



The Effect of MBTI Learning Style Preferences on Accounting Student Academic Achievement

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ABSTRACT

The purpose of this study is to determine how these MBTI learning styles impact the academic achievements of students as well as their preferred learning model, which may be onsite, online, or blended. The method for this study was carried out through quantitative analysis with SMART PLS methodology to define the connection between MBTI learning styles, academic achievement, and most sought learning models. Surveys with the students are conducted to determine their learning style preferences and their academic achievements. It is very important to identify the various aspects of learning styles and their academic results to improve teaching methods. The implication findings reveal that MBTI learning model preferences highly affects the selection of a learning model and achievement in school. On the other hand, the preferred learning model whether onsite, online or blended does not directly affect the academic performance of the students. This conclusion indicates that students' academic achievements may be more dependent on the appropriateness of teaching methods style (online, onsite or hybrid) to the students' learning style rather than the way teaching and learning is carried out. The study novelty highlights the need for universities to adopt different MBTI learning styles for personalized learning to improve academic performance with GPA.

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1. INTRODUCTION

In recent years, criticizing MBTI personality types of assessment has become a popular social tool for people but the universities ignore this. On social media, contemporary young people often use personality traits to explain their behavior and seek the identity with the same type of personality. This phenomenon is particularly popular among college students (Ke, 2024). The Myers Briggs Type Indicator (MBTI) Learning Style Preferences relies on four main dimensions that are opposing each other (dichotomous) (Benevene et al., 2023; Laksono and Astuti, 2020; Yang, 2022).

A key issue in macro accounting education is the lack of consideration for individual learning differences, particularly personal characteristics. The MBTI framework identifies four dimensions that influence learning: Extroversion vs. Introversion (social vs. reflective), Sensing vs. Intuition (practical vs. conceptual thinking), Thinking vs. Feeling (logical vs. empathetic decision-making), and Judging vs. Perceiving (structured vs. flexible approaches). These traits significantly affect how students engage with learning yet are often overlooked in accounting instruction. (Cerkez et al., 2021; Choong and Varathan, 2021).

This type of personality will influence the student's preferred ways of learning after the student has received a lecture. The lecturer, for his part, must employ a technique that is compatible with the student's academic success (Wijaya, Novita, et al., 2019). They emphasize that success in learning heavily relies on the dynamics among individuals in the classroom. This perspective suggests that by considering the internal or intrapersonal factors of students, educators can enhance the meaningfulness of learning experiences. Conversely, the second aspect, 'between,' highlights that meaning often does not arise spontaneously. Therefore, success is more dependent on interpersonal relationships than on material resources.

Personal factors such as motivation, self-esteem, anxiety, inhibition, tolerance for ambiguity, learning styles, introversion/extraversion, and self-efficacy still ignore in accounting learning research, just has been research in medical and others study program except accounting program have been limitation for previous researches (Hemdan et al., 2023; Shang and Ma, 2024; Zhao and Cao, 2023). Effective learning is partly a result of the relationships and interactions among individuals in classroom settings in group presentations using Belbin and MBTI Analysis (Fekry et al., 2019), but researcher just use one of them with MBTI Analysis. During the Covid pandemic and its transition to an endemic phase, both students and lecturers have adapted to online lectures, while traditional onsite methods continue to coexist. The blended learning approach combines both onsite and online formats. This study aims to investigate how MBTI Learning Style Preferences and Academic Achievement of Accounting students are influenced by onsite, online, or blended learning environments. The evolution of accounting education has been significantly shaped by technological advancements and new teaching methodologies. In Indonesia, higher education institutions have experienced a change in basic assumptions relational acumen (Steenkamp and Goosen, 2024) in accounting education, incorporating innovative teaching strategies to improve learning quality.

The novelty of this study emphasizes the importance of universities adopting diverse MBTI-based learning styles to support personalized education in learning style (online, onsite, hybrid) and enhance students' accounting academic performance, particularly their GPA. This study is motivated by the necessity to enhance accounting education by aligning learning styles with student needs and industry demands. The introduction of digital learning platforms, alongside conventional teaching methods, has created opportunities for effective integrated blended knowledge transfer in accounting (Russo et al., 2022). However, the effectiveness of various learning modes—online, onsite, and blended—continues to be a vital area for investigation, especially concerning students' psychological and cognitive attributes. Despite extensive

research on how learning styles affect academic achievement, there is still a lack of understanding regarding the influence of MBTI learning style preferences on the success of accounting students in various learning type and carrier.

2. METHODS

This study uses a quantitative research design to evaluate the proposed hypotheses. It gathers primary data through a structured questionnaire distributed among accounting students. The sample consists of 250 participants, with data collected via Google Forms or direct completion. The data is processed in stages using SPSS for preliminary analysis, followed by Structural Equation Modelling (SEM) with LISREL for a more detailed examination. This method and statistics using SEM based Covariance with SEM PLS because exploration the MBTI Learning Preferences Factors on Accounting Academic Achievement.

The research takes place at Maranatha Christian University, focusing on students enrolled in the accounting program. Participants are selected based on their active involvement in online, onsite, and blended learning environments. The data collection process is systematic to ensure the reliability and validity of the responses.

Data analysis includes descriptive statistics, validity and reliability testing, and hypothesis testing through SEM-LISREL. This method enables a thorough exploration of the relationships between MBTI learning style preferences, learning methods, and academic achievement, offering valuable insights for enhancing accounting education strategies.

3. RESULTS AND DISCUSSION

3.1. Descriptive Statistics

Describe the results and discussion according to the analysis using the method claimed in Methods. The findings and discussion section consist of description of the results of the data analysis to answer the research question(s) and their meanings seen from current theories and references of the area addressed. The proportion of this section is 40-60% of the total article length. The table is shown as **Table 1**:

Table 1. Descriptive tatistics of data

Variable	Min	Max	Mean	Std. Dev	Information
IPK	2.25	4.00	3.57	0.40	Average IPK Respondent
EI (Extrovert-Introvert)	1.00	2.00	1.37	0.48	Majorities Extrovert (63.2%)
SI (Sensing-Intuitive)	1.00	2.00	1.18	0.38	Majorities Sensing (82.4%)
TF (Thinking-Feeling)	1.00	2.00	1.34	0.47	Majorities Thinking (65.6%)
JP (Judging-Perceiving)	1.00	2.00	1.46	0.50	Majorities Judging (54.4%)
preferred Learning model	1.00	6.00	3.39	1.18	Majorities type 3 Blended Learning (48.8%)

Learning Model:

1. Full Online
2. Full Onsite
3. Blended Learning
4. Full Online, Blended Learning
5. Full Onsite, Blended Learning
6. Full Online, Full Onsite and Blended Learning

In this study, there were 250 respondents. Their average Grade Point Average (GPA) was 3.57, with a minimum of 2.25 and a maximum of 4.00. When looking at personality traits based on the MBTI indicator, a significant majority of respondents exhibited extroverted tendencies (63.2%) compared to introverts (36.8%). Additionally, most respondents identified with the Sensing category (82.4%), indicating a preference for concrete information, while only 17.6% fell into the Intuitive category, which relies more on patterns and intuition. In terms of decision-making styles, a greater number of respondents were classified as Thinking (65.6%) rather than Feeling (34.4%), suggesting they prioritize logic over emotions when assessing situations. Furthermore, regarding lifestyle and interaction with the outside world, Judging (54.4%) was slightly more prevalent than Perceiving (45.6%), indicating that more respondents tend to be structured and organized rather than flexible and spontaneous. Overall, the most common MBTI type among respondents was type 3 (48.8%), followed by type 5 (25.6%). This variation in learning model types of highlights differences in thinking styles, social interactions, and decision-making processes. These findings offer insight into the personality characteristics of the respondents and how these traits may connect to other aspects of the study.

3.2. Hypotheses Testing

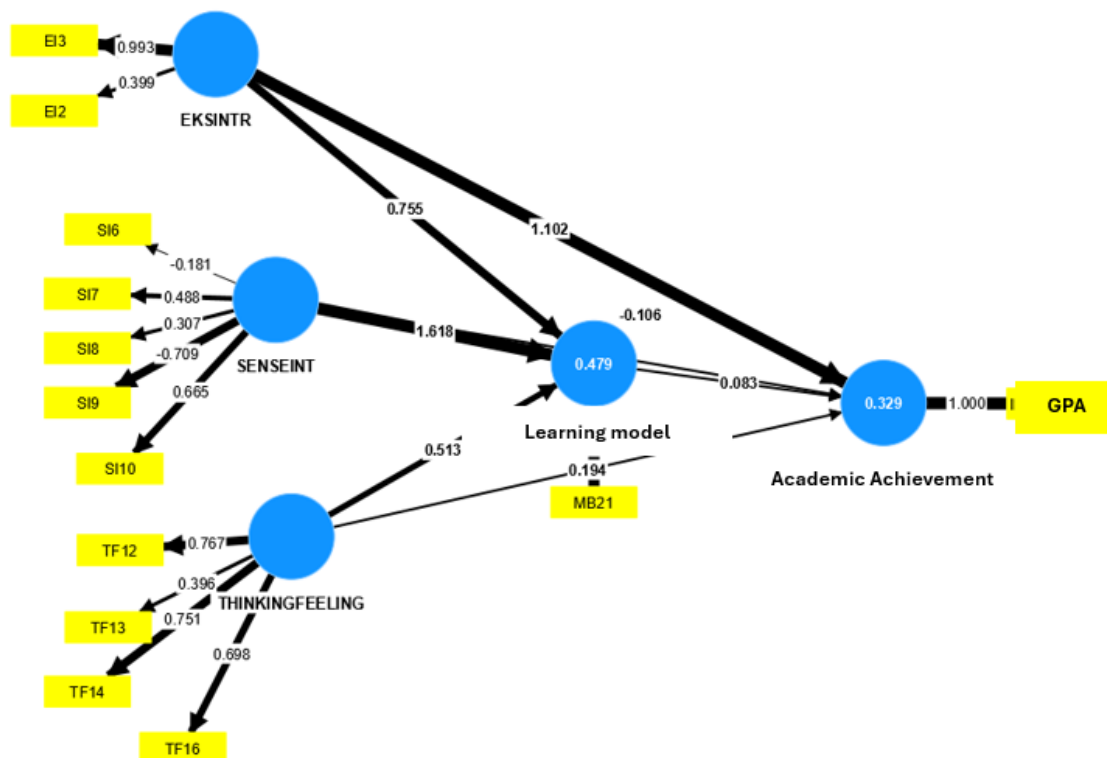


Figure 1. Path Analysis by Smart PLS

H1: MBTI Learning Style Preferences influences the preferred Learning model (*onsite, online and blended learning*)

H1a: Introvert more than extrovert in choose various learning model.

H1b: Intuitive more than sensing in choose various learning model.

H1c: Feeling more than thinking in choose various learning model.

H2: MBTI Learning Style Preferences influences the Academic Achievement of Accounting Study Program Students

H2a: Introvert more than extrovert in GPA (academic achievement) of Accounting Study Program Students

H2b: Intuitive more than sensing in GPA (academic achievement) of Accounting Study Program Students

H2c: Feeling more than thinking in GPA (academic achievement) of Accounting Study Program Students

H3: Preferred Learning model (*onsite, online and blended learning*) influences Accounting Student Learning Achievement

Table 2. Fit model of SmartPLS

	Saturated Model	Estimated Model	Result
SRMR	0.187	0.272	Marginal Fit
d_ ULS	3.169	6.755	Fit
d_ G	1.356	n/a	Fit
Chi-square	486.324	82.987	Fit
NFI	0.248	0.872	Marginal Fit

Table 3. Path coefficient

Relationship	Path coefficients	Significance
EKSINTR -> Preferred learning model	0.755	Significance
EKSINTR -> Academic Achievement	1.102	Significance
Preferred Learning model -> Academic Achievement	0.083	Not significance
SENSEINT -> Preferred Learning model	1.618	Significance
SENSEINT -> Academic Achievement	-0.106	Not Significance
THINKINGFEELING -> Preferred Learning model	0.513	Significance
THINKINGFEELING -> Academic Achievement	0.194	Not Significance

Table 4. Personality type

Personality Type	Frequency	%
ESTJ	58	23%
ESTP	50	20%
ISFP	38	15%
ESFJ	38	15%
INTP	16	6%
ISTJ	12	5%
ENTJ	12	5%
ISTP	10	4%
INFJ	10	4%
INTJ	6	2%
Total	250	100%

3.3. Influence of MBTI Learning Style Preferences on Learning Model Selection

Proposing this literacy model is crucial to tackle the challenges that students face in blended learning environments. By addressing these issues, we can create tailored tutoring strategies that cater to diverse learning styles, ultimately improving the overall educational experience for students. These varied styles positively influence academic performance and can assist in

developing tools and platforms that better meet the different learning preferences of students (Osajiuba et al., 2024). Blended literacy allows students to understand their assignments more effectively. However, since some classes are still held online, particularly for skills required in face-to-face lab settings, this can adversely affect their performance, as hands-on demonstrations are often limited to slides or equipment (Ibay et al., 2023).

The analysis indicates that MBTI literacy style preferences significantly influence students' choice of learning model. Among the four MBTI categories, three show a strong correlation with the selection of learning models. Extrovert (E) vs. Introvert (I). The path coefficient of 0.755 suggests that introverted students prefer blended learning models. This finding aligns with the notion that introverted individuals adapt better to self-paced online learning, allowing them to process information independently and focus on their studies without excessive social interaction. Sensing (S) vs. Intuition (N). The highest path coefficient (1.618) among the dimensions indicates that intuitive learners show a stronger preference for flexible learning models. Intuitive students tend to favor non-traditional learning methods, integrating various sources of information to enhance their understanding. Thinking (T) vs. Feeling (F) with a path coefficient of 0.513, students with a feeling-oriented preference adapt more effectively to various learning models compared to their thinking-oriented counterparts. This result suggests that feeling-oriented learners prioritize relationships and collaboration, making blended learning an appealing approach for them. Notably, no significant valid indicators were found for the Judging (J) vs. Perceiving (P) dimension, indicating that this aspect does not significantly influence learning model selection among accounting students.

3.4. Impact of Learning Model on Academic Achievement

Learning styles are important in education because they help students achieve academic goals. This study aims to provide insights for future research on students' learning styles in a private school setting (Nur and Abduh, 2023). Surprisingly, the study found that the type of learning model—onsite, online, or blended—has no significant impact on academic performance. With a path coefficient of 0.083, it appears that a preference for a specific learning model is not a significant factor in academic achievement. This suggests that internal factors, such as motivation and cognitive skills, have a greater influence on students' performance than the external instructional methods used.

3.5. Influence of MBTI Learning Style Preferences on Academic Achievement

Previous Study result show specifically, extroverted students scored higher than introverted students in the enterprising type. Secondly, a comparison of Holland personality type scores between judging (J) and perceiving (P) student groups showed that the judging (J) group scored higher in the realistic type than the perceiving (P) group. Differences in academic achievement were observed in terms of energy direction, information processing, and approach to life among the four MBTI personality tendencies. The sensing perceivers (SP) type showed the highest score, while the sensing judger (SJ) type showed the lowest score in basic academic ability, and this difference was statistically significant (Lee, 2024). The structured and preparatory nature of the flipped classroom significantly reduces anxiety and boosts participation among introverted students. Additionally, the model also benefits extroverted learners, fostering an active and interactive learning environment (Bouchareb, 2024).

But the result difference from previous studies (Lee, 2024), that extroverts with the higher IQ than introverts, the study further examines how MBTI learning preferences impact academic achievement, revealing the following key findings: Extrovert (E) vs. Introvert (I), with a path

coefficient of 1.102, introverted students demonstrate higher academic achievement compared to extroverts. This result supports the notion that introverts' ability to focus deeply, and work independently contributes to their academic success. Sensing (S) vs. Intuition (N), no significant relationship is found between this MBTI dimension and academic achievement (-0.106). This indicates that the way students process information does not directly impact their overall performance. Thinking (T) vs. Feeling (F), the path coefficient of 0.194 suggests a weak and insignificant effect of this MBTI dimension on academic achievement. This finding implies that decision-making styles (analytical vs. empathetic) do not play a substantial role in determining academic success.

In general, this study showed that MBTI preference majority in 23% ESTJ for Accounting Students, extrovert, sensing, thinking and judging, but the ideal for accountant ISTJ just 5%. For impact on preference of learning style, Introvert (E-I) showed positive impact for blended learning (consistent from previous studies), and intuitive (S-N) learning showed stronger for flexible learning (inconsistent with previous studies stronger in sensing preference for flexible learning. And Feeling (T-F) stronger adaptability for learning than type of thinking.

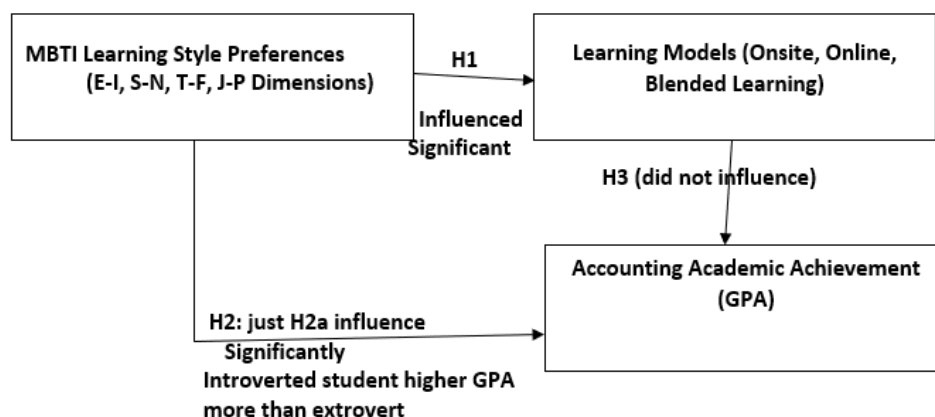
And for impact learning model on Academic Accounting Achievement, have no impact. It differs from the result of the previous study that learning model has an impact significantly on academic achievement.

MBTI learning style on Academic Accounting achievement, just introvert (E-I) significantly improve the academic accounting achievement with the higher GPA than extrovert, other MBTI didn't have influence.

3.6. Model Fit and Statistical Analysis

The model fit indices indicate mixed results, with some measures supporting a good fit while others suggest marginal adequacy: SRMR: 0.187 (Saturated Model) and 0.272 (Estimated Model) – indicating a marginal fit. And d_ULS: 3.169 (Saturated) and 6.755 (Estimated) – indicating a good fit. Chi-square: 486.324 (Saturated) and 82.987 (Estimated) – indicating a good fit. NFI: 0.248 (Saturated) and 0.872 (Estimated) – suggesting a marginal fit. These results suggest that while the model captures relevant relationships, further refinement may improve its predictive power.

3.7. Discussion Analysis and Construction Diagram of Result Finding



The study finds the connection between MBTI learning style preferences impact in learning models Introvert more than extroverts (with path coefficient 0,755 and significance), intuitive more than sensing, (with path coefficient 1,618 and significance) and feeling more than thinking

(with path coefficient 0,513 and significance) in choosing various learning models (onsite, online, and blended learning). So, because sensing-intuitive is the highest path coefficient 1,616 and significant in choosing various learning models (onsite, online, and blended learning). Most students in sensing type (82,4%) with learning by doing in case problem and majority (48,8%) in preferred learning choose blended learning, so the learning better in blended learning. And academic achievement among students is just for introvert students higher than extrovert in the academic achievement of Accounting Study Program (with path coefficient 1,102 and significance). So as lecturers of accounting need more bring students more focus and seriously in learning accounting (be more introvert) for success in learning accounting and better academic achievement. And the Preferred Learning Model did not impact on Academic achievement (with path coefficient 0,083 and no significance). The results provide valuable insights into how different personality traits affect preferences for learning models and academic performance. The study found that over half of the respondents identified as extroverts (63,2%), while less than half were introverts (36,8%). A significant majority were sensing types (82,4%), which aligns with both sensing and intuitive categories. More than half of the participants were categorized as thinking types (65,6%), with the remainder being feeling types. There was a notable number of participants with perceiving personality types. It's important to recognize that student creativity in the learning process can be nurtured not only by the students themselves but also through mentoring and support from various sources, including parents, faculty, and peers. Creativity and skills in students can be developed by encouraging positive habits, such as allowing them to take responsibility individually or in groups, particularly in entrepreneurial activities (Samina and Naz, 2024; Usman et al., 2024). The findings indicate that the ideal personality type for an accountant is only 5%, with the majority being ESTJ at 23%. This suggests a shift towards the need for accountants to be extroverted and sociable to gather information effectively, as much of the work can be facilitated through applications. The MBTI type has shown a significant impact on academic achievement, particularly among extroverts and introverts. ESTJ are characterized as assertive, disciplined, and highly rule-oriented individuals. They naturally take on leadership roles, are logical and realistic, and maintain a strong focus on efficiency and results. With their excellent organizational skills, they often take charge in various situations to ensure everything adheres to established systems. However, ESTJ can also become overly rigid and less flexible.

4. CONCLUSION

So as the conclusion, extroverts' students are especially for MBTI ESTJ because in ideal MBTI for face accounting case is ISTJ type, in auditing or accounting analysis process, teaching and learning be more threat introverts in more serious way to face the problem case, for more higher performance in working and academic achievement. Previous research showed that Extrovert students outperformed Introvert students in the active learning setting and Sensing students outperformed Intuitive students in the traditional lecture setting (Krawczyk and Buckless, 2024). But the study underscores that MBTI learning style preferences influence both the preferred learning model and academic achievement. Specifically: Introverted, intuitive, and feeling-oriented students show a stronger preference for blended learning models. Learning model selection does not significantly impact academic performance. Introverted students exhibit higher academic achievement, while sensing-intuitive and thinking-feeling dimensions do not significantly affect performance. The study reveals that only 5% of individuals possess the ideal personality type for accountants, while the majority (23%) are ESTJ. This indicates a shift in the profession, where accountants are increasingly expected to be extroverted and socially adapt to gather information effectively. Traditional accounting roles,

which heavily relied on introverted traits, have been significantly supported by technological advancements, reducing the necessity for introverted characteristics. Furthermore, MBTI personality types have been found to significantly impact academic achievement, specifically in terms of extroversion and introversion. Given their strong leadership, discipline, and rule-oriented nature, ESTJs excel in careers requiring structure and assertiveness, making them well-suited for managerial, legal, accounting, and governmental roles. However, their rigidity and lesser adaptability to change may pose challenges in dynamic environments.

These findings have implications for educators in designing adaptive teaching methods that align with diverse student learning preferences especially for introvert and extrovert students more detailed and specific. Adaptive learning with hybrid learning in accounting such as the use of video in Hybrid-Based Learning can enhance information reception among students and prevent cognitive overload (Yadiati and Sinaga, 2020). Future research could explore additional factors influencing academic performance, such as motivation, engagement, and instructional strategies. And lecturer should innovative in learning with more attractive learning such as simple game with the monopoly board game is considered more effective in increasing learners' motivation and improving their academic outcomes (Achmad Buchory et al., 2022). And digital game digital with game-based learning possesses significant potential to facilitate the development of knowledge and skills among accounting and business students that are essential for success in the context of Industry 4.0 (Ming Kuang and Setiawan, 2022)

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