



Examining the Effects of Resilience, Psychological Well-Being, and Self-Efficacy on Students' Understanding of Accounting

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Abstract: This study aims to examine the effects of resilience, psychological well-being, and self-efficacy on students' accounting understanding. A quantitative explanatory research method was employed. Data were collected from 118 undergraduate students enrolled in the Accounting Education Program, Faculty of Economics, Medan State University. The participants were selected using purposive sampling and had completed core accounting courses. Data were gathered through a structured questionnaire measured on a five-point Likert scale. Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software. The results demonstrate that resilience, psychological well-being, and self-efficacy have positive and statistically significant effects on accounting understanding. Among these variables, self-efficacy exhibits the strongest influence on accounting understanding ($\beta = 0.41$; $p < .001$), followed by resilience and psychological well-being. The structural model explains 65% of the variance in accounting understanding ($R^2 = 0.65$), indicating strong explanatory power. These findings suggest that students' accounting understanding is influenced not only by cognitive learning processes but also by psychological resources that support academic engagement and persistence.

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Introduction

Accounting understanding is a core learning outcome in business and economics education because it reflects students' ability to go beyond memorizing rules to interpret transactions, apply recognition and measurement principles, and exercise defensible judgment based on financial information, skills closely aligned with the development of critical thinking in accounting education (Wolcott & Sargent, 2021). However, many students still struggle to convert exposure to accounting concepts into deep understanding, particularly because accounting learning is cumulative, demands high procedural accuracy, and often unfolds under repeated assessment pressure. Evidence from accounting education also suggests that students' well-being and self-efficacy are meaningfully related to course performance and may shift alongside performance outcomes (Vanderstraeten et al., 2025). Therefore, accounting mastery is shaped not only by cognitive ability and instructional support, but also by adaptive psychological resources that help students persist through difficulty, learn from errors, and stay engaged as task complexity increases.

Evidence published in 2022–2025 increasingly indicates that learning outcomes emerge from the interaction between contextual support and students' internal resources, rather than from isolated factors. For example, a meta-analytic study guided by the self-



system process model reports that perceived teacher support has a small-to-medium association with academic achievement and that engagement partially transmits this relationship (Tao et al., 2022). This is crucial for accounting education: when engagement drops after early failure experiences (e.g., incorrect adjusting entries or misunderstood concepts), learning loss can compound across later topics, even for capable students.

Alongside support engagement mechanisms, resilience scholarship has expanded rapidly and provides a powerful lens for explaining why students persist in demanding academic environments. A systematic review in education emphasizes directions for building more resilient educational systems and shows how resilience research now spans environmental supports, institutional programs, and adaptive learning processes (Borazon & Chuang, 2023). This evolution matters because accounting learning often requires repeated exposure to errors and feedback; without resilience, students may interpret mistakes as evidence of inability rather than as part of skill acquisition.

Within accounting education specifically, recent studies highlight that self-efficacy and well-being are not peripheral: they can be shaped by course design and can change across a semester. In a financial accounting context, online formative assessments have been examined as a practical lever that relates to changes in self-efficacy and test anxiety (Blondeel et al., 2024), implying that structured practice can strengthen confidence and reduce emotional barriers to continued engagement. In addition, accounting education evidence suggests that students' prior learning history also matters for their efficacy beliefs. Choo et al. (2024) explicitly investigate whether prior accounting study (and related experience) influences self-efficacy among students entering a tertiary introductory accounting course, reinforcing that self-efficacy is shaped by preparedness and learning trajectories not only by current teaching.

Importantly, recent accounting education research also shows that relationships can be dynamic, not simply one-way. A longitudinal study examines the bidirectional relation between well-being/self-efficacy and course performance in an accounting course and reports nuanced timing effects for instance, well-being before examinations can relate to later course performance, and pass/fail outcomes can be followed by differences in well-being and self-efficacy in subsequent periods (Vanderstraeten et al., 2025). This suggests accounting understanding may be reinforced through feedback loops: success can strengthen well-being and confidence, while repeated struggle can erode them shaping future engagement and understanding.

Contemporary evidence also increasingly supports mediation-based explanations that connect internal resources with external supports. For example, teacher support is examined as a mediator in the relationship between academic resilience and academic performance in higher education (Cai & Meng, 2025), aligning with the view that resilient students may seek, perceive, or benefit more from external support resources during learning. In parallel, research on higher education mental health finds that academic buoyancy can mediate pathways linking academic self-efficacy and psychological well-being (Huang & Kou, 2025), highlighting that confidence may improve well-being partly through students' capacity to recover from everyday academic setbacks. At the same time, resilience-focused research continues to emphasize that mechanisms of resilience development remain an active scientific question (Afzali et al., 2024), strengthening the need for more domain-specific synthesis and model-building.

Despite these advances, a clear scientific gap persists when the findings are read together for accounting learning. Many studies operationalize outcomes as general academic



achievement or course grades, while accounting understanding, operationalized in this study as a latent construct measured through five-point Likert items capturing students' perceived conceptual comprehension and their ability to analytically apply accounting principles to transaction-based decisions (e.g., explaining and justifying recognition and measurement choices), rather than cumulative indicators such as GPA or a single course grade, is a more domain-specific endpoint that reflects conceptual integration and applied reasoning. Moreover, recent work often examines resilience, psychological well-being, and academic self-efficacy in partial combinations or different contexts, leaving limited synthesis that positions these three resources simultaneously as a coherent explanatory set for accounting understanding. Because accounting learning is inherently cumulative and evaluative, an integrative model is scientifically warranted to clarify which psychological resources matter most, how they relate to one another, and why they should jointly predict accounting understanding (Tao et al., 2022; Blondeel et al., 2024; Vanderstraeten et al., 2025).

Accordingly, the scientific novelty of this article review is the construction of a domain-focused integrative argument that accounting understanding is shaped by (1) resilience as adaptive persistence under difficulty, (2) psychological well-being as a supportive condition for sustained functioning and concentration, and (3) academic self-efficacy as a task-confidence resource that influences effort, strategy use, and persistence while acknowledging that these resources operate within a support–engagement ecology documented in recent evidence (Cai & Meng, 2025; Huang & Kou, 2025). These three psychological resources are complementary because they operate at different but connected points of the learning process: academic self-efficacy provides the initial task confidence that energizes effort and strategic engagement, resilience sustains momentum when mistakes, complex procedures, or assessment setbacks occur, and psychological well-being preserves students' long-term mental capacity to remain focused, regulate stress, and continue functioning effectively across cumulative learning cycles. In combination, the three variables form an integrated resource set that explains not only whether students start engaging with accounting tasks, but also whether they can endure difficulty and maintain consistent cognitive functioning until understanding is achieved.

Based on this novelty and the identified gap, the purpose of this research is to empirically test an integrated psychological-resource model explaining students' accounting understanding, and to determine the relative contribution of resilience, psychological well-being, and academic self-efficacy within one SEM-PLS framework. The hypotheses proposed are: resilience positively affects accounting understanding (H1), psychological well-being positively affects accounting understanding (H2), and academic self-efficacy positively affects accounting understanding (H3). The contribution of this research is threefold: (i) it extends accounting education evidence by moving beyond broad academic performance indicators and focusing on a domain-relevant learning endpoint, (ii) it clarifies how complementary non-cognitive resources jointly support engagement and persistence under academic pressure, and (iii) it provides an evidence-based foundation for designing targeted supports in accounting courses to strengthen self-efficacy, sustain resilience, and protect students' well-being (Joynt, 2023; Chaudhry et al., 2024; Wang & Zhang, 2024).

Research Method

This study employed a quantitative explanatory design to test the effects of resilience, psychological well-being, and self-efficacy on accounting understanding using survey data and latent-variable modeling (Hair et al., 2022). The research location was the Accounting

Education Program, Faculty of Economics, Medan State University. The research flow is presented in Figure 1 and consists of sequential stages: (1) identification of research variables and hypotheses, (2) instrument development and validation, (3) data collection from respondents, (4) SEM-PLS data analysis, and (5) interpretation of results, consistent with SEM-PLS procedural guidance (Sarstedt et al., 2022). The population (N = 118) comprised undergraduate students in the accounting education program at a public university in Indonesia, and the sample was determined using purposive sampling with the eligibility criterion that respondents had completed at least one core accounting course to ensure adequate exposure to accounting concepts (Etikan et al., 2016).

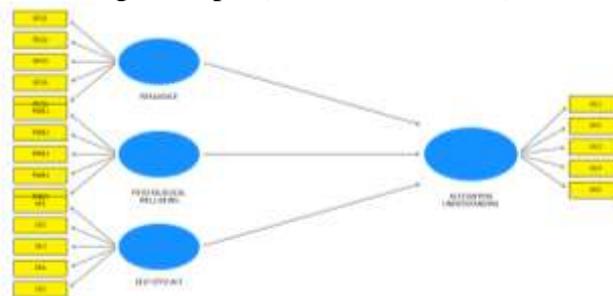


Figure 1. Research flow of the study

A total of 118 eligible students participated. The sampling approach aligns with the need for construct relevance in explanatory models, while sample adequacy was considered using common PLS-SEM recommendations (Hair et al., 2022; Hair et al., 2023). Data were collected through a structured online questionnaire. Instrument development was conducted by adapting indicators from prior validated studies on academic resilience, student well-being, and academic self-efficacy (Bücker et al., 2022; Huang & Kou, 2025; Li et al., 2024).

Resilience indicators captured students' capacity to cope and recover from academic difficulties; psychological well-being indicators reflected positive functioning and emotional balance; self-efficacy indicators measured confidence in completing accounting-related tasks; and accounting understanding was operationalized as perceived conceptual comprehension and the ability to apply accounting principles analytically. All items used a five-point Likert scale ranging from strongly disagree to strongly agree, and the instrument was reviewed prior to full data collection to ensure content clarity and appropriateness.

Data analysis was performed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software (Hair et al., 2022). The analysis followed two core stages. First, the measurement model was evaluated through indicator reliability (outer loadings ≥ 0.70), internal consistency reliability (Cronbach's alpha and composite reliability ≥ 0.70), convergent validity (AVE ≥ 0.50), and discriminant validity (e.g., HTMT < 0.85), following recommended SEM-PLS guidelines (Sarstedt et al., 2022). Second, the structural model was assessed by examining path coefficients, coefficient of determination (R^2), effect sizes ($f^2 = 0.02$ small; 0.15 medium; 0.35 large), and hypothesis testing using bootstrapping (5,000 subsamples; two-tailed; $p < 0.05$) to evaluate the significance of the proposed relationships (Hair et al., 2023).

Results and Discussion

This study analyzed responses from 118 undergraduate students in an Accounting Education program who had completed core accounting courses. The sample was dominated by female students (76.3%), and most respondents were aged 20–21 years (53.4%), which is typically a stage where students have accumulated enough exposure to core topics (e.g.,



adjusting entries, basic reporting logic) to meaningfully evaluate their own conceptual understanding.

Based on the demographic analysis, the respondents consisted of 28 male students (23.7%) and 90 female students (76.3%), indicating a higher proportion of female students in the Accounting Education Program. This composition reflects the actual condition of accounting education programs, where female students generally dominate enrollment. From an educational perspective, this condition is relevant because previous studies have indicated that female students tend to demonstrate higher learning persistence and discipline, which may influence accounting understanding.

In terms of age, respondents were between 18 and 23 years old, with the majority aged 20–21 years (53.4%), followed by those aged 22–23 years (26.3%) and 18–19 years (20.3%). This age distribution indicates that most respondents were in the middle phase of undergraduate study, a period characterized by increased academic maturity and deeper engagement with accounting concepts. Therefore, the respondent characteristics adequately represent students who are actively involved in the accounting learning process.

Table 1. Respondent Characteristics

Category	Description	Frequency	Percentage (%)
Gender	Male	28	23.7
	Female	90	76.3
Age	18-19 years	24	20.3
	20-21 years	63	53.4
	22-23 years	31	26.3
Total		118	100.0

The descriptive analysis shows that most students demonstrated moderate to high levels of resilience, psychological well-being, and self-efficacy. This indicates that students generally possess positive psychological resources that support their learning process in accounting courses. Resilience reflects students' ability to cope with academic pressure and recover from learning difficulties. The majority of respondents agreed or strongly agreed that they were able to persist when encountering difficulties in accounting courses. Psychological well-being, which includes emotional balance and positive functioning, was also perceived positively by most students, suggesting that they experience a supportive psychological condition during learning. Likewise, self-efficacy levels were relatively high, indicating that students generally believe in their ability to understand and complete accounting-related tasks.

The validity and reliability of the constructs were evaluated using convergent validity, discriminant validity, and internal consistency reliability. The analysis results show that all indicators have outer loading values above 0.70, indicating satisfactory indicator reliability. Convergent validity was confirmed through Average Variance Extracted (AVE) values, all of which exceeded the recommended threshold of 0.50. Reliability testing using Cronbach's Alpha and Composite Reliability also showed values above 0.80 for all constructs, indicating strong internal consistency. Discriminant validity was assessed using the HTMT criterion, and all values were below 0.85, confirming that each construct measured a distinct concept.

Table 2. Construct Validity and Reliability

Construct	Cronbach's Alpha	Composite Reliability	AVE
Resilience	0.82	0.88	0.68
Psychological Well-Being	0.84	0.90	0.71
Self-Efficacy	0.86	0.92	0.74
Accounting Understanding	0.85	0.91	0.72



The structural model evaluation shows that the proposed model has strong explanatory power. The R² value for accounting understanding is 0.65, indicating that resilience, psychological well-being, and self-efficacy jointly explain 65% of the variance in accounting understanding.

Table 3. Path Coefficients

Relationship	Path Coefficient (β)	t-Statistic	p-Value
Resilience → Accounting Understanding	0.27	3.91	0.000
Psychological Well-Being → Accounting Understanding	0.22	2.84	0.004
Self-Efficacy → Accounting Understanding	0.41	6.08	0.000

Effect of Resilience on Accounting Understanding

Resilience had a positive, significant effect on accounting understanding ($\beta = 0.27$; $t = 3.91$; $p < .001$). The scientific meaning of this finding is not merely that “resilient students score higher,” but why resilience matters in accounting learning. Accounting understanding requires repeated cycles of (1) attempting procedural steps, (2) receiving feedback (from tasks, quizzes, or instructors), and (3) revising misconceptions (Hattie & Timperley, 2007). Students with higher resilience are more likely to interpret mistakes as part of learning rather than as personal failure, so they persist through correction cycles instead of disengaging. This mechanism is consistent with resilience literature in education, where resilience is framed as an adaptive capacity that sustains learning effort under disruption or pressure (Borazon & Chuang, 2023).

This result also aligns with broader evidence that resilience is shaped by both internal coping resources and contextual support. For example, recent work indicates that supportive environments (e.g., teaching style and academic competence supports) can strengthen academic resilience and adaptive learning responses (Afzali et al., 2024). In accounting courses, where students often face “performance shocks” after difficult midterms or cumulative topics, resilience becomes a realistic determinant of whether students continue practicing enough to achieve conceptual integration.

Effect of Psychological Well-Being on Accounting Understanding

Psychological well-being also showed a positive, significant effect on accounting understanding ($\beta = 0.22$; $t = 2.84$; $p = .004$). Scientifically, this effect is plausible because well-being influences the cognitive conditions required for learning: emotional stability and positive functioning reduce the likelihood that stress, worry, or burnout consumes working memory and attention resources that should be allocated to problem solving and concept mapping (Eysenck et al., 2007). This matters in accounting because understanding is not only remembering rules, it is maintaining mental clarity to connect transaction evidence to recognition/measurement decisions and then to financial statement implications.

Recent accounting education research supports the idea that well-being is dynamically related to course outcomes rather than being a static background trait. Longitudinal evidence in a first-year accounting course shows that well-being measured before exams is related to later course performance, and performance outcomes can also feed back into later well-being suggesting a “loop” that can either reinforce learning momentum or amplify learning difficulties (Vanderstraeten et al., 2025). This supports the interpretation that psychological well-being can function as a stabilizer: students with better well-being are more likely to remain cognitively available for learning tasks even under assessment pressure.

In addition, well-being is conceptually connected to burnout risk (Maslach et al., 2001). Evidence focused on accounting majors indicates that academic burnout is



meaningfully associated with students' experiences and can undermine learning effectiveness (Fisher et al., 2024). Therefore, the positive path from well-being to accounting understanding can be interpreted as a protective pathway helping students avoid the emotional depletion that reduces persistence and strategy use in demanding subjects.

Effect of Self-Efficacy on Accounting Understanding

Self-efficacy produced the strongest direct influence on accounting understanding ($\beta = 0.41$; $t = 6.08$; $p < .001$). This is a key scientific finding because it clarifies which psychological resource is most “proximal” to domain learning: self-efficacy directly shapes what students do during learning (effort regulation, strategy selection, and persistence) (Bandura, 1997). Critically, this pattern is highly consistent with the hierarchical and sequential structure of accounting content, where competence at an early “Stage A” (e.g., transaction analysis and initial recording decisions) becomes a prerequisite for success at a later “Stage B” (e.g., adjusting entries and financial-statement preparation). When students lack confidence at Stage A, they are more likely to avoid practice, disengage after errors, and carry forward misconceptions making failure at Stage B more probable. In this sense, self-efficacy functions as a cognitive “gateway” that determines whether students will fully engage with the foundational steps needed to progress through the accounting cycle, rather than merely aiming for short-term performance. This gateway argument is strengthened by Choo et al. (2024), who explicitly examine how prior accounting knowledge (and its combination with relevant experience) relates to students' self-efficacy and emphasize that self-efficacy is shaped by what learners bring into earlier stages of accounting learning thereby influencing their readiness to sustain engagement across subsequent stages of the accounting cycle. Finally, the hierarchical prerequisite logic is also consistent with evidence that accounting learning is sequential and hierarchical, and that ensuring proficiency in prerequisite knowledge (including adjustment-related foundations) can improve outcomes in later accounting learning tasks (Sargent, 2013).

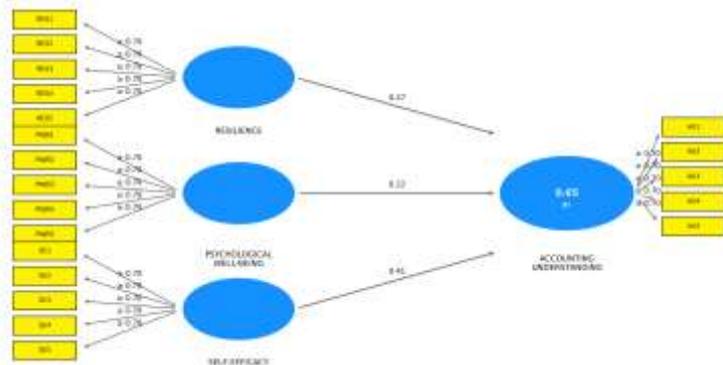
This interpretation is strongly consistent with recent accounting education evidence showing that course design and practice structures can influence self-efficacy and related emotional barriers (Pekrun, 2006). For example, online formative assessments have been shown to relate to students' self-efficacy and test anxiety in accounting contexts, implying that structured practice opportunities can strengthen confidence and reduce avoidance (Blondeel et al., 2024). Similarly, research on introductory accounting has examined the role of prior knowledge in shaping accounting self-efficacy, emphasizing that confidence is sensitive to learning history and preparation—not simply a personality trait (Choo et al., 2024).

Beyond accounting-specific work, recent higher education evidence shows that self-efficacy is linked with resilience-related processes and psychological well-being, indicating that self-efficacy can operate as an “engine” that helps students recover from setbacks and maintain positive functioning (Huang & Kou, 2025). This helps explain why self-efficacy can be the strongest predictor in your model: it is closely tied to daily learning actions (attempting, revising, persisting), and it also supports adaptive responses when students encounter typical accounting learning barriers (Zimmerman, 2000).

Taken together, the ordering of standardized effects (self-efficacy > resilience > psychological well-being) is theoretically coherent. Self-efficacy is often the most immediate predictor of learning behaviors (attempt frequency, strategy use, persistence), while resilience describes endurance across setbacks, and well-being supports the emotional–cognitive stability needed to keep learning efficient. In other words: self-efficacy primarily determines



how students approach accounting tasks, resilience determines whether they continue after difficulty, and well-being determines how much cognitive capacity remains available while doing so. This integrated reading is also consistent with state-of-the-art evidence showing that achievement emerges from a combination of internal resources and contextual supports, with engagement frequently serving as an important behavioral bridge (Tao et al., 2022).



At the same time, the model explains 65% of variance, leaving 35% unaccounted for. This suggests reviewers may reasonably ask about additional predictors (e.g., prior accounting knowledge, learning strategies, quality of instruction, assessment design, peer/teacher support). Rather than being a weakness, this is a defensible boundary: your model is explicitly psychological and domain-focused, while the remaining variance is plausibly explained by instructional and background factors that other accounting education studies have documented (e.g., prior knowledge effects on confidence and learning pathways) (Choo et al., 2024). Accounting lecturers should not only provide technical practice problems, but also intentionally create a “safe-to-fail” learning climate where mistakes are treated as feedback signals rather than penalties, because psychological safety is a key condition for sustained learning behaviors such as asking questions, admitting errors, and persisting through difficulty (Edmondson, 1999). This can be implemented through frequent low-stakes formative quizzes, guided error-analysis tasks, and structured opportunities to revise answers after feedback, which are consistent with formative assessment principles that promote self-regulated learning (Nicol & Macfarlane-Dick, 2006). In accounting’s hierarchical learning sequence (e.g., transaction analysis → journalizing → adjusting entries), embedding formative checks at each stage helps students consolidate prerequisite understanding before moving forward, thereby supporting confidence and engagement pathways that are also linked to prior knowledge and self-efficacy development (Choo et al., 2024).

Conclusion

The findings demonstrate that all three psychological variables significantly influence accounting understanding, indicating that students’ cognitive achievement in accounting is not solely determined by instructional or technical factors but is also strongly shaped by their psychological resources. The results show that self-efficacy has the strongest effect on accounting understanding, highlighting the importance of students’ confidence in their ability to learn and apply accounting concepts. Students with high self-efficacy are more likely to engage actively in learning, persist in solving complex accounting problems, and employ effective learning strategies. Resilience also plays a significant role by enabling students to cope with academic challenges and maintain learning persistence, while psychological well-



being contributes by creating emotional stability that supports concentration and cognitive processing.

The structural model explains a substantial proportion of the variance in accounting understanding ($R^2 = 0.65$), indicating strong explanatory power. This finding suggests that resilience, psychological well-being, and self-efficacy jointly form an integrated psychological framework that supports students' understanding of accounting concepts. Therefore, accounting education should not only focus on content delivery and technical competence but also incorporate strategies to strengthen students' psychological readiness for learning.

In conclusion, this study contributes to the accounting education literature by empirically confirming the critical role of psychological factors in shaping accounting understanding. The findings provide practical implications for educators to design learning environments that foster self-efficacy, support psychological well-being, and enhance resilience, thereby improving students' overall learning outcomes in accounting education.

Recommendation

Based on the findings of this study, accounting education should not only emphasize cognitive mastery of accounting concepts but also intentionally strengthen students' psychological resources. Accounting lecturers are encouraged to design learning strategies that enhance self-efficacy through progressive tasks, constructive feedback, and active learning approaches such as problem-based and case-based learning. These strategies can help students develop confidence in solving accounting problems and applying accounting concepts effectively.

In addition, accounting learning environments should support students' resilience and psychological well-being. Lecturers are advised to create a supportive classroom climate that encourages persistence, normalizes learning difficulties, and reduces excessive academic stress. Collaborative learning, reflective activities, and balanced academic workloads can help students cope with challenges and maintain emotional stability, which are essential for sustaining engagement in accounting learning.

At the institutional level, universities are recommended to integrate psychological support into academic services, particularly for students in accounting education programs. Academic mentoring, counseling services, and lecturer professional development related to student psychological support can contribute to improved learning outcomes. Future research is also encouraged to incorporate additional psychological and contextual variables or longitudinal designs to further examine factors influencing accounting understanding.

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