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THE RELATIONSHIP BETWEEN LEARNING STYLES AND STUDENT PERFORMANCE IN THE FINANCIAL ACCOUNTING I COURSE AT SULTAN IDRIS EDUCATION UNIVERSITY

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Abstract: *This study investigated the relationship between learning styles and academic achievement among students enrolled in the Financial Accounting I course at Sultan Idris Education University (UPSI). The study was guided by the VARK model, which categorizes learners into four primary modalities: Visual, Auditory, Reading/Writing, and Kinesthetic. Specifically, the research aimed to identify the dominant learning style among students, the difference in performance based on students' gender, the difference in academic performance based on parents' educational backgrounds, and analyze the relationship between learning styles and student achievement. Using quantitative survey design, data were collected from 62 respondents using a structured questionnaire adapted from Fleming's VARK framework. The instrument demonstrated strong internal consistency, with a Cronbach's Alpha coefficient of 0.866, confirming its reliability. Students' official course grades were used to measure academic achievement. The results of the study revealed that the Reading/Writing style was the most dominant learning preference, followed by Kinesthetic, Visual, and Auditory. Independent sample t-tests indicated no significant difference in performance between male and female students, while one-way ANOVA revealed no significant differences based on parents' educational background. Nevertheless, Pearson correlation analysis showed a significant positive relationship between multimodal learning styles and student achievement, particularly among those who combined Reading/Writing and Kinesthetic approaches. These findings reinforce the idea that students' awareness of their learning styles can help improve academic outcomes and that flexible, multimodal learning approaches are more effective than relying on a single style. The study contributes to the growing body of research on accounting education by highlighting the need for educators to adopt diverse teaching strategies that align with student preferences while encouraging learners to expand their range of study methods. This research provides practical implications for students, lecturers, and educational institutions in shaping teaching and learning strategies that foster academic success in challenging disciplines such as accounting.*

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Keywords: *Learning styles, academic achievement, VARK model, Visual, Auditory, Reading/Writing and Kinesthetic.*

Introduction

Guided by the National Philosophy of Education, Malaysia's national education system aims to produce individuals who are balanced intellectually, spiritually, emotionally, and physically, enabling them to contribute positively to the community and the country (KPM, 2019). Within higher education, universities carry the responsibility of preparing students not only with academic knowledge but also with the skills, attitudes, and adaptability needed to succeed in professional life.

The field of accounting plays an especially significant role in this regard. As the "language of business," accounting is central to recording, reporting, and analyzing financial information, and it demands a high degree of accuracy, logical reasoning, and problem-solving ability (AICPA, 2022). At UPSI, the course Financial Accounting I is a core requirement for students in the Bachelor of Accounting Education program. This course introduces the fundamentals of accounting and serves as the basis for more advanced subjects. It is among the most challenging courses, as students must learn to master both theoretical frameworks and their application in problem-solving contexts (Ismail & Idris, 2009; Ahmad & Md Hezir, 2023).

Students of accounting often report difficulties in balancing the theoretical and practical dimensions of the subject. They are required to understand accounting standards, memorize concepts, and apply them in structured exercises, which can be overwhelming and stressful. Research has shown that students in accounting education frequently face high levels of pressure due to heavy workloads, accuracy requirements, and the need to develop competency with complex accounting technologies (Lee et al., 2023). These challenges can reduce motivation and have a negative effect on performance if students lack appropriate learning strategies.

One way to bridge these difficulties is through the use of learning styles. By understanding and adapting to their learning styles, students may be better able to approach complex material in ways that maximize comprehension and performance. Among the many frameworks developed to study learning preferences, the VARK model proposed by Fleming has become particularly popular. The model classifies learners into four categories: Visual, Auditory, Reading/Writing, and Kinesthetic (Fleming & Baume, 2020). Studies have indicated that the alignment of teaching methods with learning styles improves student engagement and outcomes (Wan Tahir, 2019; Abu Bakar, 2024).

This study, therefore, seeks to investigate the dominant learning style among accounting students enrolled in Financial Accounting I at UPSI, to determine whether gender and parental education influence performance, and to examine the relationship between learning styles and academic performance.

Literature Review

The concept of learning styles has been studied extensively, and numerous theoretical frameworks have been developed to describe how individuals prefer to learn. Kolb's Experiential Learning Theory (1984), for example, conceptualizes learning as a cycle with four stages: concrete experience, reflective observation, abstract conceptualization, and active

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experimentation. Students often favor one stage over the others, which results in distinct learning orientations such as Diverging, Assimilating, Converging, or Accommodating (Sanni et al., 2022; Mulyadi & Fitriani, 2023). Similarly, the Dunn and Dunn model emphasizes the role of environmental, emotional, physiological, and cognitive factors in shaping learning preferences. This model highlights that learners thrive when their environments and instructional strategies are adapted to their individual needs (Nor Syafika et al., 2021).

The VARK model developed by Fleming categorizes learning preferences based on sensory modalities: visual learners rely on images, diagrams, and charts; auditory learners prefer lectures, discussions, and verbal explanations; reading/writing learners favor text-based input and output; and kinesthetic learners prefer practical, hands-on activities (Fleming & Baume, 2020). The simplicity and applicability of this framework make it particularly useful in classroom contexts. Research has shown that students who are aware of their dominant learning style can adjust their study habits accordingly, leading to improved outcomes (Mohd Farid & Azniah, 2020; Ramasamy et al., 2024).

Learning styles are especially significant in accounting education, where both theoretical and practical mastery are required. Several studies have indicated that accounting students often gravitate toward the reading/writing style, as much of the subject matter involves reading standards, interpreting rules, and solving exercises through written formats (Aziz, Hashim, & Yunus, 2022). However, kinesthetic learning is equally important, as practice and simulations enable students to apply knowledge and enhance their comprehension of abstract principles (Hussin & Aziz, 2023; Nasir & Kamarudin, 2021). Moreover, multimodal learning approaches, where students employ a combination of styles, particularly reading/writing and kinesthetic, have been found to yield stronger academic outcomes (Karim & Zahari, 2021; Kahar & Ramli, 2023).

The influence of gender on academic performance remains debated. Some research suggests that female students tend to excel in tasks requiring reading and writing skills, while male students may be more inclined toward visual or kinesthetic approaches (Leticia Sam, 2024). Other studies, however, report no significant gender differences in learning styles or academic performance at the university level (Noraini & Hashim, 2020). For parental education, the effect tends to diminish at the university level, as students become more independent in managing their studies (Johari & Salleh, 2021; Noor Saatila, Mohamad, & Sulaiman, 2021).

Overall, previous research strongly suggests that learning styles are more influential in determining academic performance than demographic factors such as gender or parental education (Malik & Yusof, 2021; Hussin & Aziz, 2023). This underscores the importance of exploring the learning styles of accounting students at UPSI, particularly in relation to their performance in Financial Accounting I.

Methodology

This study adopted a quantitative survey research design. Quantitative methods are particularly suitable for educational research where the goal is to identify trends, test hypotheses, and generalize findings within a specific population (Creswell & Creswell, 2018). The target population comprised 69 students enrolled in the Financial Accounting I course during the semester of data collection (Semester 2, session 2024/2025). Using purposive sampling, a total of 62 respondents responded to the instruments. This sampling approach was practical because it directly addressed the research objectives and provided access to the relevant participants.

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The respondents included 12 male and 50 female students, and they came from varied family backgrounds, particularly in terms of their parents' education levels (2 with primary education, 24 with secondary education, and 36 with Diploma/Degree education). This diversity enabled the study to examine the influence of demographic variables alongside learning styles.

The main instrument for data collection was a structured questionnaire adapted from the VARK model developed by Fleming (Fleming, 2021; Fleming & Baume, 2020; Fleming & Mills, 1992). There are 20 questions with five questions for each learning style: Visual, Auditory, Reading/Writing, and Kinesthetic. Each item required students to indicate the extent to which a particular style reflected their preference. Scores were then calculated to identify the dominant learning style of each respondent. In addition, students' official grades in Financial Accounting I were used to measure academic performance, ensuring objectivity in the assessment of performance. Prior to the main data collection, the instrument was subjected to a pilot study involving a smaller group of students from a different accounting class. The results of the pilot test demonstrated a strong internal consistency, with a Cronbach's Alpha coefficient of 0.866. According to Pallant (2020), a value above 0.70 is acceptable for social science research, while values above 0.80 indicate good reliability.

Descriptive statistics were used to find the most preferred learning styles. Independent sample t-tests compared male and female students' academic performance, while one-way analysis of variance (ANOVA) tested parental education influence. Pearson correlation was used to determine whether there was a relationship between learning styles and academic performance.

Findings

Dominant Learning Styles

Descriptive analysis revealed clear patterns in students' learning preferences. The Reading/Writing style recorded the highest mean score ($M = 3.65$, $SD = 0.82$), suggesting that most students prefer to learn through lecture notes, textbooks, exercises, and other forms of written material. The Kinesthetic style followed closely ($M = 3.52$, $SD = 0.79$), indicating that practical engagement, such as problem-solving, exercises, and simulations, was also highly valued. The Visual style ($M = 3.41$, $SD = 0.74$) and Auditory style ($M = 3.28$, $SD = 0.85$) were somewhat less dominant but still rated highly.

These findings suggest that while students rely strongly on reading and writing, they also value the application of knowledge through practice. This dual reliance on Reading/Writing and Kinesthetic approaches reflects the nature of accounting, which combines theoretical concepts with practical application (Aziz, Hashim, & Yunus, 2022; Hussin & Aziz, 2023). Such preferences may be explained by the structured and rule-driven nature of accounting, which demands both comprehension of standards and reinforcement through repeated practices.

Gender Differences in Academic Performance

An independent sample t-test was performed to determine whether male and female students differed significantly in their Financial Accounting I scores. The results indicated no statistically significant difference between the two groups ($t = 1.12$, $p > 0.05$). Male students achieved a mean score of 72.35 ($SD = 8.41$), whereas female students achieved a mean score of 74.21 ($SD = 7.98$). While female students scored slightly higher, the difference was not significant enough to conclude that gender plays a role in performance.

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This finding aligns with Noraini and Hashim (2020), who reported no significant gender-based differences in academic achievement among Malaysian university students. It also resonates with international studies suggesting that gender differences in learning outcomes are diminishing in higher education contexts (Noor Saatila, Mohamad, & Sulaiman, 2021). However, it contrasts with research such as Leticia Sam (2024), which suggested that female students may have an advantage in text-based learning environments. The lack of gender differences in the present study may be attributed to the structured nature of accounting education, which requires mastery of concepts regardless of gender-based learning preferences.

Differences Based on Parents' Educational Background

The effect of parents' educational background on student performance was examined using one-way ANOVA. The results revealed no significant differences among students based on whether their parents had primary, secondary, or tertiary education ($F = 0.92$, $p > 0.05$). Students whose parents had a tertiary education achieved slightly higher mean scores, but the differences were not statistically meaningful.

This outcome suggests that by the time students reach university, the direct influence of parental education diminishes. Johari and Salleh (2021) argued that parental education tends to be more influential during the formative years of schooling, as parents play a direct role in supporting children's learning. However, at the university level, students develop autonomy and rely more on personal strategies and institutional support than on parental guidance. The findings of this study, therefore, reinforce the view that learning styles, rather than parental background, are more crucial predictors of academic success in higher education.

Correlation Between Learning Styles and Academic Performance

The Pearson correlation analysis revealed significant positive relationships between multimodal learning styles and academic performance. Specifically, students who reported combining Reading/Writing and Kinesthetic strategies demonstrated stronger academic performance ($r = 0.412$, $p < 0.01$). In contrast, individual preferences for Visual ($r = 0.152$, $p > 0.05$) and Auditory ($r = 0.098$, $p > 0.05$) styles showed weaker, non-significant correlations with academic performance.

These results highlight the benefits of adopting flexible learning strategies that incorporate more than one mode of engagement. Students who restricted themselves to a single style tended to perform less effectively than those who employed multiple strategies. This finding supports Karim and Zahari (2021), who reported that multimodal learners demonstrated higher levels of performance in accounting subjects compared to unimodal learners. Similarly, Hussin and Aziz (2023) emphasized the importance of combining practice-based kinesthetic approaches with structured reading and writing to maximize understanding in accounting.

Discussion

The results of this study provide important insights into the relationship between learning styles and academic performance in Financial Accounting I among UPSI students. The dominance of the Reading/Writing style reflects the structured and text-heavy nature of accounting education, where students are required to read textbooks, review lecture notes, and complete written exercises. This finding is consistent with earlier research, which highlighted that accounting students often prefer written modes of learning due to the technical and formula-driven content of the discipline (Aziz, Hashim, & Yunus, 2022; Mohd Farid & Azniah, 2020; Hussin & Aziz,

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2023), who emphasized that reading and writing remain central to the mastery of accounting concepts, particularly at the introductory level.

The high preference for Kinesthetic learning among students suggests that practical application also plays an essential role. Accounting is not purely theoretical but requires continuous practice, problem-solving, and simulation of real-world scenarios. The positive association between kinesthetic strategies and achievement echoes the findings of Nasir and Kamarudin (2021), who reported that students who engaged more actively in practice-based learning tended to perform better in technical subjects.

The lack of significant gender differences in performance suggests that male and female students are equally capable of adapting to the demands of accounting education. This finding aligns with Noraini and Hashim (2020) and Noor Saatila, Mohamad, and Sulaiman (2021), who found no consistent evidence of gender differences in higher education performance. However, it contrasts with Leticia Sam (2024), who reported that female students may excel more in text-heavy learning contexts. The discrepancy may be explained by the structured nature of accounting instruction at UPSI, which appears to neutralize potential gender differences by requiring all students to engage with similar materials and assessments. Similarly, the non-significant differences across parental education levels reinforce the idea that by the time students reach university, parental background plays a reduced role in determining academic outcomes. This is in line with Johari and Salleh (2021), who noted that parental education has stronger effects during early schooling but becomes less influential as students gain autonomy. It also reflects a wider trend in higher education, where institutional support and individual learning strategies are more critical for student success than family background (Malik & Yusof, 2021).

Perhaps the most significant finding of this study is the positive correlation between multimodal learning and academic performance. Students who adopted a combination of reading/writing and kinesthetic strategies performed significantly better than those who relied solely on one style. This finding supports Karim and Zahari (2021), who highlighted the advantages of multimodal approaches in accounting education, and Hussin and Aziz (2023), who argued that blending multiple modes enables students to reinforce knowledge through different pathways. It also resonates with international studies suggesting that flexible learners are better able to adapt to diverse teaching methods and complex subject matter (Ramasamy et al., 2024).

The findings carry several significant implications for multiple stakeholders in higher education, including students, educators, and institutions. For students, the results underscore the importance of becoming aware of their own learning styles and understanding how these preferences can shape their study habits. Students should be encouraged to diversify their approaches—for example, by integrating kinesthetic strategies such as practice and simulation alongside traditional reading and note-taking. Such flexibility will not only strengthen comprehension but also prepare students to adapt to varied academic challenges and professional environments that demand different skills (Mat Norwani & Yusof, 2008).

For educators, the study highlights the necessity of designing teaching practices that cater to diverse learning preferences. Lecturers should avoid over-reliance on a single method of instruction and instead employ a balanced mix of strategies. Visual aids such as flowcharts and financial diagrams can help visual learners, while structured lectures and peer discussions may engage auditory learners. Assignments and technical exercises continue to benefit

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reading/writing learners, while case studies, role-play, and accounting simulations provide valuable opportunities for kinesthetic learners. By implementing inclusive and multimodal teaching practices, lecturers can increase classroom engagement, reduce student stress, and enhance performance outcomes (Abd Rahman, Mat Norwani & Yahaya, 2024).

The results also point toward the importance of institutional policies and support systems that promote learning diversity. Universities could implement workshops and training programs to help students identify their learning styles and develop multimodal strategies. Academic counseling services can guide students in adopting effective study methods tailored to their strengths while encouraging flexibility. Institutions may also consider integrating learning style awareness into student orientation programs so that undergraduates are introduced to the concept early in their academic journey.

Conclusion

From a broader educational perspective, the findings align with the National Philosophy of Education, which emphasizes the holistic development of learners (KPM, 2019). By encouraging multimodal learning and varied teaching strategies, universities can better prepare students not only for academic success but also for future professional demands. In this way, the study contributes to the ongoing discourse on how higher education can evolve to meet the needs of diverse learners in the twenty-first century.

The results also suggest that demographic factors such as gender and parental education play a limited role at the university level, while individual learning strategies exert a stronger influence. The implications of these findings are far-reaching. For students, they highlight the value of developing self-awareness and versatility in learning. For educators, they emphasize the need to adopt inclusive and multimodal teaching approaches. For institutions, they underscore the importance of providing support structures that encourage and facilitate learning diversity. This research adds to the growing body of literature on learning styles and academic performance by showing that multimodal approaches are particularly effective in accounting education. Future research should expand this work by incorporating larger and more diverse samples, examining additional variables such as motivation and digital learning tools, and exploring longitudinal effects across multiple courses. Such studies would further enhance our understanding of how learning styles interact with teaching methods to shape student success in higher education.

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