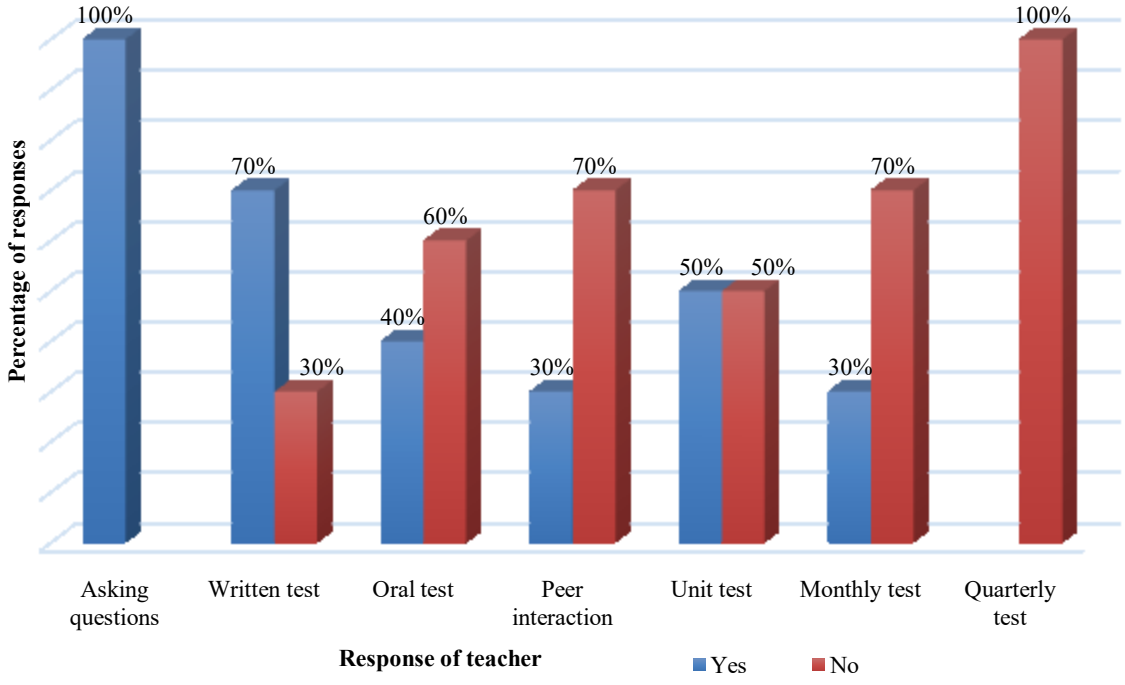


Figure 5 illustrates the various types of teaching aids employed by teachers in teaching English, Mathematics, Sciences, and Social Sciences, which include ready-made charts and models, where 50 per cent of the teachers utilized this to aid their teaching, demonstrating a reliance on readily available resources. In contrast, only 20 per cent of teachers opted to create their own charts tailored to their lessons, while a significant 80 per cent did not engage in this practice. Additionally, 40 per cent of teachers enhanced their students' understanding by projecting pictures and diagrams using a computer projector. However, 60 per cent of teachers were unable to adopt this method, primarily due to inadequate facilities and a lack of internet connectivity, which hindered their ability to access and utilize digital resources effectively. This disparity highlights the challenges faced by educators in providing diverse and engaging learning materials.

Figure 6 reveals the diverse procedures employed by secondary school teachers for assessing students in subjects such as English, Mathematics, Sciences, and Social Sciences within the East Khasi Hills district of Meghalaya. Notably, cent percent (100 %) of teachers actively engage their students by asking questions during lessons, fostering an interactive learning environment. Regarding evaluation methods, 70 per cent of teachers utilize written tests to measure student understanding, while a smaller segment, comprising 30 per cent, opts not to incorporate this approach. In language arts, specifically English, 40 per cent of teachers implement oral assessments, mainly focusing on areas like poetry comprehension. Peer interaction is a significant strategy, encouraging students to learn collaboratively from their classmates across various subjects. This method is essential as it allows learners to engage with their peers, exchanging ideas and insights. In addition, half of the teachers (50%) conduct unit tests to deepen students' understanding of the material. In contrast, only 30 per cent apply monthly testing as a consistent evaluation tool, leaving a substantial 70 per cent who refrain from this practice. Notably, no teachers regularly administer quarterly tests, indicating a gap in periodic assessment in the academic calendar.

Figure 6: Procedure for Testing Students in English, Mathematics, Sciences, and Social Sciences



Major findings

From the above analysis the major findings of the study can be summarized as:

1. All teachers in English, Sciences, and Social Sciences use the lecture and discussion method, while all Mathematics teachers employ the demonstration method.
2. 60 percent of Sciences teachers avoid practical demonstrations due to inadequate laboratory facilities.
3. In Social Sciences, 60 per cent of teachers do not use an interactive approach, limiting experiential learning opportunities.
4. 50 per cent of teachers across all subjects use ready-made charts and models, while 20 per cent create their own charts. Additionally, 40 per cent use pictures and diagrams to aid understanding, but 60 per cent cannot because of inadequate facilities and internet access.
5. All teachers ask questions to evaluate their students, but none conduct quarterly tests regularly, indicating a lack of periodic assessment.

Conclusion and Implications:-

An analysis of current teaching methods across various subjects reveals several important insights that shed light on classroom dynamics. In the realms of English, Sciences, and Social Sciences, teachers predominantly employ a combination of lectures and discussions, fostering a more traditional and dialogue-driven classroom atmosphere. Conversely, Mathematics teachers tend to favour the demonstration method, where concepts are illustrated through practical examples and step-by-step problem-solving, creating a hands-on learning experience for students. Despite the engagement tactics employed by teachers, primarily through questioning to gauge students' understanding, there appears to be a notable shortfall in implementing regular quarterly assessments. This absence indicates a significant gap in the periodic evaluation practices that are essential for measuring academic growth and identifying areas that require additional support. Further, it also highlights gaps in teaching methods and resource availability. Hence, to address these challenges a multi-pronged approach is required, such as teacher training in diverse methods like project-based learning and inquiry-based learning, promoting interactive techniques, and upgrading lab infrastructure with limited resources or virtual alternatives. Providing digital tools, internet access, and encouraging low-cost teaching aids can enhance resource availability. Regular assessments, formative evaluations, and teacher training in alternative methods like portfolios and peer assessments are crucial for identifying and addressing

learning gaps. Shifting to student-centered approaches, differentiated instruction, and collaborative learning can improve engagement. Additionally, advocating for policy reforms to allocate resources, especially in underserved areas, is essential for enhancing overall educational outcomes.

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