

Academic Performance Indicators To Improve Learning Outcomes Of Students In Educational Institutes: Beyond Standardized Tests

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Abstract

Performance indicators provide meaningful information about students' accomplishments and classroom progress, they are crucial for enhancing student learning. With the use of resources like the Student Academic Performance Indicator, teachers can see trends, patterns, and potential areas where students' performance could be improved.

The study aims to explore the key indicators utilized by teachers to assess students' learning. The qualitative phenomenological study was used. A sample size was 10 teachers from different schools. A semi-structured questionnaire was used to collect in-depth data from teachers of varied socio-economic backgrounds with different experience levels in the field. The random sampling technique was utilized to assess the population. The data was analyzed through thematic analysis. The major themes for measuring performance indicators that emerged from the data were: teaching pedagogies, Class environment, and exposure given to students. It was explored that a positive class environment, students' active participation, and extensive exposure to the students are the key factors that help to assess the learning level of students. Recommendations are proposed to teachers based on research findings to enhance the learning process of students and to improve learning outcomes.

Keywords: Performance indicators, Student learning, Educational Institutes, Learning outcomes.

Introduction

Performance indicators are essential for improving student learning because they offer insightful information about students' accomplishments and progress in the classroom (Wolff, 2023; Adeniyi, 2024). Teachers can spot trends, patterns, and possible areas for student performance improvement by using tools like the Student Academic Performance Indicator, Performance Scale Application (PSA), and predictive analytics (Batool, 2023; Sun, 2024). These markers have a favorable effect on learning accomplishment by predicting students' specialization choices and enhancing assessment, communication, and learning satisfaction. Furthermore, the early prediction of individual student performance is made possible by the use of digital platforms and frameworks for mapping course-

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specific data to standard learning indicators (Wang X, 2024; Tirumanadham, 2024). This enables tailored interventions and assistance to improve overall educational experiences. Performance indicators are necessary for sustained quality management in today's knowledge societies (Ståhl, 2024; Alraba'y, 2024).

Teachers can respond in the affirmative if students do well on an exam or task, but the methods teachers use to assess students' learning don't always translate well to a study environment (Gutiérrez, 2024 ; Clark, 2023).

There are 5 dimensions of learning to performance assessment, which lead to efficient teaching strategies.

Dimension 1: Positive Views and Attitudes Toward Education

In the absence of positive attitudes and impressions, learners are unlikely to learn effectively, if at all (Kelly, 2024). Put another way, students need to have specific attitudes and perspectives for learning to occur. Having a comfortable and supportive classroom environment is crucial for learning (Zhang, 2024 ; Oyserman, 2024). Students who don't think the classroom is a secure and organized place will likely not learn much (Gray, 2024 ; Tomlinson, 2023).

In a similar way, should she lack enthusiasm for her schoolwork, she is unlikely to exert much effort and her academic performance will suffer. Developing positive attitudes and views about learning, then, is a major goal of good training.

Dimension 2: Gaining and Applying Knowledge Assisting learners in gaining new information,

When introducing new material, teachers should concentrate their lesson plans on methods that will enable learners to connect the new information to what they already know, arrange the information in ways that make sense, and commit it to memory (Mollick, 2024 ;Staudt Willet, 2024). For instance, by assisting students in drawing a parallel between the new material and what they already know, a teacher can help them make the connection between the two. He might advise them to create a summary or a visual aid to illustrate the new knowledge. Also, by assisting students in creating pictures that capture the key elements of the new material, he may be able to improve the way that knowledge is retained in long-term memory.

Dimension 3: Broadening and Enhancing:

Understanding Getting and incorporating knowledge is not the end of the educational journey. Students build to and polish their existing knowledge, drawing new distinctions and connections (Barber, 2024 ; Termaat, 2024). They conduct a more thorough and rigorous analysis of what they have learned. In the process of expanding and improving their knowledge, students frequently take part in the activities like Comparing, Classifying, making inductions, making deductions, analyzing errors, Creating and, analyzing support, analyzing perspectives, Abstracting (Marzano, 1993)

Dimension 4: Making Meaningful Use of Knowledge

When learners can apply their information to accomplish worthwhile objectives, they are learning effectively. For example, you may have first learned about quality used automobiles by reading an article or from a conversation with a friend. However, when you have to choose which car to buy on a tight budget, you truly get to know them. Making a decision is essentially a "meaningful task" that allows one to learn about tasks at a far richer and deeper level than you would if you weren't involved in the task (Marzano, 1993).

Dimension 5: Mental Habits for Productivity

Possibly the most significant component of learning is the last one. It has to do with utilizing beneficially. Mental patterns are employed by analytical, imaginative, and self-controlled thinkers. While gaining content knowledge is vital, it may not be the primary

objective of education. Ultimately, the most significant purpose of education is probably to help people form mental habits that will allow them to learn anything they want or need to know at any time in their life (Newman, 2023 ; Miller, 2023).

The Drawbacks of the Current Methods for Tracking Student Progress and Credit Reporting

The way achievement statistics are reported and recorded is a third-factor influencing assessment reform. Opponents point out that relevant feedback regarding student performance is not provided by the current systems (Mehmood, 2023 ; Bashir, 2023).

Too many teachers can name specific instances of students who were given credit for a course just for attending daily, rather than for gaining new knowledge or abilities (Simkins, 2023 ; Felder R. M., 2024). The certification process should be changed to highlight the importance of demonstrated proficiency evaluated against set performance standards, according to several proponents of assessment reform (Garcia, 2024 ; Bhanji, 2024).

The most popular way to report a student's performance is through their grades (Torrington, 2024 ; Foster, 2024). Typically, course grades are determined by averaging the outcomes of multiple metrics. Unfortunately, because the practice of averaging masks unique strengths and shortcomings, this approach all too frequently leads to a skewed picture of a student's genuine competency. A "C" student's performance may differ significantly from that of another "C" student. Furthermore, the letter grade alone is unable to offer guidance on how pupils perform (Felder R. M., 2024 ; Gorichanaz, 2024). Another method for recording student work in the classroom captures their understanding of particular concepts and abilities (Prediger, 2024). For students, instructors, parents, and the larger school community, reports produced under this type of system are more insightful and significant since they are based on precise performance criteria. To enhance learning rather than just quantify it, we need to reevaluate our reporting and record-keeping systems.

There are a variety of performance indicators that help a teacher to evaluate if a student is grasping the knowledge or off the track in studies. Key indicators are:

Academic performance: The academic performance indicators include grades of the students in standardized exams such as formative and summative tests (Jones, 2024). These also include class assessments to evaluate the daily progress of students which include quizzes, exit, and entry cards to begin a new topic or to end the previous topic (Zirkel, 2024; Tirado-Olivares, 2024). The teacher also assesses the interest level of students and their understanding of the topic through the submission frequency of homework of the students (Pem, 2024;Felder R. M., 2024).

Behavioral Indicators

Class Participation: Engagement in discussions, group work, and classroom activities.

Attendance, regularity and punctuality in attending classes are all behavioural indicators that give a teacher glimpses into the interest and performance level of a student (Robinson, 2024;Wang J. , 2024).

Social indicators: Social indicators have a significant impact on many facets of academic accomplishment, which makes them indispensable in assessing student performance (Schwerter, 2024). There is a considerable correlation between social variables and academic achievement, kids with higher social capital tend to perform better academically (Alipour, 2024). Furthermore, students who have higher-achieving friends are more likely to bounce back from low exam scores, underscoring the beneficial effects of peer pressure on academic achievement (Shen, 2024). Additionally, it has been discovered that using social media platforms positively correlates with higher final grades, highlighting the importance of online participation and social connections in predicting student achievement (Cheng, 2024). Gaining knowledge of and conducting analyses of social indicators

including friendship networks, social capital, and online interactions can aid in improving student performance.

Problem statement:

The goal of educational standardized measures like formative and, summative assessments is to evaluate students' performance and learning (Garrison, 2007;Kibble, 2017) (Sharofova, 2024). These midterm and yearly assessments may overlook the potential of students (Brunner, 2024;Woods, 2024). They can overlook some of the strategies required to make teaching productive by assessing on-the-spot factors (Sackstein, 2024;McCarthy, 2024). By keeping a check on classroom practices, Learning can be made more effective (Felder R. M., 2024;Murtaza, 2024;Fatima, 2024).

Teachers have unique insights into what motivates their students to learn because they are on the ground and dealing with them in person (Bui, 2024;Zarrinabadi, 2024). This study looks into the elements and techniques which are effective for students learning, from the teacher's perspective. The elements that help them to gauge students' learning of a particular concept.

Concerns regarding how well these methods capture the intricacies of students' growth persist despite the introduction of numerous educational initiatives and standardized tests meant to enhance student learning (Adeniyi, 2024;Barlow, 2024). Standardized measures frequently offer a narrow view of education, possibly ignoring the variety of needs, experiences, backgrounds, and classroom circumstances that influence students' achievement (Kubiszyn, 2024;Bergbauer, 2024;Simpson, 2024).

The problem this study aims to address is the inadequacy of considering the instructor's perspective when assessing student learning. This study is predominantly concerned with qualitative aspects that transcend mere test scores and attempts to elicit the views of educators about influences on learning in which they are involved. That study aims to improve a more comprehensive and well-rounded method of assessing student learning so as a result it can enhance students' academic outcomes, benefitting their growth and development.

Research Objectives:

1. To explore the factors responsible for students learning beyond standardized measures.
2. To suggest measures to improve students learning outcomes.

Research Question:

Q1. What are the factors that help to assess students' learning beyond standardized measures?

Theoretical framework:

Constructivism Theory:

Constructivism is a theory of learning that places a strong emphasis on how actively students construct their understanding. Learners don't just absorb information; instead, they process it through reflection, build mental images, and add new information to existing schemas. Deeper comprehension and learning are encouraged by this. Constructivism is a learning method that maintains that individuals actively create their knowledge and that the learner's experiences shape reality. Arends (1998) elaborates on the theories of constructivism, stating that constructivism holds that meaning is created by the learner on a personal level via experience and that meaning is shaped by the interplay of new information with existing knowledge.

Philosophy of constructivism:

Knowledge is created:

The fundamental tenet of constructivism is that knowledge is built by learners as they add new information on top of prior knowledge. An individual's construction of new or modified information from fresh learning experiences is influenced by their past knowledge (Phillips, 1995).

Learning is an active process.

The second idea is that learning is a process that is active as opposed to inert. In contrast to constructivism, which holds that meaning can only be created by students actively engaging with the outside world through activities like experiments and real-world problem-solving, the passive approach of education sees the student as "an empty vessel" to be filled with knowledge. While knowledge can be acquired passively, comprehension cannot, as it necessitates the creation of significant links between previously acquired information, newly acquired knowledge, and the learning processes (Dewey, 1938). He thought that pupils are unlikely to modify and create new habits if they merely see an issue passively and do not personally feel the repercussions in a significant, introspective, and emotional way.

Knowledge is socially constructed.

Instead of being an abstract idea, learning is a social activity that we conduct in conjunction with one another (Dewey, 1938). Vygotsky (1978) thought that the act of "making meaning" is greatly aided by society. According to Vygotsky, a child's upbringing has an impact on both the content and manner of their thinking. As a result, sharing and negotiating socially constructed information is the foundation of all teaching and learning. Vygotsky (1978) asserts that social interactions from guided learning within the zone of proximal development are the source of cognitive development since children and their partners jointly generate knowledge.

knowledge is personal.

Every learner has a unique perspective that is shaped by their prior knowledge and values. This means that because each student interprets the same lesson, instruction, or activity differently, they may all learn different things from it.

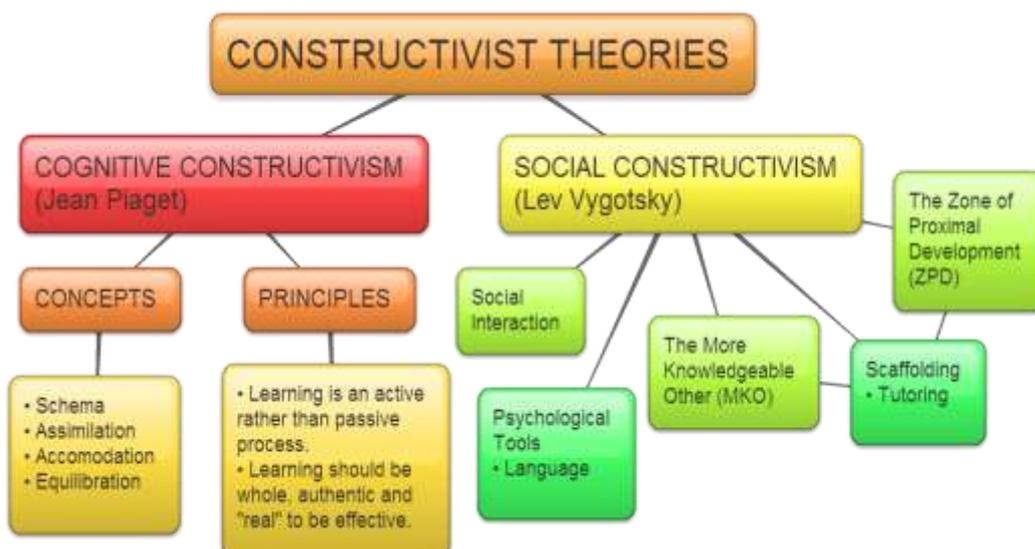


Fig :1. Constructivist Theory**Fig 2: Constructive 5E Model**

Research Methodology: The research methodology was qualitative research. To explore the intricacies of human events, qualitative research employs a methodological approach that centers on comprehending people's experiences, perceptions, and emotions within their social and cultural contexts. To comprehend reality from people's viewpoints, researchers use a methodology known as qualitative research to examine people's experiences, perceptions, and emotions in social and cultural situations (Páez, 2024).

Phenomenological Research: phenomenological research is a qualitative approach that explores people's lived experiences to learn how they interpret their reality. By examining a phenomenon's essence from the viewpoint of those who have experienced it, it seeks to uncover individualized insights that are frequently missed (Tran, 2024). This method enables a greater understanding of individual experiences by delving into the underlying meanings and concrete richness of a phenomenon without depending on preconceived notions (and middle-income countries. BMJ Global Health, 2024).

Data Collection Method: The data was collected from experienced teachers who had a minimum of 10 years of experience in the teaching field. The purposive sampling technique was used to get transparent results. The data was collected from 10 teachers of different educational institutes to get varied and in-depth data. The research tool to collect data was semi-structured interviews.

Ethical Consideration: All the ethical considerations were followed according to the BERA framework. Prior consent was taken from the participants. Interviews were recorded after their consent privacy of the recorded data was maintained.

Data Analysis: Qualitative thematic data analysis is a frequently used technique in a variety of domains, such as applied linguistics, social change research, and healthcare (Raiisi, 2024). To find significant insights and understandings, it entails using a systematic approach to data organization, analysis, and interpretation.

Thematic Analysis:

Data was analyzed through thematic analysis. The six-step analysis procedure was followed. Firstly, the data was read multiple times to get acquainted with the data, secondly, preliminary codes were made while looking for themes. The themes were evaluated. Finally, the themes were labeled using a deductive approach.

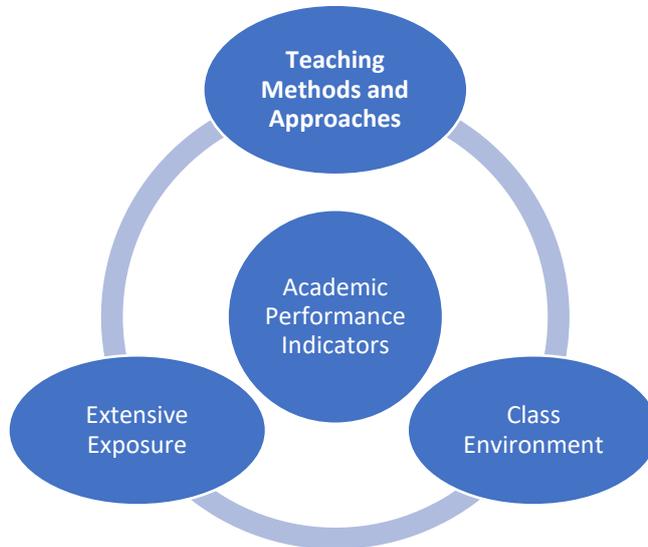


Fig 3: Visual Representation of Themes

Findings: The detailed findings of the themes are narrated as under:

Performance Indicators: Documenting improvements in student outcomes is becoming mandatory for institutions in certain states (Cabrera, 2001).

Additionally, regional and specialized accrediting bodies are shifting the focus of their review criteria from input measurement to student learning indicator assessment (Shavelson, 2018). The instructional strategies of collaborative learning, clarity and organization, and instructor interaction and feedback are strongly and favorably correlated with improvements in students' self-reported problem-solving abilities (Mierle, 2005).

Teaching Methods and Approaches:

The broad pedagogy, managerial techniques, and instructional strategies employed in the classroom are together referred to as teaching methods (De Benito, 2024;Fonsén, 2024). The teaching approach you choose will rely on what works for you, your subject area, your educational philosophy, and the mission statement of your school (McAleer, 2024;Abie, 2023).

Studies underscore the vital impact that educational concepts have in improving learning outcomes for students. Effective learning activities, student motivation, the development of critical thinking skills, and the promotion of creativity all depend on pedagogical concepts (Thornhill-Miller, 2023;Blyznyuk, 2024). It has been demonstrated that collaborative learning environments help students develop 21st-century abilities including self-control and critical thinking, underscoring the need for creative teaching techniques. Furthermore, the emergence of new educational trends highlights the value of pedagogical applications in learning-teaching, which support effective classroom management and student advancement in education. To improve student performance and the learning process as a whole, the integration of neuroscience into educational methods also highlights the significance of encouraging self-regulated learning, growth mindset, and emotional intelligence. All of these results emphasize how important pedagogical concepts are to good student learning.

P1: I noticed in my 15-year tenure of teaching that project-based techniques and hands-on activities are effective in getting learning outcomes.

Class Environment:

The classroom's atmosphere combines the academic, emotional, and social aspects of learning. Numerous elements of your classroom environment can impact students' motivation (Goagoses, 2024; Zhang, 2024).

Classroom setting has a significant impact on students' learning results (Egara, 2024). The beneficial correlation between classroom environment and learning quality, emphasizes elements like structure, order, and mutual respect between teachers and students (Arifin, 2024). Additionally, the design of the classroom and the professional development of teachers have a big impact on student's academic achievement in the educational setting, which highlights the importance of inclusive and supportive learning environments. The educational environment is multifaceted, impacting learning outcomes and facilitating instructional approaches customized to meet the needs of individual students (Lin, 2024). To provide an engaging learning environment that improves academic abilities, social development, and emotional well-being and ultimately contributes to student success, effective classroom management is crucial. Fostering social relationships, student-teacher interactions, and a sense of belonging—all of which are essential for academic achievement—requires teachers to keep their classrooms organized and conducive to learning.

P2: I believe the classroom environment works as a catalyst in the learning of students. Positive, friendly and the environment which gives freedom of expression

Extensive Exposure:

It means to provide the environment to learn through first-hand experience. the reality of going through something or being impacted by something because of the circumstances surrounding oneself (Mendoza, 2024).

Giving pupils a wide range of reading materials outside of the prescribed curriculum is vitally important (Becher, 2024). Numerous advantages of extensive reading practice have been demonstrated for both teachers and students, including higher text comprehension, increased vocabulary, enhanced reading skills, increased motivation to learn, and active engagement in language acquisition. Furthermore, students can be given exposure to multiple audiences so that they learn through mingling with varied and extensive groups of learned scholars. It will serve a dual purpose, students will learn at the same time they will gain mammoth confidence which will help them boost their creativity and learning process. P: I make students perform beyond the classroom. They are given a chance to showcase their expertise in new settings which eventually builds their confidence. Students' perspectives can be expanded and classroom learning can be connected to real-life issues through the organization of field trips, guest lectures, and industrial visits.

Conclusion:

The basic aim of the research was to improve the learning outcomes of students beyond standardized measures to evaluate the overall performance and learning of a student. The main objective of the research was to explore the factors that serve as indicators for teachers to identify the progress of students. Findings suggest that the most important indicator is teaching pedagogy. Teaching pedagogy helps as a catalyst to expedite learning and to improve critical thinking, and problem-solving skills. It is suggested that the best teaching activities in the class to ensure maximum learning are project-based activities and hands-on activities. The second indicator is the classroom environment. It is revealed that the classroom environment improves academic. Emotional and social aspects of students'

personality. It is highlighted by teachers that friendly, congenial and supportive environment helps students to boost their creativity through freedom of expression. The third performance indicator that came to light was extensive exposure given to students. It is shown that students who are taken to academic field trips, industrial visits and who get chances to listen to guest speakers learn better. The findings suggest to use innovative and active pedagogies, provide positive institutional culture and provide students extensive exposure to enhance their learning overall which can help them in practical life and in long run.

Recommendations:

Based on findings, it is recommended that educational institute leaders organize faculty development programs twice a year to stay ahead of the curve and make sure that the faculty development programs are innovative and cater to the needs of this generation. Teachers should indulge in action researches to improve learning outcomes of students.

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