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AMONG DIPLOMA STUDENTS WITH AUTISM
SPECTRUM DISORDER: A LITERATURE REVIEW OF
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Abstract:

The rising enrolment of students diagnosed with autism spectrum disorder (ASD) in post-secondary programs has amplified the demand for instructional methods tailored to neurodiverse cognitive styles, particularly within intellectually intensive fields like accounting. Although inclusive education has advanced in policy, many diploma-level accounting courses still depend predominantly on verbal exposition, abstract theoretical explanation, and generic procedural drills—approaches that may conflict with the distinctive processing patterns of learners on the autism spectrum. Autistic students commonly display strengths in visual thinking, systematic analysis, and adherence to structured tasks, yet often struggle when instruction is dense in language, reliant on inferred abstractions, or cognitively overloaded. This paper examines the potential of visual and cognitive instructional strategies to improve accounting learning outcomes for diploma students with ASD. Using a narrative literature review method, the study integrates recent scholarly contributions from 2020 to 2025 across autism education, cognitive learning theory, inclusive tertiary education, and accounting pedagogy. Results show that visual teaching tools such as flowcharts, transaction mapping with color cues, infographics, diagrams, and animated demonstrations substantially increase conceptual clarity and lessen symbolic opacity. Concurrently, cognitive supports such as chunking, sequenced task design, guided repetition, scaffolded worksheets, and structured reinforcement enhance procedural retention, ease working memory demands, bolster learner confidence, and facilitate task completion. The review contends that combining visual and cognitive methods is not merely an add-on

accommodation but a fundamental pedagogical reconfiguration that renders accounting concepts cognitively accessible for autistic students. By linking autism-sensitive pedagogy with the technical requirements of accounting instruction, this paper offers a new conceptual perspective within the limited literature on neurodiverse participation in professional tertiary programs and proposes an inclusive pedagogical framework for empirical testing.

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Keywords:

Accounting Education, Autism Spectrum Disorder, Cognitive Scaffolding, Higher Education, Visual Pedagogy



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Introduction

While the focus on ordinary access has been a prominent feature of inclusive education over the last few years, the broader scope of inclusive education is revealed through concepts of participation, engagement, and pedagogical fairness. Not only do colleges have to open their doors to students from diverse backgrounds, but they also, if necessary, must teach without favoring any one thought process. This is very important at the university, where professors often assume that all students learn and think the same way. This does not hold true. Some pupils may adopt different learning styles, such as needing more time to think and process, or learning better from practical or experiential activities. Taylor and Pazey (2022) have noted that if educators fail to provide an appropriate teaching approach, these students may be left behind. This is the major challenge facing the education sector today.

This gap is truly felt by students with autism spectrum disorder (ASD) who are particularly affected. In most cases, ASD is characterized as a neurodevelopmental disorder that affects communication, sensory neurons, social interactions, and informational input. Recently, however, autism has been viewed as a form of neurodiversity. This involves understanding that autistic students have their own cognitive profile, with strengths and challenges, a condition that teachers must work with (Ashcroft & Lutfiyya, 2023; Kapp, 2020). For instance, many such students have excellent visual recall and a tendency to notice patterns. They respond well to certain rules and routine (Clouder et al., 2020). These attributes indicate that they would be successful in technical in/or systematic subjects, provided the class provides sufficient structure to the course. Conversely, instruction can be confusing when it is unclear, over-demands "reading between the lines," or overloads and does not provide the necessary scaffolding (Davis et al., 2021).

Accounting is a subject that requires many steps and rules to follow. It is not just about numbers, but also about knowing how and why things are being done the way they are. Students enrolled in accounting courses must understand the “why” and “how” of transactions, classify financial events appropriately, understand the double-entry concept, post to the ledgers, troubleshoot, prepare the trial balance, adjust the journals, and, finally, create the financial statements. They will have to be careful to get the numbers right and take the right steps. These tasks call for not only procedures but also conceptual awareness of the relationships among actions. This may be difficult for anyone to do, but for students with autism, it is even more difficult (Byrne & Flood, 2020). This is more difficult for autistic students, as it relies on long-term verbal lectures, text examples, and open-ended dialogue that do not provide a visual framework and avoid repetition. Research evidence indicates that when instructions are unclear, explanations are incomplete, or there are abrupt jumps in the tasks, this can cause significant anxiety and make students less confident in the learning process. This can even happen to capable students, but they simply need things explained differently. Therefore, it may be the way it is being taught that is the issue. Perhaps additional opportunities to repeat activities, practice, and more visual resources would help to enhance understanding for autistic students (Van Hees et al., 2021; Johnson et al., 2024). This indicates that problems with the ASD learners may not only be related to the subject matter itself, but also to the way in which the subject is taught.

This resonates with the proposed strategies of visual pedagogy and cognitive scaffolding. Visual approaches represent abstract concepts with diagrams, color coding, process maps, symbols, and visual prompts. Cognitive scaffolding is intended to control a learner's cognitive load through chunking of lessons, sequencing of tasks, re-modeling, and supporting a practice. Both methods align well with autistic learners' needs for clarity and predictability. However, such strategies are not well documented in the context of tertiary narrow subject areas, where there may be significant procedural and symbolic expectations and associated pressure. Accounting is one of those areas that hasn't been explored. If the pedagogical approach is not flexible to the discipline, then inclusive education becomes a rhetoric and offers no change. To do this, we review a sample of recent literature on visual and cognitive teaching methods, aiming to create a more coherent conceptual framework to address teaching and learning in accounting for people with ASD at higher education.

Problem Statement

The formal presence of students with disabilities, including autism spectrum disorder (ASD), in higher education has risen due to a growing number of such students implementing inclusive policies. These policies in higher education have resulted in a higher population of students with disabilities, including autism spectrum disorder (ASD) (Taylor & Pazey, 2022), but institutional inclusion does not necessarily mean pedagogical inclusion. However, students can complete a regular diploma program yet face tremendous barriers when classroom teaching remains unchanged (Madaus, 2021). This is particularly relevant when regarding the field of accounting and accounting pedagogy. Accounting requires sustained focus, processing symbols, and comprehending information, and cannot be left unattended, as it involves multiple steps (Byrne & Flood, 2020). The analysis, recording, transfer, and reporting of transactions constitute a continuous cycle of learning that taxes the learner's executive functions, areas that are often difficult for individuals with ASD (Davis et al., 2021; Jackson et al., 2022). In accounting education, it is common to expect students to see the links between ideas as they perform activities and to provide verbal explanations and demonstrations of how things fit

together. Some learners, however, may find this a daunting approach (Sweller et al., 2020). May not be able to follow the instructions if they prefer visual learning and step-by-step instructions (Roberts & Birmingham, 2023). General accommodations are available but rarely change the basic ways that accounting knowledge is taught in classrooms (Madaus, 2021). Thus, many teaching techniques still need development within the spectrum of teaching autistic children. Therefore, it is significant to investigate whether there are opportunities to bridge this gap through a visual and cognitive teaching approach to enhance accounting learning among Diploma students with ASD. This may include greater use of visual material, breaking larger tasks into smaller steps, and giving specific instructions so students understand. This will help the teacher establish a learning environment where every child can learn, benefiting both students and the teacher.

Research Objectives

The main purpose of this study is to investigate the pedagogical relevance of visual and cognitive instructional approaches for effective learning of accounting for students with autism spectrum disorder (ASD) at the Diploma level. The paper is guided by the following specific objectives in achieving this broader objective:

1. To identify the dominant cognitive and academic learning characteristics of ASD students in tertiary education settings.
2. To examine the extent to which visual pedagogical strategies facilitate the comprehension of accounting concepts and symbolic relationships among ASD learners.
3. To examine the cognitive instructional scaffolding in terms of its role in supporting procedural mastery, information retention, and task completion in accounting education.

Research Questions

In line with the objectives above, this paper addresses the following research questions:

1. What are the key cognitive and learning characteristics of students with autism spectrum disorder that influence their participation in accounting education?
2. How do visual pedagogical approaches assist ASD students in understanding abstract and symbolic accounting concepts?
3. In what ways do cognitive teaching strategies support accounting procedural learning and reduce instructional overload?

Literature Review

Autism Spectrum Disorder as a Neurodiverse Learning Profile in Higher Education

In the last decade, scholarship in the field of education has evolved from viewing autism spectrum disorder as a clinical deficit to a broader perspective that sees autism as a neurodiverse learning profile with a unique way of thinking, communicating, and learning (Kapp, 2020; Clouder et al., 2020). Pedagogically, this transition is important because it challenges the prevailing belief that autistic learners need to adjust to mainstream instructional

systems. Rather, it proposes that the teaching systems will themselves need redesign to accommodate the legitimate cognitive diversity.

This has become more apparent in the tertiary sector, with the number of students with ASD entering Diploma and University Courses. Gelbar et al. (2020) report that many students with autism are intellectually capable of higher education but still face significant barriers because the academic environment presumes the ability to make rapid inferences, be flexible with multitasking, and grasp implicit expectations of lecturers. This can potentially disadvantage the learning of those who process information with a greater emphasis on explicitness, routine, or fixed visual cues.

Some students with ASD have strengths in cognitive abilities, including good visual recall, sensitivity to patterns, attention to detail, and comfort with rule-based systems (Ashcroft & Lutfiyya, 2023; de Bruin, 2022). These can be very effective for learning when presented clearly and in a consistent, organized manner by educators. This is because ASD students like information to be presented in an organized and logical way, and to help them concentrate well, they do need to know the expectation.

But there are also some weaknesses in terms of ASD students' learning attitudes. According to Davis et al. (2021), people with ASD have difficulty with executive functioning, such as remembering what they need to do, organizing their work, paying attention, and keeping track of multiple steps. These functions will present a major problem for them when they are college students. Johnson et al. (2024) found that individuals with ASD take many steps (layers) to achieve environmental or situational stabilization. Having an overload of information can be very difficult and overwhelming for them.

Van Hees et al. (2021) found that many autistic students are often unsure about the lecturer's moves from one step to another, or whether there are unspoken inferential links between the steps and explanations. This means that when a student with autism is not doing as well as expected, it does not necessarily mean the student is incapable of doing better. Rather, it could be a desire for an easier, more consistent learning method to connect with and comprehend. Overall, the evidence suggests that students with ASD in higher education should not be treated simply as students with disabilities who need accommodations, but rather as students whose academic involvement will be significantly affected by a combination of factors, including a necessity for clarity, predictability, visual permanence, and explicit instructional sequencing.

Accounting Education as a High-Abstraction and High-Procedure Discipline

Accounting education occupies a distinctive position in business and professional studies as it brings together technical procedure and “big ideas” in a manner not typically found. Byrne and Flood (2020) argue that it is generally believed that introductory accounting is not difficult because of the arithmetic, but rather because, to internalize and apply accounting, students must translate everyday business events into the symbolic language of accounting, which is heavily coded with internal logic.

Learners should recognize transactions, identify their debit-credit implications, record entries in ledgers, balance off any relationships, make adjustment entries, and, in the end, write full accounts. Each step interrelates with the others, and this requires a good understanding of the practical and theoretical aspects of accounting education. It is not about learning a problem

here and a problem there but about knowing how each step relates to the others (Jackson et al., 2022). The author also mentioned that if errors are committed in the initial stage of accounting, they will affect the entire accounting solution in subsequent stages. These will affect students' minds and reduce their confidence in continuing to study accounting.

Taking accounting may bring even more challenges for a student with ASD. Entries such as accruals, adjustments, depreciation, contra entries, or recognition are not natural concepts. They only make sense when you can make the financial relationship apparent to the learner. Worthless conceptual translations, accounting jargon can be learned without understanding. As a cushion, as Williams and Palmer (2023) described, cognitively diverse learners can have difficulties in technical disciplines when educators assume it is an automatic skill to be taught through repetitive practice. The repetition of procedures, not the conceptual fixity, frequently results in mechanical reproduction rather than meaningful learning.

The many rules and logic of accounting can be a puzzle for students with ASD and fit into their thinking process. However, accounting also involves many abstract symbols and processes, and it can be difficult for teachers to convey, let alone recap and simplify, for students who are unfamiliar with the subject matter. Thus, the problem lies not in accounting as a per se unsuitable tool for learners with autism, but in its technical application as mainstream, generalized learning.

Visual Pedagogical Approaches and the Externalization of Accounting Meaning

Visual pedagogy remains one of the most effective teaching approaches for students on the Autism Spectrum, as they learn through clear, repeated visual presentations (Roberts & Birmingham, 2023). Visual explanations, unlike spoken explanations, are external and can be revisited later at a different pace and with repeated constructions of meaning. Zhao and Fan (2025) found that visual supports had a significant positive impact on learners' engagement, as learners could better understand the concept of education by seeing them, not just because teachers did the talking. Roman-Gravan et al. (2023) also indicate that classroom use of digital solutions and visual supports decreases children with ASD's confusion and anxiety. This is because the expectations that it contains become clearer and more stable cognitively with the help of the visual aid. Overall, using visual teaching methods can be an effective way to help students with autism learn and succeed in the classroom.

This pedagogical value is made even more significant when applied to accounting education, as accounting itself is largely an invisible symbolic system. Students are unable to directly observe how a business transaction moves from the source document to the journal entry, then to the ledger, then to the trial balance, and finally to the financial statement. This conceptual movement is expected to be imagined by the learner internally. Visual pedagogy breaks this invisibility by developing representational accounting models. These may include:

- color-coded debit and credit pathways,
- transaction flowcharts,
- account relationship diagrams,
- visual ledger movement arrows,
- infographic accounting cycles,
- balance alignment maps.

These tools are not merely intended to make teaching materials more appealing; they also help clarify the logic of accounting. Bolado Peña (2025) proposes that externalizing conceptual relationships allows learners to invest less mental effort in inferring hidden links and more effort in consolidating explicit understanding. This is especially significant for students with ASD, as these students rely on stable conceptual reference points before confidence in independent execution can be established.

First, on a practical level, visual pedagogy eliminates the "imagining" aspect and offers the possibility for the learner to "see and trace" an accounting concept. This will reduce the symbolic ambiguity and make concepts permanent. We can then say that visual pedagogy cannot be separated from pedagogy as a whole nor seen as a mere tool of classroom teaching, but rather as part of pedagogy and an epistemological "translator" that renders the abstract description of accounting into a cognitively understandable presentation.

Cognitive Pedagogical Scaffolding and the Regulation of Mental Load

While visual pedagogy helps learners see accounting relationships clearly, a clear vision alone does not automatically guarantee mastery. The accounting profession has many steps, rules, and continuity checks to follow. The learners will still have to determine which is the most immediate action to take, what the next move is, which rule should be observed at which point, and the impact of the string of accounting moves. Hence, even if procedures are presented visually, students may still not be able to cope if the total procedural demand exceeds their capacity to understand.

This is where cognitive pedagogical scaffolding is extremely important. Cognitive scaffolding refers to the deliberate organization of learning experiences that regulate mental load, pacing, and support the learner before he or she can internalize procedural knowledge without help (Sweller et al., 2020). Instead of giving a complex task, the teacher breaks the learning into smaller, more manageable parts.

This pedagogy is particularly relevant for students with autism spectrum disorder since studies on executive functions have consistently found that autistic learners might have more difficulty retaining the information in their working memory, organizing tasks, keeping up with multistep monitoring, and spontaneously transferring the procedure (Davis et al., 2021; Johnson et al., 2024). Cognitive overload arises when learners must deal with so many new things during instruction that they cannot fully grasp them, and these elements remain unfixed.

Drawing on Cognitive Load Theory, Sweller et al. (2020) postulate that human working memory is bounded in its capacity to hold unfamiliar information. If too many demands are presented together in the instructional design and there is no further segmentation, comprehension begins to break down, regardless of learner motivation. This is especially true in accounting classes, where students may be required to understand the meaning of a transaction, account classification, debit-credit logic, procedural sequence, and numerical balancing almost simultaneously. According to the research by Fernandez-Batanero and Roman-Gravan (2025), these supports are effective for students with neurodiversity, as they reduce uncertainty and increase familiarity with the learning process. Williams and Palmer (2023) also note that knowledge of a particular technical content is more comprehensible when the teacher stabilizes one operational stage before introducing the next, rather than expecting learners to absorb the entire system through rapid exposure.

Cognitive scaffolding can thus have several concrete manifestations in accounting classrooms:

- teaching transaction analysis separately before journal writing,
- stabilizing journal writing before ledger posting,
- using checklist prompts before balancing,
- repeating identical procedural patterns before independent variation,
- providing scaffolded worksheets that visually cue each next action.

This type of sequencing has two important purposes. It decreases cognitive overload by lowering the number of tasks to which the attention is concurrently devoted. Second, it gives learners confidence as accounting becomes a fixed procedure rather than a "finished problem". The significance of this to ASD learners is that many academic withdrawals are not because the learner cannot understand or follow the teaching process, but rather because he or she becomes cognitively uncertain. When learners encounter multiple uncertainties during a procedure, they can easily disconnect themselves from the task before it is even complete. This can be counteracted by cognitive scaffolding, which provides constant "cognitive" feedback and orientation to learners during the accounting process.

Hence, cognitive pedagogical scaffolding does not simplify accounting by lowering standards. Rather, it sequences accounting complexity into cognitively absorbable stages so that learners can build mastery with greater stability.

Theoretical Foundation

The pedagogical argument in this paper is anchored in two complementary learning theories: Dual Coding Theory and Cognitive Load Theory. The theories provide a conceptual understanding of the appropriateness of using visual and cognitive pedagogical strategies in accounting education for learners with an autism spectrum disorder. The key approach is to make accounting lessons more visual and less confusing, enabling learners with ASD to deepen their understanding and retention of the material. A combination of these two theories will help the teacher create a high-quality learning experience for their students with autism.

Dual Coding Theory

Paivio (1991) proposed that there are two distinct representational systems occurring in human cognition, which are related: a verbal channel and a visual channel. Learning is more durable if it can be encoded by both channels, as it would have multiple associative pathways for understanding.

Traditional accounting teaching tends to focus on the verbal channel. When lecturing, a lecturer explains the logic of the transactions orally, explains terminology verbally, and gives examples in writing for the students, thus expecting the learner to develop their understanding of the relationship among the written examples internally from the audio-verbal explanations. This places a heavy inferential burden on learners.

These burdens can be particularly difficult for students with ASD. As described above, many autistic learners rely on the visual permanence to a greater degree than transient verbal clues (Roberts & Birmingham, 2023). The learner is no longer solely reliant upon the language to

understand the accounting; they will benefit from the use of diagrams, arrows, color coding, transaction maps, and flow diagrams for visual accounting. Rather, the accounting meaning is conveyed concurrently with visible representation. This dual representation is exactly as predicted by Dual Coding Theory to enhance understanding. The learner can recall accounting logic from words they have remembered, as well as from the visual structure they have remembered. This means, in theory, that visual pedagogy in accounting can be supported to increase retention of concepts and minimize symbolic ambiguity.

Cognitive Load Theory

John Sweller's second theoretical pillar is called the Cognitive Load Theory. When considering learning efficiency, the limited capacity of working memory is one of the factors that significantly impacts learning, as explained by Sweller (1988). If what they must learn is dense, poorly sequenced, or occurs all at once, the learner's mind gets overloaded, becomes confused, and retains little.

This is a principle relevant to teaching accounting. Teaching moments often involve learners tackling terminology, conceptual interpretation, procedural rules, and number balancing simultaneously while performing accounting tasks. The simultaneous setting can quickly become too overwhelming for children with ASD who can already be easily overloaded around executive functioning (Johnson et al., 2024).

This is resolved by cognitive scaffolding, which reduces extraneous mental load. Chunking, repeated modeling, checklist prompts, and procedural sequencing enable students to focus on a single, steady unit of accounting logic before moving to the next (Sweller et al., 2020). Thereby, cognitive regulation of accounting complexity focuses on its delivery rather than its elimination. As such, the theory of Cognitive Load Theory offers a robust explanation: the structured pacing of instruction is not a preferred teaching approach, but a required one for learning as a sustainable process for neurodiverse students in procedural areas.

Theoretical Integration

Combined, the two theories provide the conceptual backbone of the present study.

- Dual Coding Theory explains why accounting meaning should be made visually explicit.
- Cognitive Load Theory is used to describe why it is important to sequence the cognitive procedures presented in an accounting curriculum.

This combination justifies the central argument that pedagogical mechanisms of visual and cognitive approaches are not “additional,” “optional” innovative techniques, but are theoretically connected and embracing means of enhancing accounting learning effectiveness of ASD diploma students.

Methodology

This research employed a narrative literature review to synthesize and critically interpret scholarly discussions related to autism spectrum disorder, neurodiverse higher education, visual pedagogy, cognitive instructional design, and accounting education. A literature review

methodology was deemed the most suitable for the present study, which examines an underdeveloped interdisciplinary field rather than producing primary empirical findings. In particular, the aim of this paper is to make a pedagogical argument that links threads of scholarship that are seldom considered side by side in any account of their own, one that centers on the frame of education.

As Clouder et al. (2020) explain, the literature-based synthesis is especially helpful in learning fields where empirical research has been conducted across multiple conceptually related domains but not systematically integrated into a unified explanation within the content domain being learned. In the current setting, pertinent information can be found not only in autism support research but also in literature and research on neurodiversity in higher education, studies of executive functioning, visual instructional design, and accounting pedagogy. A narrative review enables a critical synthesis of these conversations. A four-stage systematic procedure for literature review was followed, including the identification, screening, and selection; thematic categorization; and interpretive synthesis stages.

Stage 1: Literature Identification

Relevant scholarly studies were retrieved from major academic databases, including:

- Scopus
- Web of Science
- ERIC
- ScienceDirect
- Google Scholar

The search period was primarily set within the last five years (2020-2025) to ensure the relevance of the published works to the latest pedagogy; however, when conceptually valuable, seminal works before 2020 were included, especially the works of instructional psychology and learning theory (Paivio, 1991; Sweller, 1988).

Stage 2: Screening and Selection

Items selected were only peer-reviewed journal articles, scholarly conference proceedings, educational review papers, and conceptually relevant theoretical discussions written in English. Clinical or diagnostic autism studies that lacked direct pedagogical implications were excluded from the review. Likewise, general disability studies lacking relevance to higher education instructional practice were not prioritized.

Approximately forty scholarly sources were shortlisted based on conceptual fit, recency, and direct relevance to one or more of the five main review themes.

Stage 3: Thematic Categorization

The selected literature was then organized into five analytical categories:

- ASD learning characteristics in tertiary education,
- Abstraction and procedural demands of accounting education.
- Visual pedagogical supports.

- Cognitive pedagogical scaffolding supports.
- Integrated inclusive pedagogical implications.

This thematic structure enabled the review to transcend the description of individual articles toward a stronger comparative interpretation.

Stage 4: Interpretive Synthesis

The review went beyond merely reporting what each study revealed, using interpretive thematic synthesis to reveal pedagogical patterns and conceptual convergence, and to identify unresolved gaps in the selected literature (Gelbar et al., 2020; Zastudil et al., 2025). Secondly, it was significant, which enabled the formulation of a discipline-sensitive argument about the advantages of visual and cognitive pedagogical approaches for accounting learners with ASD at the diploma level in the present paper.

Therefore, the decision was made to use the methodology of a narrative literature review, which would allow for a sufficiently flexible description and would also be scholarly rigorous in examining an educational issue that has received little empirical attention but is conceptually critical.

Critical Discussion

Based on the literature reviewed in this paper, there is one recurring conclusion that the difficulties students with ASD have in accounting education cannot be wholly attributed to the nature of the subject, but rather to the level of mismatch between the procedural nature of the discipline and instruction that is not yet responsive enough to neurodiverse ways of processing information. This distinction is significant because it alters how the problem is approached. When it is presumed that accounting failure among ASD learners is simply a reflection of accounting being too difficult, the implied solution is learner remediation. But as an instructional mismatch, the interpretation of the problem may change because the solution shifts toward pedagogical redesign. The literature strongly supports the second interpretation. Accounting has conceptual, procedural, and executive monitoring, which must be continuous (Byrne & Flood, 2020). However, these qualities do not necessarily make it out of reach for autistic learners. Indeed, the tendency for systems and predictable order may be demonstrated as a preference of autistic individuals, as the rules that underlie accounting are highly systematic (Ashcroft & Lutfiyya, 2023). The problem arises when the technical regularity of accounting is obscured by overly verbal, inference-laden teaching and by minimal pictorial representation of the concepts.

There are, of course, many traditional accounting courses, in which instructors dash through lectures on accounting logic, leaving it up to the student to mentally construct the unseen connections, and advance from one step to the next in a march, with little opportunity for consolidation. For ASD learners, this creates a dual instructional burden. Firstly, the learner needs to know what accounting is. Second, this learner needs to be driving themselves downwards along a cognitively unstable path towards the content. The combination of these two demands can manifest as “strengths” in the student when the fault lies with the instruction. It seems that visual pedagogy can alleviate one part of this burden by functioning as a representational translator. It makes accounting a visible conceptual arrangement. Learners have several opportunities to revisit transaction movements, account relationships, and

balancing, rather than relying solely on verbal memory (Bolado Peña, 2025; Roberts & Birmingham, 2023). This repeated exposure reduces inferential pressures and enhances the permanence of concepts.

The second part of the burden is addressed through the cognitive scaffolding process, which regulates the pacing of procedures. The accounting cycle is not offered in one go, and the teaching is divided into smaller parts, which can be cognitively stabilized in succession (Sweller et al., 2020; Williams & Palmer, 2023). This is crucial, as most learners with autism lose interest not so much when their understanding is difficult, but when the doubts that occur pile up before the confidence can be built. Another implication concerns learner emotions. There are several areas of accounting that could lead to multiple errors, since a single mistake can trigger downstream errors. This can lead to stress and may result in learners avoiding the activities and disengaging, particularly if they are already unsure how to complete multi-step tasks. For this reason, working with visual checkpoints and cognitive routines provides intellectual and emotional support by guiding the process and reducing the risk of getting lost. From this, it is concluded that inclusive accounting education should no longer be seen merely as providing additional support around existing teaching, as the literature suggests. It should incorporate a reconsideration of the teaching itself.

Proposed Conceptual Framework

Independent Variables

Visual Pedagogical Approaches which contribute to:

- improved conceptual visibility,
- reduced symbolic ambiguity,
- stronger meaning permanence.

Cognitive Pedagogical Approaches which contribute to:

- reduced cognitive overhead.
- improved memory management,
- higher procedural predictability,
- stronger learner confidence.

Mediating Variables

Learning conditions that are mediated as:

- improved information processing,
- stronger memory retention,
- lower academic anxiety,
- increased procedural continuity,
- enhanced classroom confidence.

Dependent Variable

Enhanced Accounting Learning Effectiveness among ASD Diploma Students.

This effectiveness may be reflected through:

- improved accounting concept comprehension,
- stronger procedural task completion,
- better independent accounting performance,
- increased classroom engagement,
- more sustained academic participation.

As such, the framework positions visual and cognitive pedagogy as complementary, inclusive mechanisms, rather than isolated classroom approaches. Figure 1 below shows the relationship of the variables.

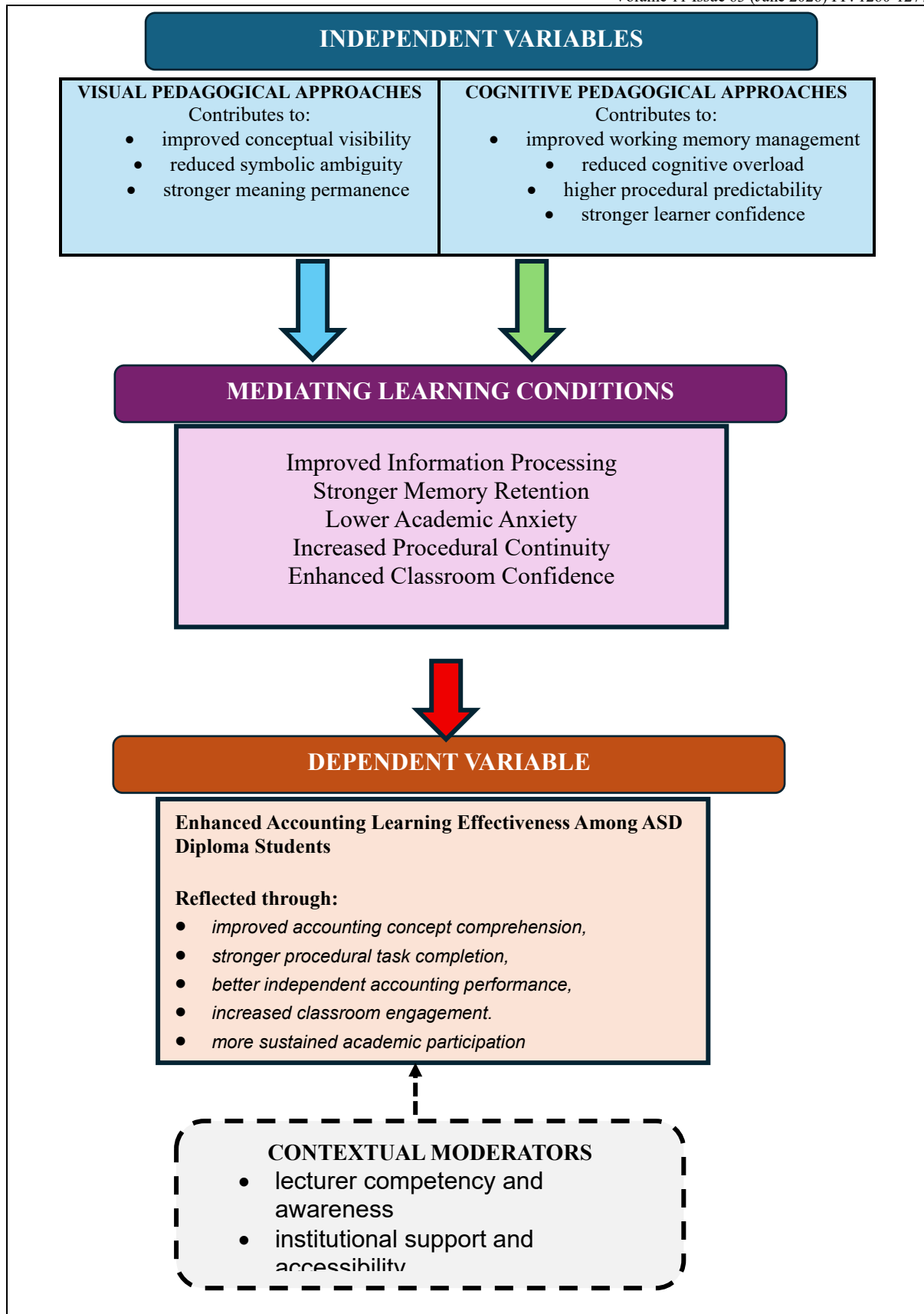


Figure 1: Diagram of the Proposed Conceptual Framework

Conclusion

This paper reviewed the extent to which visual and cognitive pedagogical approaches may enhance the effectiveness of accounting learning for diploma students with Autism Spectrum Disorder. By integrating ideas from three extensive research fields, autism education, cognitive instructional theory, and neurodiverse higher education, and ideas from accounting pedagogy, the study demonstrates that the obstacles encountered by students with autism are not merely linked to a learner's specific characteristics but also influenced by the conventional representation and delivery of accounting knowledge.

The review reveals that accounting is systematic and rules-based, and symbolic and abstract, and, in a manner of speaking, procedurally compressed. Students who depend on visual permanence, explicit sequencing, and structured cognitive reinforcement are placed at a clear disadvantage if such a discipline is taught largely through verbal explanation, rapid tutorial transfer, and minimal instructional stabilization. As such, the question is not whether students with ASD can learn accounting, but whether accounting is taught in ways that enable cognitively appropriate routes to understanding?

The advantages of visual pedagogical approaches stem from their ability to bring accounting relationships to life and render them legible. Cognitive pedagogical approaches contribute by sequencing accounting complexity into stages that are easy to follow. All these methods, combined, not only provide an added layer of scaffolding but also transform the path the learner takes to comprehension. More importantly, they move inclusive education away from symbolic participation and toward genuine cognitive accessibility.

To conclude, meaningful inclusion in accounting education cannot stop at merely admitting autistic learners into mainstream classrooms. It also necessitates a rethinking of how accounting is taught, sequenced, represented, and cognitively experienced.

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