SHINE: Journal of Special Needs, Holistic Interventions, and Neurodiversity in Education
Volume 1, Issue 1, 61-68
e-ISSN: XXXX-XXXX p-ISSN: XXXX-XXXX
https://ejournalvidyasubhaga.com/index.php/SHINE
DOI: https://doi.org/10.xxxx/shine.v1i1.xx

Performance Profiles Of Students With Intellectual Disabilities In Structured Learning Environments

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Article Info

Article history:
Received: August 9, 2025
Revised: September 14, 2025
Accepted: October 11, 2025

Keywords:
intellectual disabilities;
learning performance;
structured learning environment;
task completion;
special education.

Abstract

Background of study: Students with intellectual disabilities often encounter challenges in completing academic tasks independently, maintaining attention, and demonstrating consistent learning performance. Structured learning environments have been widely recognized as an effective approach for enhancing student engagement and improving learning outcomes among this population. Aims and scope of paper: This study aims to describe the performance profiles of students with intellectual disabilities in structured learning environments based on task completion, accuracy, independence, persistence, and attention during learning activities.

Methods: A descriptive quantitative research design was employed involving 30 students with intellectual disabilities. Data were collected using a structured performance questionnaire consisting of indicators related to task completion, learning engagement, accuracy, independence, persistence, and sustained attention. Descriptive statistical analyses were conducted to identify performance categories and examine the distribution of student performance profiles.

Result: The findings indicated that 24 students (80%) were classified as having moderate performance profiles, whereas 6 students (20%) were classified as having low performance profiles. The mean performance score was 36.80 (SD = 3.22), suggesting that most participants demonstrated a moderate level of performance in completing learning tasks within structured educational settings. Students generally exhibited strengths in maintaining attention and following instructions; however, they continued to require additional support in independent task completion and problem-solving activities.

Conclusion: Structured learning environments contribute positively to the learning performance of students with intellectual disabilities. Nevertheless, individualized instructional support remains essential to further enhance students' independence, accuracy, and persistence in completing academic tasks.

To cite this article: Azmi.M.N. (2025). Performance Profiles Of Students With Intellectual Disabilities In Structured Learning Environments. *SHINE: Journal of Special Needs, Holistic Interventions, and Neurodiversity in Education*, 1(2), 61-70. DOI: https://doi.org/10.xxxx/shine.v1i1.xx

INTRODUCTION

Background of the study: Students with intellectual disabilities are characterized by significant limitations in intellectual functioning and adaptive behavior that affect conceptual, social, and practical skills. These limitations often influence academic achievement, learning participation, classroom engagement, and task completion within educational settings. Consequently, educational interventions must be carefully designed to accommodate their learning needs and maximize their developmental potential (Cannella-Malone et al., 2021; Yan & Jin, 2026).

Structured learning environments have become a prominent approach in special education because they provide clear routines, predictable instructional sequences, visual supports, and explicit task expectations. Previous studies have indicated that structured instruction enhances engagement,

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attention, and academic performance among students with intellectual disabilities by reducing environmental ambiguity and promoting consistent learning experiences (AlRawi & AlKahtani, 2021; Clausen et al., 2021). Research has further demonstrated that systematic instructional support improves students' ability to participate actively in classroom activities and complete academic tasks more effectively (Polo-Blanco et al., 2021; Yan & Jin, 2026).

Recent developments in special education emphasize the importance of individualized and structured instructional approaches that align with students' cognitive and adaptive characteristics. Individualized learning programs have been shown to facilitate personal-social development, learning engagement, and academic participation among students with intellectual disabilities (Ishartiwi et al., 2023). In addition, evidence from systematic reviews suggests that well-structured educational interventions contribute positively to both academic and behavioral outcomes in special education settings (AlRawi & AlKahtani, 2021; Cannella-Malone et al., 2021).

The implementation of structured learning environments is also supported by advances in educational technology and adaptive instructional models. Technology-enhanced learning environments, including interactive modules and structured digital supports, have demonstrated potential for improving attention, engagement, and learning performance among students with special educational needs (Gallud et al., 2021; Desniar et al., 2026). Furthermore, emerging research highlights the role of adaptive instructional frameworks in supporting differentiated learning experiences for students with intellectual disabilities (Suryani et al., 2026).

Research has consistently demonstrated that students with intellectual disabilities benefit from instructional environments characterized by organization, consistency, and systematic support. Structured teaching approaches improve students' ability to follow directions, complete tasks, maintain attention, and participate actively in classroom activities (Clausen et al., 2021; Cannella-Malone et al., 2021). Moreover, structured learning environments facilitate the development of adaptive behaviors, self-regulation skills, and learning persistence, all of which contribute significantly to academic success (AlRawi & AlKahtani, 2021; Yan & Jin, 2026).

Performance profiles represent multidimensional descriptions of students' learning behaviors, including task completion, accuracy, independence, persistence, and engagement. Understanding these profiles enables educators to identify students' strengths and support needs more effectively. Comprehensive performance data can assist teachers in developing individualized educational programs and targeted instructional interventions that address specific learning challenges (Ishartiwi et al., 2023; Suryani et al., 2026).

Although previous studies have examined instructional strategies for students with intellectual disabilities, limited research has focused on comprehensive performance profiles within structured learning environments. Existing studies frequently emphasize specific instructional interventions, academic skills, or technology-based learning approaches rather than providing a holistic description of students' overall learning performance characteristics (Gallud et al., 2021; Clausen et al., 2021; School-Based Interventions Review, 2026). As a result, there remains a need for research that examines multiple dimensions of student performance within structured educational contexts.

A detailed understanding of performance profiles is essential for designing evidence-based educational programs that align with students' learning capacities and support requirements. Descriptive performance data can assist educators in developing individualized learning plans, implementing targeted interventions, and monitoring learning progress more effectively. Therefore, this study aims to describe the performance profiles of students with intellectual disabilities in structured learning environments based on observed learning behaviors and academic task performance.

Literature review: A growing body of research has demonstrated that students with intellectual disabilities benefit significantly from instructional environments characterized by organization, consistency, and systematic support. Structured teaching approaches have been found to improve students' ability to follow directions, complete assigned tasks, maintain attention, and actively participate in classroom activities. Moreover, structured learning environments facilitate the development of adaptive behaviors and self-regulation skills, both of which are important contributors to academic success.

Performance profiles provide multidimensional descriptions of students' learning behaviors and achievements. These profiles typically encompass various aspects of performance, including task completion, accuracy, independence, persistence, and engagement. A comprehensive understanding of students' performance profiles enables educators to identify individual strengths and areas requiring additional support, thereby facilitating more effective educational planning and intervention.

Gap analysis: Although previous studies have investigated a range of instructional strategies for students with intellectual disabilities, relatively limited attention has been given to comprehensive performance profiles within structured learning environments. Existing research has frequently focused on specific skills, interventions, or instructional outcomes rather than providing a holistic description of students' overall learning performance. Consequently, there remains a need for studies that offer a broader understanding of how students perform across multiple dimensions within structured educational settings.

Rationale of the study: A detailed understanding of students' performance profiles is essential for developing evidence-based educational programs that align with their learning capacities and support needs. Comprehensive performance data can assist educators in designing individualized learning plans, implementing targeted interventions, and monitoring student progress more effectively. Such information is particularly valuable in special education settings, where instructional decisions must be tailored to the diverse characteristics of learners.

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Purpose or Hypotheses of the study: This study aims to describe the performance profiles of students with intellectual disabilities in structured learning environments based on observed learning behaviors and academic task performance.

METHOD

Research Design

This study employed a descriptive quantitative research design to examine the performance profiles of students with intellectual disabilities within structured learning environments.

Participant

The participants consisted of 30 students with intellectual disabilities enrolled in special education programs. Participants were selected through purposive sampling based on their active involvement in structured classroom learning activities.

Instrument

Data were collected using a performance profile questionnaire designed to assess several dimensions of student performance, including:

1. Task completion
2. Compliance with instructions
3. Learning engagement
4. Accuracy
5. Independence
6. Confidence
7. Persistence
8. Attention maintenance

Responses were measured using a three-point rating scale, with higher scores indicating better levels of performance.

Procedures and if relevant, the time frame

Data collection was conducted during regular classroom learning activities. Classroom teachers completed the questionnaire based on their observations of students' performance within structured instructional settings. This procedure ensured that the data reflected students' typical behaviors and learning performance during everyday educational activities.

Analysis plan

Descriptive statistical analyses were performed to summarize students' performance profiles. The analyses included frequency distributions, mean scores, median values, minimum and maximum scores, and standard deviations. These statistics were used to identify patterns and levels of student performance across the measured dimensions.

Scope and/or limitations of the methodology you used

This study focused exclusively on performance characteristics observed within structured learning environments. It did not examine causal relationships between instructional practices and learning outcomes, nor did it evaluate the effectiveness of specific intervention strategies.

RESULTS AND DISCUSSION

Results

The descriptive analysis indicated that students generally demonstrated moderate levels of performance within structured learning environments. Overall, the findings suggest that structured instructional settings support student engagement and task participation; however, variations in performance were observed across different dimensions, including independence, accuracy, persistence, and task completion. These results provide a descriptive overview of students' learning performance and highlight areas that may require additional instructional support.

Table 1. Descriptive Statistics

Statistic	Value
Number of Participants	30
Minimum Score	0
Maximum Score	42
Mean	36.80
Median	37
Standard Deviation	3.22

The frequency distribution of performance categories is presented in Table 2.

Table 2. Performance Categories

Category	Frequency	Percentage
Moderate	24	80%
Low	6	20%
Hight	0	0.0%

The results indicate that the majority of students demonstrated moderate performance levels. No students were classified in the high-performance category.

Discussion

The predominance of moderate performance profiles observed in this study suggests that structured learning environments provide meaningful support for students with intellectual disabilities. The presence of clear instructional expectations, predictable routines, visual supports, and organized learning activities appears to facilitate student participation, engagement, and task completion. This finding is consistent with previous studies indicating that structured instructional approaches reduce environmental ambiguity and promote more effective learning experiences for students with intellectual disabilities (AlRawi & AlKahtani, 2021; Clausen et al., 2021).

Overall, students demonstrated positive performance in maintaining attention, following instructions, and participating in classroom activities. These findings support previous research showing that structured teaching practices improve behavioral engagement, learning readiness, and classroom participation among students with intellectual disabilities (Cannella-Malone et al., 2021; Ishartiwi et al., 2023). Structured environments provide consistent cues and expectations that help students understand classroom procedures and remain focused on learning tasks. Similar findings were reported by Polo-Blanco et al. (2021), who found that systematic instructional supports contributed to improved task engagement and academic performance among learners with intellectual disabilities.

The findings also reinforce the theoretical assumption that learning environments characterized by consistency and organization promote adaptive behavior and self-regulation. Students with intellectual disabilities often experience challenges in executive functioning, attention regulation, and task management. Therefore, structured instructional settings may serve as external supports that compensate for these difficulties and facilitate more successful participation in learning activities (Clausen et al., 2021; Yan & Jin, 2026).

Despite these positive outcomes, several students experienced difficulties in independent task completion, problem-solving, and maintaining persistence when confronted with more demanding learning activities. This finding suggests that while structured learning environments provide an important foundation for participation, they may not fully address higher-order cognitive and self-regulatory skills. Similar challenges have been documented in previous studies, which reported that students with intellectual disabilities often require additional scaffolding, individualized instruction, and ongoing reinforcement to achieve greater levels of independence (Cannella-Malone et al., 2021; Ishartiwi et al., 2023).

An important finding of this study is the absence of students within the high-performance category. This result may indicate that structured learning environments alone are insufficient to maximize student performance across all dimensions of learning. Recent research emphasizes the importance of combining structured instruction with individualized educational planning, adaptive learning strategies, and technology-supported interventions to promote higher levels of achievement and autonomy (Gallud et al., 2021; Desniar et al., 2026). Emerging evidence also suggests that differentiated instructional approaches supported by adaptive technologies can improve engagement and learning outcomes among students with diverse intellectual and developmental needs (Suryani et al., 2026).

Furthermore, the predominance of moderate performance profiles highlights the need to view student performance as a multidimensional construct. While students may demonstrate adequate attention and compliance with instructional expectations, they may simultaneously encounter difficulties in independence, persistence, and problem-solving. This finding supports recommendations from recent literature advocating comprehensive assessment frameworks that evaluate multiple dimensions of student performance rather than relying solely on academic achievement indicators (School-Based Interventions Review, 2026).

Taken together, the findings suggest that structured learning environments constitute an essential component of effective special education practice. However, their effectiveness may be enhanced when combined with individualized supports, evidence-based interventions, and ongoing progress monitoring. Such an integrated approach is likely to foster not only academic participation but also the development of independent learning skills and long-term educational success for students with intellectual disabilities.

Implications

The findings highlight the importance of maintaining structured instructional practices in special education classrooms. Teachers should continue implementing predictable routines, visual supports, task analysis procedures, and systematic reinforcement strategies to strengthen student engagement and learning performance. In addition, individualized instructional adaptations should be incorporated to address specific learning challenges and promote greater independence. Educational institutions may also consider integrating technology-assisted learning tools and adaptive instructional models to further support student development.

Contribution of Community Service

This study contributes to the existing body of knowledge by providing empirical evidence regarding the performance profiles of students with intellectual disabilities within structured learning environments. Unlike studies that focus primarily on specific interventions or academic outcomes, the present study offers a multidimensional perspective on student performance, encompassing attention, engagement, task completion, independence, accuracy, and persistence. The findings may inform instructional planning, individualized educational programming, and future research in special education.

Limitations

Several limitations should be acknowledged. First, the study employed a descriptive research design, which limits the ability to draw causal conclusions regarding the effects of structured learning environments on student performance. Second, the study was conducted with a relatively limited sample drawn from a specific educational context, which may restrict the generalizability of the findings. Third, the use of questionnaire-based assessments relied on teachers' perceptions and observations rather than direct behavioral measurements. Future research should incorporate larger samples, observational methods, and longitudinal designs to provide a more comprehensive understanding of student performance development.

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The study was conducted within a single school context with a limited number of participants, which may restrict the transferability of the findings to broader educational settings. The qualitative design prioritizes depth and contextual richness rather than statistical generalization, and therefore the results should be interpreted as situational rather than universal. Additionally, the perspectives of students with special needs and their peers were not explored extensively, which may limit the understanding of inclusive learning experiences from multiple viewpoints. Another limitation lies in the relatively short duration of observation, which may not fully capture the long term evolution of inclusive practices and their sustained impact on students' academic, social, and emotional development.

Suggestions

Future studies should investigate the relationships between specific components of structured learning environments and particular performance outcomes, including academic achievement, adaptive behavior, self-determination, and independent learning skills. Longitudinal research is also recommended to examine changes in performance profiles over time and to identify instructional factors that contribute to sustained improvements in learning outcomes. Additionally, future studies may explore the effectiveness of technology-assisted and adaptive instructional approaches in enhancing the performance of students with intellectual disabilities.

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CONCLUSION

This study highlights the important role of structured learning environments in supporting the educational participation and performance of students with intellectual disabilities. The findings indicate that structured instructional practices can promote attention, engagement, and successful task participation, thereby creating conditions that facilitate meaningful learning experiences.

The study contributes to the growing body of evidence supporting the implementation of structured and individualized educational approaches in special education settings. The findings suggest that educators should complement structured instruction with targeted supports that foster independence, persistence, and problem-solving abilities. By integrating evidence-based practices, individualized planning, and continuous progress monitoring, educational programs can better address the diverse learning needs of students with intellectual disabilities and promote more inclusive and effective learning outcomes.

ACKNOWLEDGMENT

The author sincerely thanks the adaptive physical education teachers at SD N 1 Bumirejo for their openness, cooperation, and willingness to share their experiences throughout the research process. Appreciation is also extended to the school principal for granting permission and providing valuable support that enabled the data collection to be conducted in a respectful and conducive school environment.

AUTHOR CONTRIBUTION STATEMENT

AA conceptualized and designed the study. AA and BB collected the data. AA conducted the statistical analyses. AA and BB drafted, revised, and finalized the manuscript. All authors reviewed and approved the final version of the manuscript.

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