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# Awareness of Lecturers Towards Alternative Teaching Methods in Relation to their Student Engagement

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**Abstract**

This study explores the relationship between lecturers' attitudes toward various teaching strategies and students' levels of engagement and liking. Data were collected from 60 lecturers using a structured scale measuring five dimensions: general attitude, confidence, frequency of use, perceived challenges and perceived effectiveness of different strategies. Additionally, responses from 140 students were analysed to gauge engagement and liking within traditionally taught classrooms.

Lecturers' attitude scores were categorized into low, moderate, and high levels. Findings revealed that over half of the lecturers held positive attitudes toward diverse and student-centered teaching methods. Strategies such as inquiry-based and project-based learning were more favoured than technology-assisted approaches, which showed lower frequency and confidence scores.

Pearson correlation analysis indicated a significant positive relationship between lecturers' attitudes and student engagement, supporting the view that teacher mindset directly affects learner motivation. These results highlight the importance of fostering openness to varied instructional methods to improve student outcomes.

**Keywords:** Lecturer attitude, Teaching strategies, Student engagement

## Introduction

In recent years, the field of education has undergone significant transformations, largely driven by advancements in teaching methods and learning technologies. As a result, educators are faced with an increasing range of teaching strategies, each claiming to enhance student engagement, motivation, and academic performance. However, the adoption of these strategies by lecturers and their effectiveness in fostering positive student outcomes remain complex and multifaceted.

Lecturers play a crucial role in the learning process, not only by imparting knowledge but also by shaping the learning environment through the teaching strategies they employ. The attitudes of lecturers towards different teaching strategies are believed to influence how effectively these strategies are implemented. Moreover, **lecturer confidence**, **frequency of use**, **perceived effectiveness** and **challenges** in adopting these strategies further contribute to the success or failure of instructional methods.

The relationship between lecturers' attitudes towards teaching strategies and student outcomes such as **engagement** is an area that has garnered significant attention in educational research. Research suggests

that students who engage more with the subject matter and enjoy the teaching approach are more likely to perform better and develop positive attitudes toward learning.

This study seeks to explore how lecturers' attitudes towards various teaching strategies are related to their students' engagement for the subject. The primary objective of the study is to identify the attitudes of lecturers towards teaching strategies based on five key factors: (1) attitude towards teaching strategies, (2) confidence in using different teaching strategies, (3) frequency of use, (4) challenges in adopting teaching strategies and (5) perception of effectiveness. These factors will help clarify the factors that influence a lecturer's adoption of teaching methods and their overall attitude towards them.

The research aims to assess whether these attitudes have a measurable impact on student engagement with the expectation that lecturers who demonstrate positive attitudes and higher confidence in using diverse teaching strategies will foster greater student engagement and a more positive student experience.

**Objectives**

1. To identify the attitudes of lecturers towards various teaching strategies, including traditional and innovative methods.
2. To assess the correlation between lecturers' attitudes towards different teaching strategies and their students' level of engagement.

**Hypothesis**

1. Lecturers are expected to show varying levels of preference and openness towards traditional and innovative teaching strategies.
2. There is a positive correlation between lecturers' attitudes toward different teaching strategies and student engagement.

**Literature Review**

**Heping Zhang and others (2024)** concluded in their study, "Effect of teachers' teaching strategies on students' learning engagement: moderated mediation model", that there is strong relationship between teachers' teaching strategies and students' learning engagement, teachers should employ captivating teaching strategies to effectively capture students' attention. This study identifies significant positive correlations between teachers' diverse teaching strategies in teaching environment and students' learning engagement.

Study conducted by **Feifei Han (2021)** titled "The Relations between Teaching Strategies, Students' Engagement in Learning and Teachers' Self-Concept", states that the teaching strategies were also positively correlated with the teachers' self-concept implying that applying these teaching strategies are likely to bring about positive self-perceptions of oneself as a teacher.

Hassan Khalaily (2019) conducted "Implementation of Alternative teaching methods by Teachers: The Role of Practical Experience and the importance of Teacher training", states that the implementation rate of alternative teaching methods was found to be higher among newer teachers. The study shows that positive attitudes toward frontal teaching are inversely related to the implementation of alternative teaching methods.

According to study "The Relationship between Lecturers' Teaching Style and Students' Academic Engagement" conducted by **Abdull Sukor Shaari and others (2014),** there is a positive relationship

between lecturers' teaching styles with student academic engagement. The diversity of teaching styles is encouraging for the student to learn systematically.

## Methodology of Research

- **Research Design**

This study adopted a quantitative correlational research design to explore the relationship between lecturers' attitudes toward different teaching strategies and their students' levels of engagement and liking. The research aims to identify trends and associations between variables using statistical analysis without manipulating any independent variables. The design is suitable for addressing the research objectives and testing the hypotheses regarding the influence of teaching attitudes on student outcomes.

- **Population and Sample**

The target population consisted of higher education lecturers and students, who regularly use various teaching strategies in undergraduate classrooms. A purposive sample of **60 lecturers and 140 students** was selected based on their willingness to participate and their experience with both traditional and innovative teaching methods. Data from lecturers and students were gathered using a structured self-developed questionnaire assessing their attitudes across five domains.

| S.No. | Name of School | Lecturers | Students |
|---|---|---|---|
| 1 | Sant Kanwar Ram Govt. Girls HSS, Katora talab, Raipur | 10 | 25 |
| 2 | P.G. Umathe SAGES Govt. HSS, Raipur | 12 | 25 |
| 3 | Govt. HSS, Ravigram, Raipur | 10 | 30 |
| 4 | J.R. Dani SAGES HSS, Raipur | 16 | 40 |
| 5 | Govt. HSS, Sanjay Nagar, Raipur | 12 | 20 |
| Total | | **60** | **140** |

## Research Instruments

Two types of instruments were used:

### 1. Lecturers' Attitude Toward Teaching Strategies Tool

A self-designed instrument was developed and validated to measure lecturers' attitudes toward various teaching strategies. It consisted of five sections:

- Attitude towards teaching strategies (general perception)
- Confidence in using teaching strategies
- Frequency of use
- Perceived effectiveness
- Challenges in adoption

Each section used a Likert scale (1–5) and included items addressing both traditional and alternative strategies (e.g., group work, technology-assisted learning, project-based learning). Weighted averages were computed to categorize lecturers into Low, Moderate, and High attitude levels.

### 2. Student Engagement and Liking Scale

A standardized tool developed by Prof. (Dr.) Hemant Lata Sharma and Ms. Mansi Chowdhry questionnaire was used to collect student data. The instrument captured:

- Student Engagement: Cognitive, Behavioural, Emotional (max score: 150)

**Data Analysis and Interpretation**

Data were analysed using descriptive and inferential statistics. The following steps were followed:

- Descriptive statistics (means, weighted scores) were computed for each dimension of lecturers' attitudes.
- Lecturers were grouped into attitude levels (Low, Moderate, High) based on composite scores.
- Student engagement and liking scores were averaged per group context.
- Pearson correlation analysis was performed to examine the relationship between:
- Lecturer attitude levels and student engagement (Hypothesis 2)

**Section 1: Attitude towards Teaching Strategies**

Attitude toward teaching strategies reflects lecturers' general perception, openness, and disposition toward utilizing both traditional and innovative instructional methods in their teaching practice. This section focuses on how lecturers perceive the value and applicability of various pedagogical strategies, including lecture-based instruction, collaborative learning, differentiated instruction, inquiry-based learning, project-based learning, technology-assisted teaching, and peer teaching.

A 5-point Likert scale was used to assess this dimension, where:

- 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

These statements cover themes such as willingness to adopt innovation, preference for traditional vs. modern methods, beliefs about effectiveness, confidence, and perceived challenges.

**Descriptive Analysis of Items**

**Table 1: Descriptive Analysis of Items**

| Item No. | Statement | Mean Score |
|---|---|---|
| 1. | I am willing to try new teaching strategies. | 4.40 |
| 2. | Incorporating different teaching strategies improves student learning. | 4.52 |
| 3. | I find it challenging to incorporate multiple teaching strategies. | 3.10 |
| 4. | I feel comfortable using technology-based teaching methods. | 3.25 |
| 5. | I prefer traditional teaching methods such as lectures and books. | 4.00 |
| 6. | I think student-centered teaching strategies are more impactful. | 4.45 |
| 7. | I think it is easier to manage a class using traditional methods. | 4.10 |
| 8. | I find that project-based learning is time consuming, but effective. | 3.90 |
| 9. | I am enthusiastic about adopting inquiry-based teaching strategies. | 4.05 |
| 10. | I think students benefit from peer teaching. | 4.20 |
| 11. | Differentiated teaching is necessary to reach all students. | 4.38 |
| 12. | I am unsure about using Gamification in my lessons. | 2.75 |
| 13. | I think co-operative learning improves students' social and academic abilities. | 4.33 |
| 14. | I think experiential learning is necessary for practical subjects. | 4.50 |
| 15. | Continuous assessment helps guide my teaching strategies. | 4.60 |

The data show a predominantly **positive attitude** toward diverse and innovative teaching strategies among the surveyed lecturers:

- The highest agreement was observed for items like:
  - *"Continuous assessment helps guide my teaching strategies"* (M = 4.60)
  - *"Incorporating different strategies improves learning"* (M = 4.52)
  - *"Experiential learning is necessary for practical subjects"* (M = 4.50)
- Moderate to high agreement was also found for:
  - *"Student-centered methods are impactful"* and *"Willingness to try new strategies"* (above 4.4)
  - *"Project-based learning is effective despite being time-consuming"*
- Items indicating some **challenges or uncertainty** included:
  - *"I find it challenging to incorporate multiple strategies"* (M = 3.10)
  - *"I am unsure about using Gamification"* (M = 2.75)
  - *"Comfort with technology-based methods"* (M = 3.25)

These results suggest that while there is a strong inclination toward progressive strategies, practical challenges and unfamiliarity with tech-based or gamified approaches persist.

**Grouping for Attitude Level**

To better understand the general attitude profile of the lecturers, a composite score was computed for each participant by summing their responses to all 15 attitude-related statements. This score was then used to classify lecturers into three levels:

- Low Attitude (15–37): Limited acceptance of alternative strategies and higher reliance on traditional methods.
- Moderate Attitude (38–52): Mixed views; open to some strategies but not all.
- High Attitude (53–75): Positive disposition toward a variety of teaching strategies.

This classification allowed for subsequent correlational analysis between lecturers' attitudes and student engagement levels.

**Table 2: Distribution of lecturers across these categories**

| Attitude Level | Number of Lecturers | Percentage |
|---|---|---|
| LOW | 13 | 21.7% |
| MODERATE | 15 | 25% |
| HIGH | 32 | 53.3% |

This data reveals that more than half (53.3%) of the lecturers demonstrated a high level of positive attitude toward diverse teaching strategies, suggesting a growing readiness to adopt student-centered and alternative methods. Meanwhile, a smaller portion (21.7%) still held predominantly traditional views.

**Section 2: Confidence in using different Teaching Strategies**

Confidence plays a pivotal role in determining whether educators are willing to explore and adopt diverse instructional strategies in their classrooms. This section investigates the extent to which lecturers feel confident in using a range of teaching strategies, both traditional and innovative. Participants were asked to rate their confidence using a 5-point Likert scale, where 1 = Not Confident and 5 = Very

Confident. A weighted average score was then computed for each strategy to reflect the overall level of confidence among respondents.

**Table 3: Computed Mean Confidence Scores**

| Teaching Strategy | Responses (1–5) | | | | | Mean Confidence |
|---|---|---|---|---|---|---|
| | 1 (Not Confident) | 2 | 3 | 4 | 5 (Very Confiden) | |
| Lecture-Based Instruction | 1 | 0 | 13 | 26 | 20 | 4.07 |
| Co-operative Learning | 3 | 0 | 19 | 12 | 26 | 3.97 |
| Differentiated Instruction | 3 | 9 | 25 | 12 | 11 | 3.25 |
| Inquiry-Based Instruction | 5 | 4 | 16 | 21 | 14 | 3.45 |
| Project-Based Learning | 10 | 11 | 15 | 17 | 7 | 3.02 |
| Technology-Assisted Learning | 8 | 19 | 15 | 8 | 10 | 2.97 |
| Peer Teaching | 7 | 15 | 18 | 12 | 8 | 3.00 |

The findings show that lecturers felt most confident using Lecture-Based Instruction (mean = 4.07) and Co-operative Learning (mean = 3.97). These results suggest strong familiarity and ease with these methods. On the other hand, Technology-Assisted Learning (mean = 2.97) and Project-Based Learning (mean = 3.02) received the lowest confidence scores, which may reflect limited training, resources, or experience in implementing these strategies.

Overall, Lecture-Based Instruction and Cooperative Learning show the highest levels of teacher confidence, while Technology-Assisted Learning and Peer Teaching are areas where teachers feel less confident and face more challenges. This suggests that while traditional and cooperative methods are widely adopted with ease, newer and more complex strategies such as technology-based teaching still present challenges for many educators.

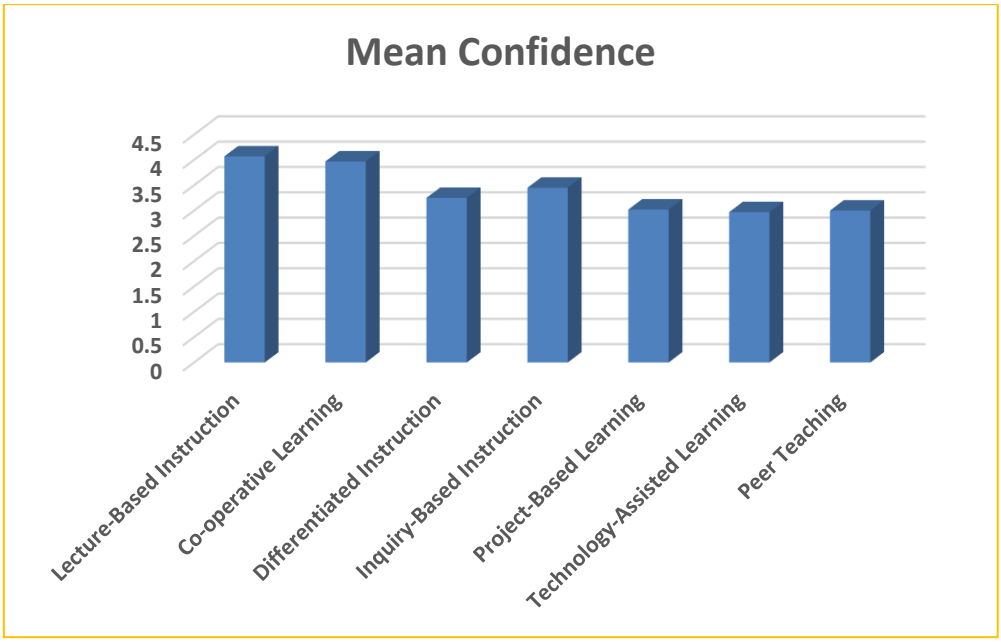


**Figure 1 Mean Confidence in using Teaching Strategies**

Figure 8.1 displays the average confidence scores for each teaching strategy. While lecturers generally express high confidence in using traditional and group-based methods, their confidence drops for more resource-dependent or complex strategies such as technology-assisted and project-based learning. These variations highlight key areas for capacity building and targeted professional development.

**Section 3: Frequency of Use of Teaching Strategies**

To gain a deeper understanding of actual classroom practices, the present study also examined the frequency with which lecturers use various teaching strategies. Respondents were asked to indicate how often they employ each strategy using a 5-point Likert scale, where 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always.

A **weighted average frequency score** was computed for each teaching strategy. This was done by multiplying the number of lecturers selecting each response by the corresponding score, summing these products, and dividing by the total number of responses for that strategy. The formula used is as follows:

$$\textbf{Weighted Average Frequency} = \frac{(f1 \times 1)\,(f2 \times 2)\,(f3 \times 3)\,(f4 \times 4)\,(f5 \times 5)}{f1 + f2 + f3 + f4 + f5}$$

Where:

- $f1$ to $f5$ are the frequencies of responses for scores 1 to 5 respectively.

This calculation provides a single average score (ranging from 1 to 5) that reflects the overall frequency with which each strategy is used.

**Table 4: Weighted Average Frequency of Use of Teaching Strategies**

| Teaching Strategy | Weighted Average Frequency |
|---|---|
| Lecture-Based Teaching | 4.833 |
| Inquiry-Based Learning | 3.7 |
| Project-Based Learning | 3.65 |
| Group Work/Collaborative Learning | 3.05 |

| | |
|---|---|
| Formative Assessment Techniques | 2.983 |
| Differentiated Learning | 2.580 |
| Technology-Based Instruction | 1.625 |

The results revealed notable patterns. Lecture-based teaching emerged as the most frequently used strategy, consistent with the study's focus on lecturers who primarily adopt traditional methods. In contrast, strategies such as Role Play and Case-Based Learning showed lower average frequencies, suggesting that these more innovative or interactive approaches are less commonly implemented.
These findings indicate a reliance on traditional pedagogical methods, even though many lecturers may express favourable attitudes toward alternative strategies. This gap between attitude and actual classroom application highlights an area for potential intervention and further professional development.

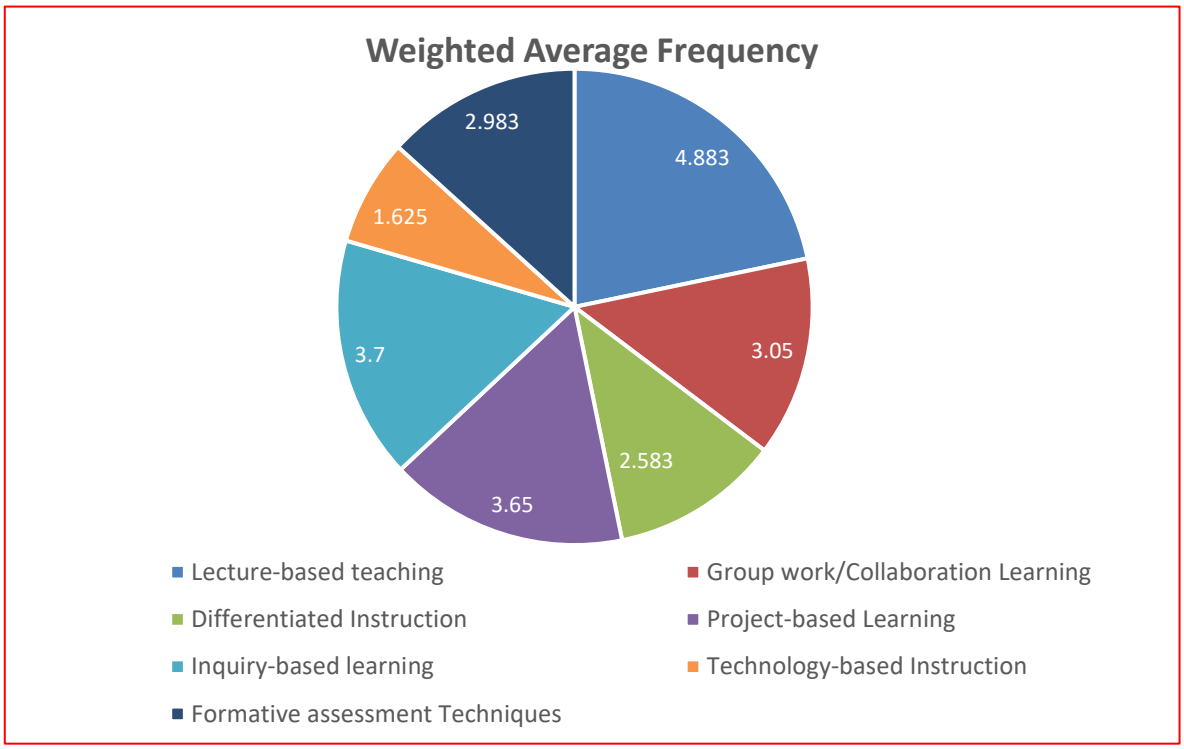


**Figure 2 Weighted Average Frequency of Use of Teaching Strategies**

Figure 6.1 presents a bar chart comparing the average frequency of use of various teaching strategies among lecturers. The data reveal that Lecture-Based Teaching is used with the highest frequency (mean = 4.83), indicating a strong reliance on traditional instructional approaches. In contrast, Technology-Based Instruction is the least frequently used strategy (mean = 1.63), suggesting limited integration of digital tools into teaching practices. Strategies like Inquiry-Based and Project-Based Learning show moderate use, reflecting partial adoption of more student-centered methods. These findings emphasize the existing gap between innovative pedagogical awareness and actual classroom implementation.

**Section 4: Challenges in Adopting different Teaching Strategies**

While the shift toward student-centered and innovative teaching methods is widely advocated in educational research, the practical adoption of such strategies is often hindered by a range of challenges.

Understanding these obstacles is essential for interpreting lecturers' attitudes and for identifying areas where institutional or policy-level support is needed.

As part of this study, lecturers were asked to indicate the primary challenges they face when attempting to adopt alternative teaching strategies. This item was part of the broader "Attitude Toward Teaching Strategies" tool and aimed to capture the practical constraints experienced by lecturers, particularly those who primarily use traditional teaching methods.

**Table 5: Responses from Lecturers about Challenges**

| **Challenges** | **No. of Responses** |
|---|---|
| Lack of time for preparation and planning | 10 |
| Insufficient Resources (Materials, Technology etc.) | 50 |
| Big Size of Class | 47 |
| Curriculum limitations or standardized testing requirements | 5 |
| Vocational Development or Lack of Training | 7 |
| Resistance of Students | 14 |
| Difficulty in classroom management with some strategies | 26 |
| Personal discomfort with a particular teaching method | 11 |
| Difficult to evaluate students after using different strategies | 36 |
| Lack of Administrative support | 42 |

The responses revealed several consistent themes. The most frequently cited challenge was **"Insufficient Resources (Materials, Technology, etc.)"**, reported by **50 out of 60 lecturers**. This finding underscores a critical issue in the implementation of modern teaching approaches: access to necessary infrastructure. Without appropriate technological tools, digital platforms, or updated teaching materials, many lecturers may find it difficult—or impossible—to implement more interactive or individualized methods of instruction.

The second most commonly reported challenge was **"Big Size of Class"**, selected by **47 lecturers**. This response highlights how large class sizes restrict the feasibility of active learning techniques, such as collaborative group work, formative feedback, or inquiry-based instruction, all of which often require more time and personal interaction than traditional lecture-based formats allow.

Other notable challenges included:

- **"Lack of time for preparation and planning"** (10 responses), suggesting that lecturers are constrained by heavy workloads, leaving little opportunity to redesign lesson plans or experiment with new approaches.
- **"Vocational development or lack of training"** (7 responses), indicating a gap in professional development opportunities that might help lecturers acquire the skills or confidence to adopt new methods.
- **"Curriculum limitations or standardized testing constraints"** (5 responses), which point to systemic constraints that prioritize content coverage and exam performance over pedagogical flexibility.

These results show that even when lecturers express interest or positive attitudes toward adopting different teaching strategies, they often face significant logistical, institutional, and structural barriers.

Addressing these issues—particularly resource availability, class size management, and professional training—may be crucial for enabling a more widespread and sustainable shift toward innovative teaching in higher education.

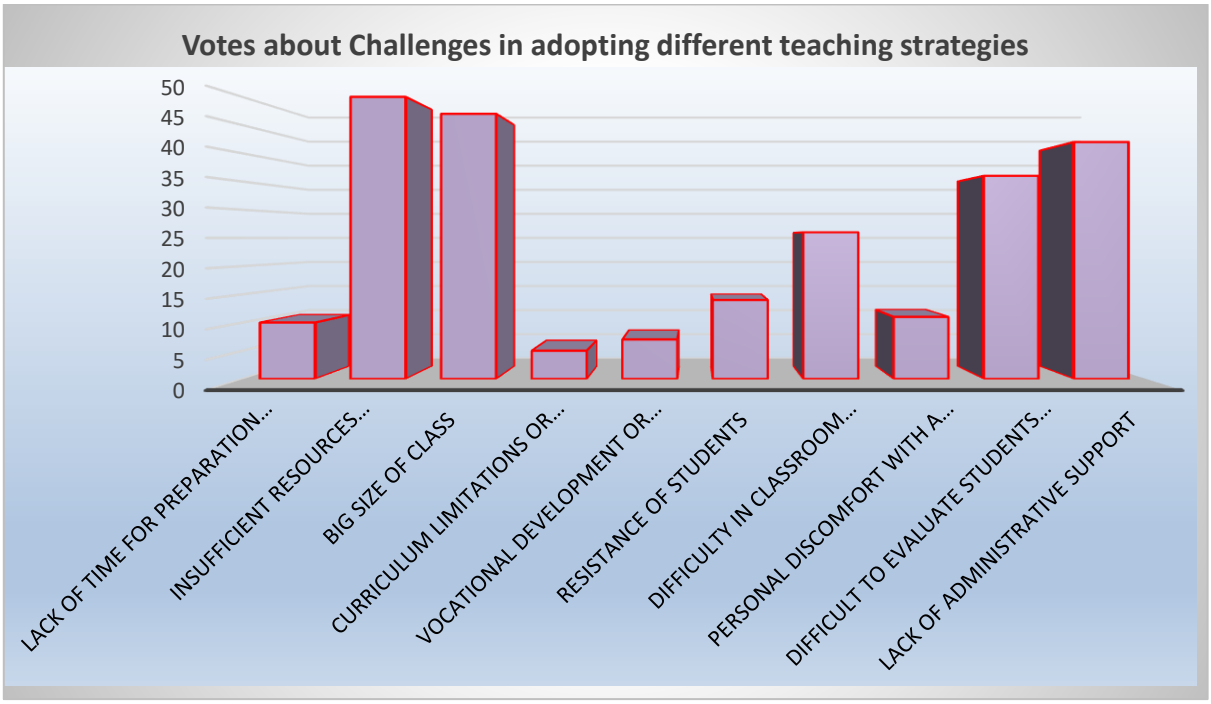


**Figure 3: Indication of the primary challenges when attempting to adopt alternative teaching strategies**

**Section 5: Perception of effectiveness of Teaching Strategies**

To examine how lecturers perceive the instructional value of various teaching strategies, participants were asked to rate the effectiveness of each on a 5-point Likert scale, where 1 = Not Effective and 5 = Very Effective. A weighted average was computed for each strategy based on the frequency of responses at each rating point.

A mean score was calculated for each strategy to reflect its perceived effectiveness. Higher values indicate greater perceived instructional value, while lower scores suggest strategies seen as less impactful in classroom settings.

**Table 6: Computed Mean Perceived Effectiveness Scores**

| Teaching Strategy | Responses (1–5) | | | | | Mean Effectiveness |
|---|---|---|---|---|---|---|
| | 1 (Not Effective) | 2 | 3 | 4 | 5 (Very Effective) | |
| Lecture-Based Instruction | 2 | 4 | 22 | 8 | 24 | 3.80 |
| Group Work/Collaborative | 3 | 8 | 22 | 15 | 12 | 3.57 |
| Differentiated Instruction | 12 | 16 | 18 | 5 | 9 | 2.70 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Project-Based Learning | 4 | 12 | 17 | 15 | 12 | 3.38 |
| Inquiry-Based Instruction | 3 | 9 | 12 | 26 | 10 | 3.58 |
| Technology-Assisted Learning | 2 | 15 | 13 | 22 | 8 | 3.33 |

The results show that Lecture-Based Instruction had the highest mean score of 3.80, indicating it is still viewed as the most effective method by many lecturers. Inquiry-Based and Group Work/Collaborative Learning followed closely, with scores of 3.58 and 3.57 respectively, suggesting moderate appreciation for more interactive strategies. In contrast, Differentiated Instruction received the lowest mean effectiveness score (**2.70**), suggesting it is either less understood or less favoured in actual classroom contexts.

This comparative study clearly indicates that some teaching strategies, such as Lecture-Based Instruction and Group Work, are considered more effective by teachers. On the other hand, strategies like Differentiated Instruction are less popular and their effectiveness is questioned. Inquiry-Based Learning and Project-Based Learning are also seen as effective by teachers, while Technology-Assisted Learning has mixed reviews.

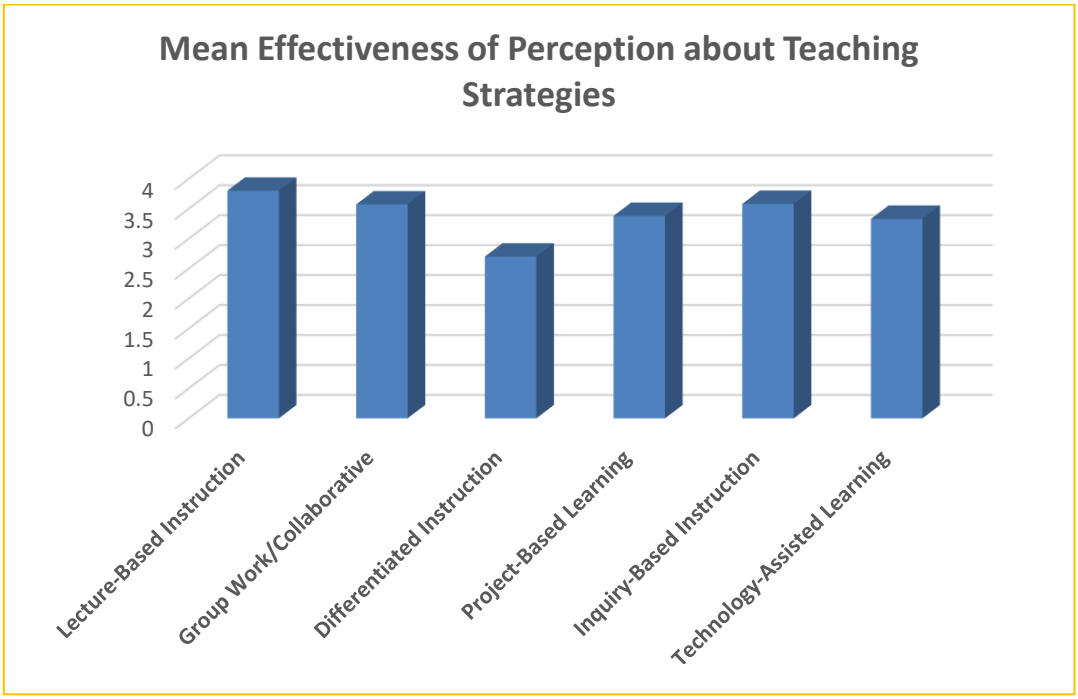


**Figure 4 Mean Effectiveness of Perception about Teaching Strategies**

Figure 7.1 illustrates the average perceived effectiveness of various teaching strategies. The chart reveals a continued preference for traditional methods, especially lecture-based teaching, while some innovative strategies such as differentiated instruction are perceived as less effective. This may point to gaps in training, familiarity or institutional support for implementing these methods.

**Correlation Between Lecturers' Attitudes Toward Teaching Strategies and Student Engagement**

**Hypothesis 2:** There is a positive correlation between lecturers' attitudes toward different teaching strategies and student engagement.

To analyse this relationship, two key data sets were used:

**Lecturers' Attitude Scores**, based on five dimensions:

1. Attitude towards teaching strategies,
2. Confidence in using them,
3. Frequency of use,
4. Perceived effectiveness, and
5. Challenges in adoption (inversely scored).

These were compiled and each lecturer was categorized into **Low**, **Moderate**, or **High Attitude** levels.

- **Student Engagement Scores**, collected from a standardised tool developed by Prof. (Dr.) Hemant Lata Sharma and Ms. Mansi Chowdhry, separate group of 140 students using a standardized engagement scale tool developed by Prof. (Dr.) Hemant Lata Sharma and Ms. Mansi Chowdhry, scored out of 150.

Since the lecturer and student data sets were collected independently, a **group-wise correlation** approach was adopted. Student engagement scores were grouped based on the corresponding attitude level category of lecturers presumed to be associated with similar teaching practices (i.e., traditional strategy usage).

The **Pearson Product-Moment Correlation Coefficient (r)** was used to examine the relationship between:

- **Lecturers' attitude level scores** (numerically coded: Low = 1, Moderate = 2, High = 3)
- **Average Student Engagement scores** in corresponding teaching environments.

The assumptions of linearity, scale-level measurement and absence of outliers were verified before proceeding.

**Table 7: Attitude Level Category connected to Student Engagement Scores**

| Lecturer Attitude Level | Attitude Score (X) | Mean Student Engagement Score (Y) |
|---|---|---|
| Low | 1 | 85.3 |
| Moderate | 2 | 96.7 |
| High | 3 | 112.1 |

Pearson's Correlation Formula

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{(N \sum X^2 - (\sum X)^2)(N \sum Y^2 - (\sum Y)^2)}}$$

Where:

- X = Lecturer Attitude (1, 2, 3)
- Y = Student Engagement or Student Liking
- N = Number of data points (3 in this case)

$$\sum X = 1 + 2 + 3 = 6 \qquad \sum Y = 85.3 + 96.7 + 112.1 = 294.1$$

$$\sum XY = (1 \times 85.3) + (2 \times 96.7) + (3 \times 112.1) = 615$$

$\sum X^2 = 14, \quad \sum Y^2 = 29{,}193.39$

We get the Pearson Correlation co-efficient $\boldsymbol{r = 0.9963}$

**Results of the Pearson correlation indicated that there is a non significant large positive relationship between X and Y, ($r$(1) = .996, $p$ = .055).**

The results strongly support the hypothesis. Students taught by lecturers with higher attitudes toward diverse teaching strategies—reflected by higher frequency of use, confidence, and perceived effectiveness—report greater levels of engagement. This suggests that as lecturers become more open and skilled in employing varied teaching strategies, student involvement in learning activities increases significantly.

This correlation highlights the importance of promoting pedagogical diversity and empowering lecturers through training and resources. Doing so not only benefits instructional quality but also directly contributes to improving the academic engagement of students—a key predictor of academic success and classroom satisfaction.

**Discussion**

The findings of this study indicate that a majority of lecturers exhibit a high level of positive attitude toward a range of teaching strategies, including student-centered and innovative approaches. This is evident from the weighted frequencies and high perception of effectiveness scores for methods such as project-based learning, inquiry-based instruction, and cooperative learning. Notably, traditional lecture-based strategies still dominate in frequency of use, despite being perceived as less effective by many lecturers.

A significant positive correlation was found between lecturers' attitudes and students' engagement, supporting the hypothesis that educators who embrace diverse instructional methods foster more involved learners. This reinforces existing literature which suggests that student engagement is strongly influenced by instructional design, teacher enthusiasm, and responsiveness to diverse learning needs.

However, some areas showed gaps—such as the low frequency and confidence in using technology-assisted learning. Despite growing emphasis on digital tools in education, lecturers remain hesitant, possibly due to limited training or infrastructure. This mismatch between attitude and actual classroom practice deserves attention in professional development programs.

**Suggestions for Further Research**

1. **Longitudinal Studies**: Future research could track changes in lecturers' attitudes and their impact on student engagement over time, especially as professional development and institutional policies evolve.
2. **Qualitative Insights**: Interviews or focus groups could explore in depth why certain strategies are less adopted despite positive perceptions? e.g., challenges with implementation, time constraints or lack of resources.
3. **Technology Integration**: Further research can examine the specific barriers to using technology in teaching and how targeted interventions might change usage patterns.

4. **Student Performance Metrics**: Adding academic achievement data could provide stronger evidence of how teaching strategy influences not just engagement and liking but also performance.
5. **Cross-Disciplinary Comparison**: Future work could explore whether attitudes and correlations vary significantly across disciplines (e.g., sciences vs. humanities).

**Educational Implications**

1. **Professional Development**: Institutions should invest in ongoing teacher training that builds confidence in using varied and modern teaching strategies, especially in technology-assisted and differentiated instruction.
2. **Curriculum Design**: Course planning should integrate flexible teaching models that allow for cooperative, project-based, and inquiry-driven activities to cater to diverse learners.
3. **Policy Implementation**: Educational leaders should consider lecturers' attitudes when mandating new pedagogical practices. Bottom-up implementation—where teachers are involved in planning—may increase adoption and effectiveness.
4. **Student-Centered Approach**: As the study confirms a link between teacher attitudes and student engagement, it underscores the need for a cultural shift toward learner-centric education.
5. **Resource Allocation**: Schools and colleges must ensure that teachers have access to the materials, time, and support systems needed to adopt innovative strategies.

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