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Article

Multi-Faceted Instructional Support on The Academic Performance on Basic Education

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Abstract: This research evaluates the instructional support for students in 21st-century classrooms in public schools. The study further investigates the teachers' instructional support across materials and resources, technology integration, differentiated instruction, and multimodal instruction. It analyzes learners' academic performance and establishes a significant association between the level of teachers' support and students' academic performance. The study finds that despite various perceived concerns, such as insufficient instructional materials, inadequate planning time, and challenges with technology integration, there is a high level of instructional support provided by the teachers, resulting in commendable student performance. The insights from this study could provide a strategic basis for further enhancement of instructional support and addressing challenges in the evolving educational landscape of 21st-century classrooms.

Keywords: Multi-faceted instructional support, academic performance, basic education

Introduction

In the rapidly evolving educational landscape of the 21st century, characterized by digitalization, diversity, and individualized learning pathways, fostering learner motivation and engagement is a critical concern (Czerkawski & Berti, 2020). Research consistently points to the significant role that teacher support plays in promoting these essential learner attributes. However, there is a lack of comprehensive understanding regarding the specific ways in which teacher support influences learner motivation and engagement in the

contemporary classroom setting (Esra & Sevilen, 2021). Learners today face unique challenges, such as digital distractions, information overload, and a lack of personalized attention due to large classroom sizes, which can undermine their motivation and engagement. Further, the shift towards remote and blended learning models due to recent global events has intensified these issues, creating an urgent need to reexamine the role of teacher support (Bordoloi et al., 2021).

As the 21st-century classroom becomes more heterogeneous in terms of learner backgrounds, abilities, and learning preferences, there is an increasing need for teacher support that is both inclusive and differentiated (Ismael & Aziz, 2019). However, there is a dearth of research on how teacher support can be effectively tailored to meet diverse learner needs and how this tailored support influences motivation and engagement across different learner groups. Despite the acknowledgment of the importance of teacher support, there is a gap in the literature about how various aspects of teacher support, including emotional support, instructional support, and classroom organization, impact learners' motivation and engagement. Furthermore, the strategies teachers can employ to effectively provide support in both physical and virtual learning environments remain underexplored (Yigit & Seferoglu, 2023).

While much research has been dedicated to understanding the influence of teacher support on learners' motivation and engagement, most of this work has been conducted in traditional, face-to-face learning environments (Amerstorfer et al., 2021). As we move deeper into the 21st century, it is increasingly important to understand how teacher support translates into digital and hybrid learning environments, where physical presence and traditional interaction patterns are disrupted. Moreover, with the rise of digital technologies and diverse student populations, the definition of 'teacher support' is evolving (Gjelaj et al., 20200). It now encompasses a wider range of activities, including technological support, cultural sensitivity, differentiation, and online feedback mechanisms. Yet, there is a lack of comprehensive, empirical research to measure and understand the impact of these new dimensions of teacher support on learner motivation and engagement (Alamer, 2022).

Existing literature also tends to treat motivation and engagement as monolithic constructs, overlooking the fact that they are multi-faceted phenomena influenced by various factors, including individual student characteristics, learning context, and the nature of the learning task (Vincent-Ruz, 2019). Further investigation is needed to unravel the complex interplay between these factors, teacher support, and learners' motivation and engagement. Furthermore, the majority of studies focus on the immediate effects of teacher support on learner motivation and engagement, ignoring its potential long-term impacts. A longitudinal perspective is crucial to understand whether the effects of teacher support persist over time, which would inform

more sustainable and effective teaching practices (Mouza et al., 2020). In addition, teacher support is often examined in isolation, disregarding the broader classroom and school environment. The impact of teacher support on learners' motivation and engagement is likely shaped by the overall school climate, including aspects such as school leadership, peer relationships, and school policies. The interaction between teacher support and these environmental factors remains largely unexplored (Bergdahl et al., 2020).

Another overlooked aspect is the role of learner perceptions in mediating the impact of teacher support. It is possible that the same support strategies could be perceived differently by different learners, thereby influencing their motivation and engagement in varied ways (Schunk & Dibenedetto, 2021). Understanding these perceptual differences and their implications could provide valuable insights for optimizing teacher support. Furthermore, while the focus of the current literature is predominantly on the benefits of teacher support, there may also be unintended negative consequences (Ferri et al., 2020). For example, excessive teacher support could potentially undermine learners' autonomy, leading to decreased motivation and engagement. Such potential trade-offs and how to mitigate them require further investigation. Lastly, there is a lack of research on how to equip teachers with the necessary skills and knowledge to provide effective support in the 21st-century classroom. With the evolving demands of the teaching profession, it is crucial to identify the professional development needs of teachers in relation to learner support. Lastly, teacher support is often studied from a deficit perspective, concentrating on how its absence hinders learner motivation and engagement. Conversely, the positive effects of effective teacher support and how they can be maximized to foster learner motivation and engagement warrant further exploration (Decoito & Estaiteyah, 2022).

In light of these gaps and limitations, this study aims to provide a more nuanced and comprehensive understanding of how teacher support influences learner motivation and engagement in 21st-century classrooms, accounting for the evolving nature of learning environments, the multi-dimensional aspects of motivation and engagement, and the potential long-term effects of teacher support. This study seeks to address these gaps by investigating the influence of teacher support on learners' motivation and engagement in the 21st-century classroom. It aims to identify effective strategies that teachers can use to enhance their support and thereby increase learner motivation and engagement. By doing so, it hopes to contribute to the development of better teaching practices and learning environments that respond to the needs of 21st-century learners.

Methodology

Descriptive-correlational research methodology can be employed to examine the relationship between teachers support and

academic performance. This research approach aims to describe and understand the existing relationship between variables The study will utilize a structured questionnaire as the primary instrument for data collection. The questionnaire will include sections that measure the different types of teacher support (instructional, emotional, organizational, technological, cultural sensitivity) and sections that assess student motivation and engagement. All items will be rated on a 5-point Likert scale. This questionnaire was adopted from the following: The concept of teacher support was primarily drawn from the work of Trickett and Moos (2002), who identified different dimensions of support, including instructional, emotional, organizational, and technological. Their model was further extended by Gay (2002), who highlighted the importance of cultural sensitivity in diverse classrooms. Moreover, the use of a 5-point Likert scale for measuring these constructs is grounded in the work of Likert (1932), who developed this scale as a means of capturing gradations in attitudes and perceptions.

Results and Discussion

Table 1. Materials and Resources

Indicators	Teachers	
	Mean	VD
There is a diverse range of materials available to cater to different learning needs and preferences.	3.98	A
The materials are up-to-date, reflecting current knowledge and best practices.	3.90	A
The materials are easily accessible to both teachers and students	4.21	A
The instructional materials are aligned with the curriculum and learning objectives	3.74	A
The materials are well-designed, accurate, and free from errors.	4.24	SA
Weighted mean	4.01	A

The table provides a comprehensive analysis of various indicators concerning the availability, diversity, up-to-datedness, accessibility, alignment with the curriculum, and quality of instructional materials and resources. The data is based on teacher ratings, with a weighted mean of 4.01, indicating a positive overall evaluation. Teachers generally agree that there is a diverse range of materials available (mean rating 3.98), allowing them to cater to various learning needs and preferences. The materials are also perceived to be up-to-date (mean rating 3.90), reflecting current knowledge and best educational practices. Teachers highly rate the accessibility of the materials for both teachers and students (mean rating 4.21), which implies their convenience in use. However, the alignment of these instructional materials with the curriculum and learning objectives

slightly lags, as indicated by the lowest mean rating of 3.74. Lastly, the quality of the materials is rated the highest (mean rating 4.24), signifying that they are well-designed, accurate, and free from errors. The overall assessment leans toward agreed (A) and strong agreed (SA) with the positive state of the learning materials and resources.

The implications of these findings reflect on several areas of educational practice. First, the positive evaluation of the availability and diversity of materials implies a successful effort in accommodating varied learning needs and preferences. This indicates that teachers are equipped to provide differentiated instruction and are likely to engage a broader range of students effectively. However, it also suggests the need to sustain this effort and continue to introduce a variety of materials to cater to the evolving learning needs of students. The commendable rating on the up-to-dateness and quality of materials signifies that educational resources are abreast with current knowledge and best practices, enhancing the relevance and effectiveness of instruction. However, the lower score on curriculum alignment underscores the need to regularly review and adjust materials to ensure they meet evolving curricular requirements and learning objectives. The fact that materials are easily accessible to teachers and students implies that the current methods of resource distribution are effective, but it is also a reminder to keep refining accessibility to respond to changes in teaching and learning environments. The positive ratings across the board provide an overall encouragement to continue investing in high-quality, diverse, accessible, and updated teaching materials. Simultaneously, they imply the importance of continuous training for teachers to align these materials with the curriculum effectively and utilize them optimally for enhanced student outcomes.

Table 2. Technology Integration

Indicators	Teachers	
	Mean	VD
Technology tools are regularly incorporated into instructional activities	3.76	A
The use of technology enhances student engagement and participation in learning	3.72	A
Technology integration positively impacts student learning outcomes.	4.24	SA
Teachers receive training and support to effectively integrate technology into instruction.	3.76	A
Access to technology resources is equitable, ensuring all students have equal opportunities to utilize them.	3.57	A
Weighted mean	3.81	A

Table 2 presents an analysis of various indicators related to technology integration in the teaching and learning environment, as evaluated by teachers. The overall weighted mean score is 3.81, showing a favorable attitude towards technology use. Teachers

generally agree that technology tools are regularly incorporated into instructional activities (mean rating 3.76), which signifies a good level of technology integration in the classroom. The perceived impact of technology on student engagement and participation is positive, though slightly lower with a mean rating of 3.72.

The most positively rated aspect is the belief that technology integration positively impacts student learning outcomes (mean rating 4.24), showing strong agreement. Teachers also acknowledge receiving adequate training and support to effectively integrate technology into instruction (mean rating 3.76). However, there is some concern about equitable access to technology resources, as suggested by the lowest mean rating of 3.57. Even though this score indicates agreement, it calls for attention towards ensuring that all students have equal opportunities to utilize these resources. The overall evaluation leans towards agreed (A) with the current state of technology integration in teaching and learning.

The findings carry significant implications for the practice of technology integration in education. While the positive overall score implies that technology is being effectively used in instructional activities and enhancing student engagement, it also suggests areas for improvement. The strong agreement that technology integration positively impacts student learning outcomes highlights the importance of maintaining and improving this integration, given the increasingly digital landscape of 21st-century education.

However, the slightly lower scores on the regular incorporation of technology tools and its effect on student engagement imply the necessity for continuous innovation in incorporating technology into classroom activities. These efforts might include finding new tools or methods to further boost student involvement and engagement. The adequate support and training that teachers are receiving underscore the importance of continuous professional development in this domain, given the rapid advancement of technology. However, the ongoing professional development should also focus on effective strategies for engaging all students through technology.

The finding that raises the most significant concern is the equity of access to technology resources. Even though the score indicates agreement, it still stands as the lowest rated item. This indicates a need to further ensure that all students have equal opportunities to utilize technology, which might involve investing in resources to provide universal access to technology or developing policies that address disparities in technology access. The results call for continued attention and investment to further enhance the effective and equitable use of technology in education.

Table 3. Differentiated Instruction

Indicators	Teachers	
	Mean	VD
Instruction is designed to address the diverse learning styles, abilities, and interests of students.	4.09	A
Students are grouped based on their needs and abilities to receive targeted instruction.	4.48	SA
Assessments are differentiated to allow students to demonstrate their understanding in different ways.	4.02	A
Instructional goals and objectives are personalized and tailored to individual student needs.	3.97	A
Individualized instruction, feedback, and accommodations are provided based on student requirements.	4.26	SA
Weighted mean	4.16	A

Table 3 provides an analysis of teachers' evaluations of differentiated instruction in their educational setting. The overall weighted mean score of 4.16 signifies agreement or strong agreement on the usage and effectiveness of differentiated instruction. Teachers agree that instruction is designed to cater to diverse learning styles, abilities, and interests of students (mean rating of 4.09), which highlights the acknowledgment and incorporation of student diversity in the teaching process. A strong agreement is found in the practice of grouping students based on their needs and abilities for targeted instruction (mean rating of 4.48). This implies the efficient usage of ability grouping strategies to tailor teaching more effectively. Differentiated assessments also receive positive remarks, allowing students to showcase their understanding in various ways (mean rating of 4.02). Personalization of instructional goals and objectives to individual student needs is somewhat agreed upon (mean rating of 3.97), suggesting possible room for improvement. Teachers strongly agree on providing individualized instruction, feedback, and accommodations based on student requirements (mean rating of 4.26), emphasizing a commitment to personalized instruction.

The implications of these findings are multifaceted. Firstly, the high score for differentiated instruction practices indicates that teachers are recognizing and addressing diverse student needs, abilities, and interests, which can improve student engagement and performance. The strong agreement on student grouping based on their needs indicates the successful implementation of this strategy, encouraging its ongoing use and refinement. The positive score for differentiated assessments suggests that continued development of varied assessment strategies will further enhance student engagement and comprehension. However, the relatively lower score on personalizing instructional goals and objectives suggests a need for improved strategies and resources to better tailor these elements to each student's needs. This may involve more comprehensive student assessment,

enhanced teacher training, or increased collaborative planning time. The strong agreement on individualized instruction and feedback emphasizes its effectiveness and the necessity to maintain such practices. In conclusion, these findings underscore the effectiveness of differentiated instruction while suggesting areas, such as personalization of goals and objectives, that may benefit from further emphasis and resource investment.

Table 4. Multimodal Instruction

Indicators	Teachers	
	Mean	VD
Instruction incorporates visual, auditory, and kinesthetic elements to support different learning preferences.	4.17	A
Various multimedia resources and materials are used to present information and engage students.	4.53	SA
Students actively participate in hands-on activities, discussions, and visual representations.	4.00	A
Instruction is designed to be accessible to students with different abilities and learning styles.	4.07	A
Instructional materials and activities allow students to engage with content using their preferred modalities.	4.52	SA
Weighted mean	4.26	SA

Table 4 presents the evaluations by teachers concerning multimodal instruction in the learning environment. With a strong weighted mean score of 4.26, teachers are generally in agreement or strong agreement with the indicators. Teachers affirm that instruction incorporates visual, auditory, and kinesthetic elements to cater to different learning preferences (mean rating 4.17), demonstrating the adoption of diverse teaching methods. There is a strong agreement that various multimedia resources and materials are used to present information and engage students (mean rating 4.53), emphasizing the extensive use of multimedia in teaching. Teachers also agree that students actively participate in hands-on activities, discussions, and visual representations (mean rating 4.00), which highlights the active engagement strategies adopted. Similarly, instruction is perceived as being designed to be accessible to students with different abilities and learning styles (mean rating 4.07). Lastly, teachers strongly agree that instructional materials and activities allow students to engage with content using their preferred modalities (mean rating 4.52), implying that learning preferences are well accommodated.

The implications of these findings are significant for teaching practices. The positive evaluation of multimodal instruction suggests that current teaching methods are effectively accommodating diverse learning styles and preferences, contributing to increased student engagement and potentially better learning outcomes. However, the

continued professional development of teachers in this area should be prioritized to ensure the consistent and effective integration of multimodal instruction, taking into account the rapid advancements in educational technology and resources. Furthermore, while the use of multimedia resources is highly rated, it is crucial to continuously evaluate and update these resources to maintain their relevance and effectiveness. Importantly, these findings call for the continued emphasis on student-centered learning approaches where instruction is tailored to individual learning preferences, further enhancing the inclusiveness and effectiveness of the learning environment.

Table 5. Students' Academic Performance

Subjects	Grade
English	90.03
Math	90.01
Science	89.07

Table 5 presents the average grades for students across three subjects: English, Math, and Science. The grades are notably high across all subjects, indicating a strong overall academic performance among students. English has the highest average grade of 90.03, followed closely by Math with an average grade of 90.01. The Science subject has a slightly lower, but still high, average grade of 89.07. These findings suggest that students generally excel across these core subjects, reflecting the effectiveness of instruction and learning strategies currently employed.

However, the slight disparity in the grades, with science lagging slightly behind English and Math, may imply that there could be room for enhanced focus our resources to improve Science instruction and learning. Implications of these findings might include a review and reinforcement of the successful teaching and learning strategies employed in English and Math, given their slightly higher performance. These practices might be replicated or adapted to other subjects. For Science, educators and stakeholders may want to investigate the cause of the slightly lower average grade. This could involve reviewing the curriculum, teaching methods, resources, or student engagement strategies within science classes. Possible actions could include providing additional support for science teachers, implementing additional student tutoring or mentoring programs, or increasing resources and materials for science learning.

Table 6. Test of Significant Relationship

Source of Association	Chi-square	p-value	
English Materials and Resources	151.108	0.000	Significantly Associated

Technology Integration	102.595	0.000	
Differentiated Instruction	167.204	0.000	
Multimodal Instruction	176.038	0.000	
Science			
Materials and Resources	185.626	0.000	Significantly Associated
Technology Integration	135.708	0.000	
Differentiated Instruction	201.660	0.000	
Multimodal Instruction	204.491	0.000	
Math			
Materials and Resources	227.978	0.000	Significantly Associated
Technology Integration	177.139	0.000	
Differentiated Instruction	244.000	0.000	
Multimodal Instruction	244.000	0.000	

Table 6 presents the results of the test of significant relationship for various factors in the subjects of English, Science, and Math. The chi-square test was conducted to determine if there is a significant association between the factors and the respective subjects. In English, all factors, namely Materials and Resources, Technology Integration, Differentiated Instruction, and Multimodal Instruction, showed a significant association with the subject, as indicated by a p-value of 0.000 for each factor. Similarly, in science, all factors (Materials and Resources, Technology Integration, Differentiated Instruction, and Multimodal Instruction) exhibited a significant association with the subject, with p-values of 0.000 for each factor. In Math, all factors (Materials and Resources, Technology Integration, Differentiated Instruction, and Multimodal Instruction) also demonstrated a significant association with the subject, as indicated by a p-value of 0.000 for each factor. These results suggest that the factors of Materials and Resources, Technology Integration, Differentiated Instruction, and Multimodal Instruction play a significant role in the subjects of English, Science, and Math. This highlights the importance of incorporating these factors into instructional practices to enhance student learning outcomes in these subjects.

Conclusion

Based on the findings, despite a few notable challenges, this educational institution exhibits a generally high level of educational provision and student academic performance. The students, with a slightly higher number of older learners, are benefiting from a comprehensive instructional approach that includes diverse materials and resources, technology integration, differentiated, and multimodal instruction, leading to commendable performance in key subjects such as English, Math, and Science. Significant associations between these instructional supports and student performance confirm their effectiveness. However, teachers' concerns around instructional materials, planning time, student support, technology integration, assessment feedback, and well-being support underline areas for potential improvement. Addressing these issues may further enhance the institution's educational delivery and student outcomes. Therefore, focusing on these areas should form part of the institution's strategic planning and development efforts to ensure continuous improvement and sustainability in the rapidly evolving educational landscape.

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