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Demographic Profile and Learning Styles of Accountancy Students in Laguna University: Basis for Enhancement Learning Program

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Abstract- ***This study investigated the demographic profile and learning style preferences of Bachelor of Science in Accountancy (BSA) students at Laguna University during the Second Semester of Academic Year 2024–2025, with the aim of proposing enhancement learning programs responsive to students' needs. Utilizing a quantitative descriptive-correlation research design, data were collected from all 124 BSA students through a validated questionnaire assessing four perceptual learning styles—visual, auditory, kinesthetic, and tactile—alongside demographic variables such as sex, age, year level, and general weighted average (GWA). Statistical tools, including descriptive statistics, t-tests, Welch's ANOVA, and post-hoc analyses, were employed to determine significant variations among groups.Findings revealed that the majority of respondents were female, aged 18–21, mostly in their second year, and generally performing within high academic standing. Visual learning emerged as the most assessed style, followed by auditory, tactile, and kinesthetic styles. No significant differences in learning style preferences were found when respondents were grouped by sex, year level, or GWA. However, a significant difference in visual learning assessment was observed across age groups, with students aged 24 and above showing markedly lower reliance on visual learning strategies. Responses from the open-ended question further emphasized the need for peer tutoring sessions, strategy-focused workshops, multimodal instructional materials, and more hands-on learning activities.Based on these findings, the study recommends the development of enhancement learning programs that integrate visual aids, interactive discussions, experiential tasks, and technology-supported instructional resources. These interventions aim to accommodate different learning style preferences and support improved academic performance in terms of general weighted average among Accountancy students. The results also contribute baseline data for future research on personalized learning approaches in accounting education.***

Indexed Terms - Accountancy, Learning Styles, Demographic Profile, Enhancement Learning Program

I. INTRODUCTION

BS Accountancy is a very tough program and is considered one of the hardest courses in higher education. There is a low retention rate in the Accountancy program due to its highly demanding standards, technical requirements, and strict qualification policies. Aside from navigating theoretical frameworks and practical applications, students in this program were also expected to maintain discipline in how they thought and studied effectively. This puts a heavy pressure on students to improve their learning strategies in order to meet academic and career expectations that rise from the program's rigorously demanding standards.

Learning style is one of the components likely to influence student competence. Students learned differently and often did not understand the same lecture at the same time. While some preferred having explanations given to them to enhance understanding, others learned more quickly by viewing charts or diagrams. Some write down the lesson to aid comprehension, while others require action in order to "feel" the lesson. Understanding students' learning styles is considered very important because of the demanding nature of the BS Accountancy program. For this reason, the researchers aimed to assess the learning styles of accounting students and examine the differences in these learning styles when students were grouped according to their demographic profile, such as sex, age, year level, and general weighted average. Based

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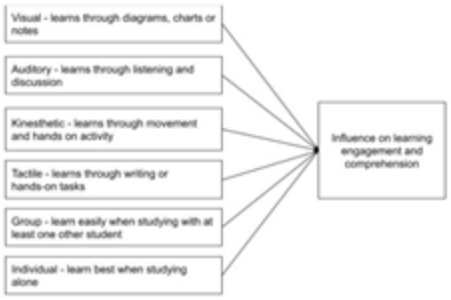
on the results of the study, a proposed enhancement to the learning program was developed to better support students' learning needs.

II. THEORETICAL BACKGROUND

This study is grounded on Reid's Perceptual Learning Style Assessment Model (1987) and explains that students differ in how they understand, process, and organize information. According to Reid, there are six perceptual learning styles: visual, auditory, kinesthetic, tactile, group, and individual. However, learners usually prefer certain ways of learning more than others, and these preferences influence how they approach learning activities. In this study, only the four sensory-based learning styles (visual, auditory, kinesthetic, and tactile) are included. These learning styles are the most suitable for the research instrument and match the focus of the study on how students receive and process academic information. Figure 1 presents the theoretical framework, showing how each perceptual learning style is related to students' level of engagement and understanding. The framework assumes that these learning style preferences affect how students handle academic tasks, use learning materials, and understand the lessons discussed in class.

Encio (2022) emphasized that in Accountancy education, identifying differences in learning style assessments is important where students are expected to understand complex concepts, analyze numerical data, and apply problem-solving skills. Although the study does not measure the effects of learning styles on academic performance, the framework provides a basis for examining whether learning style assessments vary across demographic characteristics such as sex, age, year level, and general weighted average (GWA). The theoretical framework supports the descriptive-correlational design of the study by suggesting that perceptual learning styles may vary among students with different demographic characteristics. This idea is consistent with Reid's view that learners' backgrounds and personal traits can influence how their learning styles are assessed, making it reasonable to compare learning style results across different demographic groups.

Figure 1. Reid's perceptual learning style assessment model (1987) diagram



III. RESEARCH PROBLEM STATEMENT

This quantitative study examined the demographic profile and learning styles of 124 BS Accountancy students of Laguna University, with emphasis on determining significant differences among the variables. It focused on four key areas: (1) the students' demographic profiles (sex, age, year level, and GWA); (2) their self-assessed learning styles, including visual, auditory, kinesthetic, and tactile; (3) the differences in learning styles across demographic groups; and (4) the development of strategies and proposed programs to help students recognize and apply their learning assessments more effectively.

IV. DATA AND METHODS

Descriptive–correlational was employed to determine the learning styles of Bachelor of Science in Accountancy (BSA) students and to identify significant differences when respondents were grouped according to their demographic profile. A total population sampling technique was utilized, wherein all of one hundred twenty-four (124) BSA students from the second to fourth year levels at Laguna University who are officially enrolled during the Second Semester of Academic Year 2024–2025 were the respondents. Data were collected using a self-constructed and validated questionnaire administered through Google Forms. The instrument consisted of two parts: the first part gathered demographic information such as sex, age, year level, and general weighted average (GWA), while the second part measured students' learning styles in terms of visual, auditory, kinesthetic, and tactile dimensions using a Likert-scale format. An open-

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ended question was also included to obtain respondents' suggestions for a possible enhancement learning program.

The reliability of the research instrument was established using Cronbach's alpha, which yielded a coefficient of 0.84223, indicating good internal consistency. Descriptive statistical tools such as frequency, percentage, mean, and standard deviation were used to describe the demographic profile of respondents and their learning style preferences. Inferential statistical analyses, including t-test, Welch's Analysis of Variance (ANOVA), and Games–Howell post hoc test, were employed to determine significant differences in learning styles when grouped according to demographic variables.

V. RESULTS

Table 1
Summary of the Demographic Profiles of the respondents

Demographic Variable	Category	Frequency (*f*)	Percentage (%)
Sex	Male	37	30
	Female	86	69
	Prefer not to say	1	1
Age	18–19 years old	69	55
	20–21 years old	43	35
	22–23 years old	10	8
	24–25 years old	1	1
	26 and above	1	1
Year Level	Second Year	85	69
	Third Year	15	12
	Fourth Year	24	19
General Weighted Average (GWA)	1.00–1.49	85	69
	1.50–1.99	99	80
	2.00–2.49	4	3
	2.50–2.74	4	3
	2.75–3.00	0	0
Total		124	100

Table 1 presents the demographic profile of the respondents in terms of sex, age, year level, and General Weighted Average (GWA). The results show that the majority of the respondents were female, comprising 69% of the total sample, while male respondents accounted for 30%. One respondent preferred not to disclose sex. This distribution indicates a higher representation of female students in the study.

In terms of age, most respondents belonged to the 18–19 years old group, representing 55% of the sample, followed by those aged 20–21 years old at 35%. With respect to year level, second-year students comprised the largest proportion of respondents at 69%, indicating that the majority of participants were in the early stage of their tertiary education. Similar demographic patterns among undergraduate students in business- and accounting-related programs have been reported in previous studies (Felder & Brent, 2021; Kolb & Kolb, 2020).

Regarding academic performance, the distribution of General Weighted Average (GWA) shows that most respondents obtained grades within the 1.00–1.49 and 1.50–1.99 ranges, while none of the respondents fell within the 2.75–3.00 range. This indicates that the respondents generally demonstrated strong academic standing.

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Table 2
Summary of the Learning Styles of the Respondents

	Total	Percentage
Visual	74	60%
Auditory	55	44%
Tactile	53	43%
Kinesthetic	31	25%

The overall summary of the learning styles of the Bachelor of Science in Accountancy students of Laguna University. The results indicate that visual learning style obtained the highest mean, followed by auditory, tactile, and kinesthetic learning styles. This suggests that most respondents prefer learning through visual aids such as charts, diagrams, and written explanations.

The dominance of visual learning aligns with existing studies in accounting education, which emphasize the effectiveness of visual representations in simplifying complex numerical and conceptual information (Estrella & Manalo, 2021; Calunsag et al., 2024). Accounting subjects often involve abstract concepts, procedures, and problem-solving processes, making visual tools particularly beneficial. The findings also indicate that while visual learning is dominant, students exhibit multimodal tendencies, as other learning styles still garnered agreeable mean scores, supporting Reid's Perceptual Learning Style Model (1987).

Table 3
Results and Analysis of Significant Difference between Sex and Learning Styles

Learning Styles	Female (86)*		Male (38)*		f-value	p-value	Interpretation
	Mean	SD	Mean	SD			
Visual	4.34	0.52	4.22	0.51	1.59	0.21	Not Significant
Auditory	4.22	0.56	4.08	0.56	1.45	0.23	Not Significant
Tactile	4.18	0.56	4.10	0.52	0.58	0.45	Not Significant
Kinesthetic	3.95	0.53	4.06	0.45	1.38	0.24	Not Significant

*number of cases (sample size)

It presents the results of the test of significant difference between sex and the four assessed learning styles—visual, auditory, kinesthetic, and tactile. The statistical analysis reveals that no significant difference exists between male and female respondents across all learning style dimensions ($p > 0.05$).

This finding indicates that sex does not significantly influence the way Accountancy students at Laguna University prefer to learn. Both male and female students demonstrate comparable tendencies in visual, auditory, kinesthetic, and tactile learning. The result supports the null hypothesis *(H_{01})*, which states that there is no significant difference in learning styles when students are grouped according to sex.

This outcome is consistent with several empirical studies that reported minimal or no gender-based differences in learning style preferences among college students (Bin Eid et al., 2021; Chouhan et al., 2023). It suggests that learning preferences are shaped more by academic demands, exposure, and individual learning experiences rather than biological sex. Consequently, instructional strategies should emphasize inclusive and multimodal approaches instead of gender-differentiated instruction.

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Table 4
Results and Analysis of Significant difference between age and learning styles

Learning Styles	18-19 years old (69)*		20-21 years old (43)*		22-23 year old (10)*		24 years old and above (2)*		f-value	p-value	Interpretation
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Visual	4.28	0.45	4.40	0.60	4.28	0.34	3.30	0.14	23.88	<.0.01	Significant
Auditory	4.22	0.50	4.07	0.66	4.22	0.46	4.60	0.57	0.78	0.56	Not Significant
Tactile	4.20	0.55	4.08	0.57	4.06	0.39	4.60	0.57	0.77	0.56	Not Significant
Kines-thetic	3.98	0.50	4.00	0.55	3.90	0.46	3.90	0.51	0.25	0.86	Not Significant

*number of cases (sample size)

In this table the results of the analysis examine differences in learning styles when respondents are grouped according to age. The findings indicate that visual learning style shows a statistically significant difference across age groups ($p < 0.05$), while auditory, kinesthetic, and tactile learning styles show no significant differences ($p > 0.05$).

This result implies that age has a significant effect only on students' preference for visual learning strategies. Younger students tend to rely more heavily on visual aids such as diagrams, charts, and written explanations, whereas older students exhibit less dependence on visual learning. The null hypothesis *(H_{02})* is therefore partially rejected—rejected for visual learning style but accepted for auditory, kinesthetic, and tactile styles.

The finding aligns with research suggesting that as learners mature, they develop greater independence and shift toward experiential and applied learning approaches rather than heavily structured visual materials (Simonds & Brock, 2020; Alghamdi, 2023). This emphasizes the importance of adapting teaching strategies to accommodate varying cognitive and experiential stages among students.

Table 5
Mean groupings analysis regarding the significant difference between age and visual learning style

Age Group	Mean	SD
18-19 years old	4.28 (A)*	0.45
20-21 years old	4.40 (A)*	0.60
22-23 years old	4.28 (A)*	0.34
24 years old and above	3.30 (B)*	0.14

*Same letter indicates same grouping

This presents the mean groupings for visual learning style across the different age categories. The results reveal that respondents aged 24 years and above have significantly lower mean scores in visual learning compared to younger age groups.

This finding clarifies the significant result observed in Table 15 by identifying where the difference occurs. The lower visual learning assessment among older students suggests that they may rely more on internalized understanding, analytical reasoning, and practical application rather than external visual support. This supports existing literature stating that older learners tend to develop deeper cognitive processing strategies and reduced reliance on visual scaffolding (Staddon, 2020; Bayrak, 2022).

The result reinforces the idea that learning preferences are dynamic rather than fixed, evolving with age, academic exposure, and life experience. Educators are therefore encouraged to combine visual materials with analytical discussions and applied activities to support learners across age groups.

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Table 6
Post-Hoc Results and Analysis (Games-Howell) for the Difference among Age Group in their Assessment of Visual as Learning Style

Age Group	Age Group Comparison	Mean Difference	p-value	Interpretation
18-19 years old	20-21 years old	-0.12	0.65	Not Significant
	22-23 years old	0.002	1.00	Not Significant
	24 years old and above	0.98	0.05	Significant
20-21 years old	18-19 years old	0.12	0.65	Not Significant
	22-23 years old	0.12	0.82	Not Significant
	24 years old and above	1.10	0.01	Significant
22-23 years old	18-19 years old	-0.002	1	Not Significant
	20-21 years old	-0.12	0.82	Not Significant
	24 years old and above	0.98	0.01	Significant
24 years old and above	18-19 years old	-0.98	0.05	Significant
	20-21 years old	-1.10	0.01	Significant
	22-23 years old	-0.98	0.01	Significant

This table presents the Games-Howell post-hoc analysis, conducted to determine which age groups significantly differ in their assessment of visual learning style. The analysis confirms a significant difference between the youngest age group and the 24-and-above age group ($p < 0.05$).

The application of Games-Howell test is appropriate given the unequal group sizes and variance among age groups. The results strengthen the conclusion that the significant effect of age on visual learning is primarily driven by older students' reduced reliance on visual strategies.

This evidence is consistent with studies emphasizing that as students progress academically and professionally, they shift from surface-level, visually guided learning to more autonomous and reflective learning processes (Chin, 2021; Felder & Brent, 2021). The result underscores the need for instructional flexibility that blends visual tools with problem-based and experiential learning activities

Table 7
Results and Analysis of Significant difference between year levels and learning styles

Learning Styles	2nd Year (85)*		3rd Year (15)*		4th Year (24)*		f-value	p-value	Interpretation
	Mean	SD	Mean	SD	Mean	SD			
Visual	4.30	0.50	4.39	0.61	4.28	0.51	0.15	0.86	Not Significant
Auditory	4.23	0.52	4.04	0.81	4.08	0.52	1.06	0.31	Not Significant
Tactile	4.18	0.55	4.16	0.63	4.08	0.47	0.39	0.68	Not Significant
Kines-thetic	4.00	0.49	4.08	0.63	3.84	0.48	1.25	0.30	Not Significant

*number of cases (sample size)

This illustrates the differences in learning styles when respondents are grouped according to year level (second year, third year, and fourth year). The results show that no significant differences exist across all four learning styles ($p > 0.05$). These findings indicate that learning style preferences remain relatively consistent regardless of students' year level. Thus, the null hypothesis *(H_{03})* is accepted, suggesting that academic progression alone does not significantly alter students' preferred learning styles.

Although higher-year students are exposed to more complex coursework, the absence of significant differences implies that students adapt their study strategies within their preferred learning styles rather than shifting to entirely new ones. This aligns with studies showing that while learning strategies may become more refined, core learning preferences remain stable across academic levels (Alfarsi et al., 2023; Damasco et al., 2024

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Table 8
Results and Analysis of Significant difference between GWA and learning styles

Learning Styles	1.00 - 1.49 (17)*		1.50 - 1.99 (99)*		2.00 - 2.49 (4)*		2.50 - 2.74 (4)*		f-value	p-value	Interpretation
	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Visual	4.34	0.46	4.32	0.51	3.75	0.53	4.35	0.81	1.32	0.34	Not Significant
Auditory	4.21	0.53	4.18	0.50	3.95	1.02	4.05	0.69	0.12	0.95	Not Significant
Tactile	4.08	0.53	4.14	0.54	4.80	0.40	4.10	0.66	3.02	0.10	Not Significant
Kines-thetic	4.07	0.57	3.97	0.51	3.95	0.44	3.95	0.57	0.14	0.93	Not Significant

*number of cases (sample size)

This presents the analysis of learning styles when respondents are grouped according to General Weighted Average (GWA). The results indicate no significant difference in any of the learning styles across varying academic performance levels ($p > 0.05$).

This finding supports the null hypothesis *(H_{04})*, which states that there is no significant difference in learning styles when respondents are grouped according to GWA. It implies that academic performance is not determined by a particular learning style, as students with high and low GWA demonstrate similar learning preferences.

This result is consistent with previous research suggesting that learning styles alone do not predict academic success (Mozaffari et al., 2020; Nasiri et al., 2023). Academic achievement is more likely influenced by factors such as motivation, study habits, self-regulation, and instructional quality rather than preferred learning modality. Therefore, enhancement programs should focus on strengthening learning strategies rather than categorizing students based on academic standing.

Students' responses for Possible Enhancement Learning Program

The open-ended responses provided by the respondents highlighted several areas for potential enhancement in accounting students' learning experiences. Based on their answers, the suggested activities can be grouped into the following main categories:

- Peer coaching, tutoring, and group study
- Workshops, seminars, and learning style awareness programs
- Technology integration and multimedia learning
- Practical application and experiential learning
- Self-directed and personalized study strategies
- Institutional support and learning resources
- Motivational and behavioral approaches

These categories reflect students' assessed strategies for improving their learning and will be used to inform future activities and interventions aimed at helping students better understand and apply their learning styles more effectively.

VI. CONCLUSION

After careful analysis and interpretation of the findings, the following conclusions are drawn:

1. The majority of the respondents were female, between the ages of 18–21, enrolled in their second year level, and generally maintaining a high general weighted average. This demonstrates that the BSA population is composed of young, academically capable students who share similar demographic profiles.
2. A substantial majority of the respondents indicated strong agreement for visual, auditory, and kinesthetic learning styles and a slightly lower but still positive agreement in the tactile learning style.
3. There is no significant difference in learning styles when respondents are grouped according to sex, year level, and GWA, while there is significant difference found in visual learning when grouped according to age. Thus, learning styles remain generally consistent

across demographic groups, except in the case of age difference.

4. Based on the findings of the study, a multimodal (VAKT) Accountancy Enhancement Learning Program is proposed.

5. At the 0.05 significance level, the null hypothesis is partially rejected as there is only significant difference in demographic profile when grouped according to age.

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