

# Learning Styles and Performance of Generation Z Accounting Students

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## ABSTRACT

Students learning styles in higher learning institutions are becoming important, especially in facing the new generation, i.e., generation Z (Gen Z), a digital native. Educators face a challenge to ensure the institution delivers an effective teaching and learning approach that suits Gen Z's behaviour. Any mismatch may cause the students to underperform. This study examined the learning styles of Gen Z accounting students and their relationship with performance. Based on the unique characteristics of Gen Z, the main variable, i.e., learning style, is measured based on Gen Z's learning preferences: individual or group learning. Two levels of studies, diploma and bachelor's degree students, are being tested to examine if the learning styles differ between the groups. The student's academic performance is measured based on the attainment of soft skills and their academic results. Data was collected using a questionnaire survey to randomly selected undergraduate accounting students from various universities and colleges in Malaysia. Out of 300 questionnaires distributed, 211 were responded. The Gen Z preferred learning style between the two groups of students was conducted using an independent sample t-test. The enlightening results showed that degree students prefer group learning and diploma students prefer individual learning. A significant positive relationship exists between learning styles and students' soft skills attainment, but no significant relationship with students' academic performance. The findings of this study, which are informative, implicate a need for education providers to prepare the most suitable teaching and learning methods at different program levels to enhance Gen Z's interest in learning and their performance.

**Keywords:** Accounting students' performance, generation Z, learning styles, academic performance

## INTRODUCTION

The younger generation commonly uses smartphones to engage in social media. They frequently use social media in their learning process to locate material needed to fulfil lecturer-assigned tasks. Alshuaibi et al. (2018) showed that students' performance correlates with learning styles when social media is used as part of the student's learning style. It supports the findings of Gkorezis et al. (2017), who discovered that information-seeking can influence students' performance. On the other hand, Gulnara and Monowar (2014) found that student's willingness to learn new information is associated with various learning methods that aid academic achievement.

Previous studies found that Gen Z is more individualistic and more exposed to individual effort, especially if it requires group work (Seemiller & Grace, 2016; Wotapka, 2017). Boland et al. (2011) investigated accounting students' learning styles and preferences in Australia, Belgium, and Japan. Students from

Australia and Belgium prefer to complete the assignments independently, but Japanese students prefer to learn by watching. Many researchers have studied the possible learning style for Gen Z. For example, Shorey et al (2021) examined the effectiveness of technology integration and digital storytelling to boost Gen Z students' learning and confidence in their future careers. Iftode (2019) conducted a case study to evaluate the learning styles of a group of undergraduate and postgraduate students, where he found Gen Z is an auto-didactic and independent learning type with a strong desire to choose what and how to study. While, Mohd Ishaq et al. (2022) studied undergraduate learning preferences based on gender using both unimodal and multimodal learning styles.

Due to Gen Z's unique characteristics, a more suitable teaching-learning approach for Gen Z must be further explored. This study extended the learning styles explored by previous research by focusing on Gen Z undergraduate accounting students who preferred individual or group learning and whether their preferred learning style influenced their academic performance. Understanding Gen Z's learning style preference will help the higher learning institution develop a suitable learning approach to support Gen Z's learning preference, thus reducing the expectation gap between the lecturers and students.

## LITERATURE REVIEW

The topic of higher institutional students' teaching and learning styles is of utmost importance due to the new issue's educators face. They must provide appropriate courses to students to deal with business needs and rapid technological changes that have influenced the new generation's learning styles. Students aged between 19 and 24 in 2019 fall under Generation Z (Gen Z), born between 1995 and 2015. Gen Z, with its unique and fascinating personality and values, embodies a different and intriguing learning approach compared to prior generations, which are Generation Y (born between 1981 and 1994) and Gen X (born in 1965 to 1980) (Seemiller & Grace, 2016). Unlike Gen Z, Gen X is accustomed to using typewriters and accessing the internet, which is either limited or too expensive. Meanwhile, despite its high cost, Gen Y has experienced the debut of the internet and information technology. As a result, student traits differ from generation to generation, resulting in learning variations. This context underscores the importance and relevance of the study's topic to the reader.

Before, without information technology, teaching and learning styles only used traditional chalk and board methods. For example, students must read books and consult the library for references. However, with the advent of information technology, data may be obtained simply by accessing the internet at any time and from any location. Therefore, a student-centred learning approach is more appropriate to suit current digital teaching and learning development. Furthermore, this approach could help students to utilise their capability to learn thoroughly.

Students in Generation Z describe themselves as responsible and open-minded. They naturally want to make a difference, and educators must understand and collaborate with them to address problems independently (Mohr & Mohr, 2017). To meet the needs of today's young generation, higher learning teaching and learning techniques should be adaptable to the students' choices. According to Mohr and Mohr (2017), Gen Z students prefer to work with small group members.

Lecturers employ various teaching and learning methodologies to communicate instruction to fulfil their students' learning objectives in accounting courses. Individual projects, quizzes, tests, and final examinations may assess students and group learning activities such as group discussions, presentations, report writing, case studies, and problem or project-based learning. Pranger (2016) defined individual learning as where the students did the task alone and were assessed for their effort alone. On the other hand, each group member would work together to finish the task and be graded based on their contributions. The lecturer, the peers, or a mixture of both may award each group member a grade. Students can foster the

development of self-confidence through group and peer learning. Group learning can also assist the students in improving their soft skills (Houldsworth & Mathews, 2000; Owen, 2009).

Concerning the unemployment issue, the government has also taken steps to encourage young graduates to start enterprises (Suhaimi, 2023). Statistics show an increasing trend of graduates becoming entrepreneurs as another option of employment (see Figure 1). As a result, entrepreneurship skills are required to ensure the success of this initiative. Students may develop entrepreneurial abilities due to their studies, and some may continue to obtain entrepreneurial experience throughout their studies. As the number of years of study increases, entrepreneurial skills increase (Bell, 2016). Students must develop these skills through formal assessments, individually or in a group, during their study years.

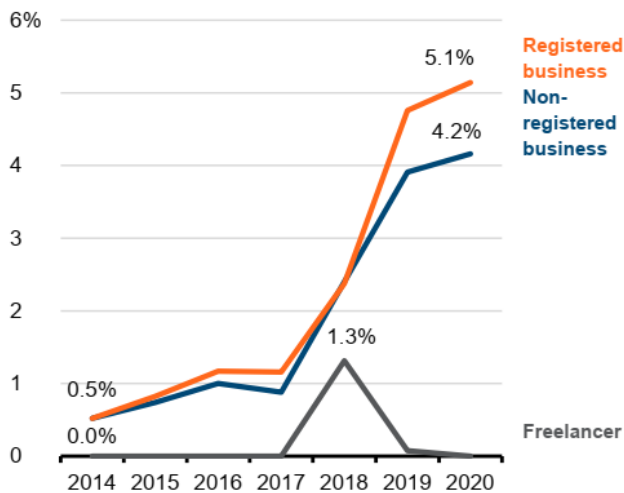


Fig. 1 Percentage of graduates involved in self-employment in Malaysia

Source: Khazanah Research Institute (2023)

Individual and group learning may help students develop similar and dissimilar soft skills. Higher learning institutions that offer an accounting program should look at this matter and take appropriate actions to ensure that the teaching and learning methodology can help the students achieve good academic results and the required soft skills. Education providers must first identify Gen Z's traits and distinctions from the previous generation to build relevant teaching and learning approaches for the current generation. Table 1 shows a descriptive comparison of Gen Y and Gen Z, as researched by (Mohr & Mohr, 2017).

According to Mohr & Mohr (2017), Gen Z is responsible and open-minded; as a result, they are neither impulsive nor conservative. In contrast to Gen Y, who are exuberant and overconfident, they are attentive and loyal but easily distracted. Gen Z sees themselves as entrepreneurs but believes they need to be more competitive and creative. According to Seemiller and Grace (2016), Gen Z is characterised by individuals who prefer to work alone and suffer from FOMO anxiety. In addition, Gen Z describes themselves as sympathetic and harsh critics of their peers.

TABLE I CHARACTERISTICS OF GENERATION Y AND Z

Generation Y/Millennials		Generation Z	
Me Generation	Self-Interested	Responsible	Not Spontaneous
High Expectations	Entitled	Open-Minded	Not Conservative
Optimistic	Over-Confident	Thoughtful	Not Focused

Educated	Connected	Loyal	Not Competitive
Introspective	Ambiguous	Entrepreneurial	Not Creative
Parent-Supported	Trophied	Compassionate	Critical of Peers
Tolerant	Unstructured	Interactive	FOMO

Source: Mohr and Mohr (2017)

### A. Teaching and Learning of Accounting Courses to Modern Generation

Teamwork is one of the most critical skills needed by employers (Osman, 2013). However, due to control procedures to ensure the confidentiality of business information, mainly financial information, accounting work or activities sometimes need to be conducted by an individual. For example, in auditing, a simple audit case, such as auditing the accounts of a sole trader business or a dormant company, could be completed by one person. However, suppose the audited company is a private or public listed company. In that case, an individual needs help to prepare the audit process due to massive accounting transactions, unlike sole trading and dormant companies. Therefore, an audit team must perform the audit work. This example expresses the need for individual and teamwork skills to do accounting tasks excellently.

It is common for any higher learning institution (HLI) to combine individual and group work assignments to develop students' soft skills. Because the students, particularly at the diploma and degree levels, are from Gen Z (ages 18 and up) (Seemiller & Grace, 2016), the teaching and learning styles must incorporate all of the soft skills required by the students and match them to the student's preferred learning styles. However, whether Gen Z students can learn these skills through individual and group work assignments is still questionable.

According to Gen Z characteristics, they prefer the lecturer to explain why they must master a subject before providing a lecture to have a broader perspective. It would help students realize the importance of the subject and motivate them to study appropriately (Wotapka, 2017). As a result, the accounting professor must use engaging teaching methods to encourage Gen Z accounting students to stay engaged and accomplish their intended academic and soft skills outcomes. It could be accomplished with the use of appropriate teaching and learning materials. An educational game, for example, could be an excellent teaching and learning tool for students to improve their soft skills. (Viviers, Fouché, & Reitsma, 2016). McAtee (2023) found that millennial students learn best when mixed instructional methods are used. The mixed method will help enhance the students' soft skills by encouraging them to participate actively in class.

### B. Gen Z Learning Styles

Students usually have their own methods for studying a particular subject. For example, some students prefer to study alone, while others prefer to study in groups. Stewart and Felicetti (1992) define students' learning styles as how and under what conditions they prefer to study. The diverse learning methods among Gen Z accounting students can be attributed to several factors. Boland et al. (2011) investigated accounting students' learning styles and preferences in Australia, Belgium, and Japan. For example, students from Australia and Belgium prefer to complete the assignments independently, but Japanese students prefer to learn by watching.

Different cultural learning styles contributed to the disparity in learning style preferences across pupils. Some students' learning methods are influenced by the prior understanding of the subject and the lecturer's motivation (Sikkema & Sauerwein, 2015). Previous studies also suggested that integrative learning (integrating culture learning, prior knowledge, and motivation by the lecturer) could help the 'students' learning progress. Previously, Yazici (2005) discovered that topic major, gender, and educational experience

influence students' learning styles. The studies also revealed that the formal teaching style impacts undergraduate students' learning preferences.

Gen Z is individualistic, technology innate, and very visual. Therefore, teachers must explain why they must do or learn things (Wotapka, 2017), especially if it requires group work. Because a student's preferred learning style influences their teaching style, lecturers must first understand their students' preferences in order to develop a teaching style that is appropriate for them. Its purpose is to ensure that students reach their full potential using their preferred learning style. However, this only helps some pupils equally. According to Landrum and Landrum (2016), students with disabilities receive relatively minor benefits. It demonstrates that pupils' learning styles and preferences differ. Therefore, LI (2014) suggested that educators consider a flexible learning style. Flexible learning is associated with open and distance education. Admission criteria, students' discretion over learning time, commitment, material, assignments, and course design for optimal learning respecting the learner's capacity are all examples of flexibility. (LI, 2014). Its purpose is to assist students with various learning styles and preferences at their own pace. Shorey et al. (2021) found that more culturally diverse studies adopting mixed-methods or qualitative design are needed to capture more profound insights about Gen Z. Effective technology integration can boost students' learning and confidence in their future careers.

### **C. Group and Individual Learning**

Due to the students' personalities from generation to generation, education providers must consider current students' behaviour to develop the necessary soft skills for future job employment. For example, Gen X and Y had been exposed to group work since childhood. On the other hand, Gen Z is more exposed to individual effort, and the goal is to obtain personal fulfilment, as they experienced and grew up during the Great Recession (Seemiller & Grace, 2016). As a result, they appear to have more solo abilities than teamwork abilities. In addition, they are thought to be less innovative in problem-solving than Gen X and Y, who work in groups and are strong at problem-solving.

Thus, educators must ensure that students' assessments are appropriate to develop soft skills within the students. Since Gen Z is more individualistic than Gen X and Y, the students may prefer individual rather than group work. Gen Z might find it unnecessary to communicate with others because they could quickly obtain information online. Unfortunately, in the natural working environment, not all tasks can be done by one person. Some jobs need to be done by a group of people due to time constraints and job difficulty. Whether Gen Z realizes it or not, teamwork is crucial. These teamwork skills could be developed through teamwork assignments. Thus, Gen Z's soft skills can be acquired from individual and group work.

A group with few members may be ideal in accommodating Gen Z students' strong independent personalities. Students can experience accomplishing more work separately and keeping their attention and focus on one job more perfectly with a small number of participants in a group and workload segregation. Furthermore, they believe they have more responsibility for completing the task and solving the problem in a small group. According to Kolb (1984), individuals can learn more effectively by identifying their lesser preferred learning styles and strengthening them through applying the experiential learning cycle. Group learning is believed to assist students in completing the experiential learning process.

Case-based learning strategies could help pupils become more autonomous thinkers (Cinneide, 1997). Assessing students using individual or group case-based assignments encourages them to strengthen their analytical thinking. Seminar-based learning can also help students enhance their soft skills, problem-solving abilities, critical thinking, and analytical abilities (Baird & Munir, 2015).

Group work teaches students to collaborate effectively with their peers to complete the lecturer's task. Each group member generally has a distinct personality, behaviour, and skill set. Group factors impact

performance in tutorial group work, according to Houldsworth and Mathews (2000). Students could improve teamwork skills, which Gen Z must equip (Simione et al., 2017). The group work could be assessed by the lecturer, group members, or peer assessment. According to Owen (2009), peer assessment can help students improve their critical thinking and professional and personal abilities. On the other hand, peer evaluations should be conducted objectively and without bias.

#### **D. Learning Styles and Students' Performance**

There are two methods for assessing a student's performance. The most popular way is to examine their academic performance. It is calculated using cumulative examination results, the average cumulative grade points (CGPA). A higher CGPA is linked to improved student achievement. Developing pupils' soft skills is another technique for assessing their performance. The MOHE believes HLIs must ensure students gain the requisite soft skills in college.

**1. Academic Performance:** This research looked at the students' performances via the CGPA. CGPA is often used as a reference for students' excellence. The greater the CGPA, the more impressive the student's achievement is thought to be. CGPA has been used in a few studies to assess student achievement. For example, Nonis and Hudson (2010) employed the CGPA to assess students' academic achievement in their study of their study time and habits concerning academic performance.

Academic success has traditionally been linked to a student's gender. Female students have a higher CGPA than male students, according to a study by Alfian and Othman (2005). 'Alanzi's (2018) survey in Kuwait also showed that female students have superior academic performance than male students. In those studies, the focus was more on students' academic performance and learning styles. This study examines whether individual and group learning impacts students' CGPA. However, Spicer (2004) discovered a skewed link between learning style and student achievement. The inconsistency was attributed to a need for more learning style flexibility.

**2. Soft Skills Attainment:** Students in HLIs are expected to graduate with sufficient competence in their field of study. However, having relevant information is insufficient to ensure that businesses will likely hire graduates. Moreover, graduates' lack of employability skills worries employers since employers demand specific skills to help the business grow and expand. As a result, to be more competitive in the job market, an accounting student must possess technical and non-technical capabilities (soft skills), such as oral and written communication, teamwork, and problem-solving abilities (Abdul et al., 2014).

Soft skills training should be provided to graduates during their university studies to boost their chances of being employed by businesses. According to Finch et al. (2016), graduates with interpersonal and organizational abilities have a competitive edge over those with a high CGPA. It was discovered that CGPA was only a minor factor in the hiring process. A study by Omar et al. (2012) proved the findings for the Malaysian job environment. Graduates must also communicate well, make decisions, and be motivated enough to be employed (Jusoh et al., 2011). Graduates with good English, leadership, and technical skills have more excellent employment prospects than those without these skills (Ismail, 2011). Employers require accounting graduates to have leadership abilities and to work autonomously rather than as followers, in addition to solid communication skills (Ngoo et al., 2015).

### **RESEARCH FRAMEWORK AND HYPOTHESES**

The Learning Styles theory describes the psychological elements that influence pupils' study. A few elements primarily influence the learning style of the students. Educators' jobs are made more difficult by the diversity of styles. For the sake of the pupils, educators must incorporate technique diversity into teaching and learning methodologies. Educators must establish the most appropriate teaching approaches to

complement their students' learning styles. Students are assigned individual and group work, as is customary in today's institutions. Individual work would be more successful for some kids than group work, and vice versa. Without a doubt, some students succeed in both areas.

David Kolb's (1984) (as quoted in McLeod, 2017) learning styles based on student psychology have become a central idea and are frequently used by educators in their programme teaching technique. Kolb's learning style is divided into two (2) parts: how knowledge is absorbed and how experience is applied to learning (Buch & Bartley, 2002). Gen Z is good at obtaining information to fulfil their project since they seek and discover knowledge faster. However, further understanding of how effectively Gen Z can seek and discover knowledge based on the different learning styles in different levels of studies needs to be examined. Based on the theory and literature review, the hypotheses were developed based on the following framework:

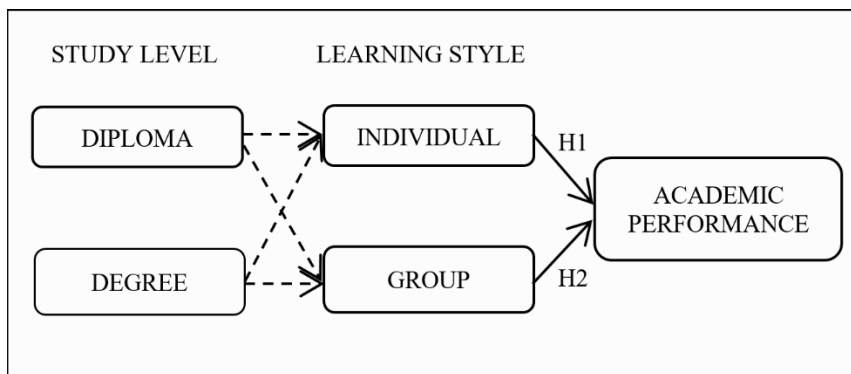


Fig. 2 Research Framework

H1: Accounting students' performance is positively related to group learning style.

H1a: Accounting students' academic achievement is positively correlated to group learning styles.

H1b: The attainment of soft skills by accounting students positively correlates to group learning styles.

H1c: Degree and diploma accounting students significantly differ in group learning styles.

H2: Accounting students' performance is positively related to individual learning

H2a: Accounting students' academic achievement is positively correlated to individual learning styles.

H2b: The attainment of soft skills by accounting students positively correlates to individual learning styles.

H2c: Degree and diploma accounting students significantly differ in individual learning styles.

## RESEARCH METHODOLOGY

A questionnaire survey was used to collect data for this study. The surveys were distributed to targeted respondents via Google Forms. Samples are taken from undergraduate accounting students of public and private universities and colleges in the Klang Valley, Malaysia. The respondents are pursuing their bachelor's degree and diploma programs in accounting.

Using cluster sampling, 150 students from each cluster, i.e., accounting degree and diploma programme, were chosen randomly for the study sample. A total of 211 replies were received, reflecting a response rate of 70.3 per cent. According to the distribution of respondents, 105 replies (70 per cent) came from degree

students, and 106 responses came from diploma students (70.6 per cent).

TABLE 2 SUMMARY OF RESPONSES

Cluster	Distributed Questionnaire	Responses
Diploma	150	105 (70%)
Degree	150	106 (70.6%)
TOTAL	300	211 (70.3%)

The respondents’ profiles are summarised in Table 3 below.

TABLE 3 FREQUENCY AND PERCENTAGE OF RESPONDENT

	Degree		Diploma	
	Frequency	Percentage	Frequency	Percentage
Female	74	70.5%	71	67%
Male	31	29.5%	35	33%
Total	105	100%	106	100%

The survey questionnaire was based on elements of a study by Naidoo (2014), which looked at how the soft skills of undergraduate management accounting students improved before and after group work. The MOHE soft skills were incorporated into the group and individual work questionnaire. A five-point Likert scale was used to assess learning style preferences and soft skills, with one indicating “Strongly Disagree” and five indicating “Strongly Agree.” Students’ academic performance was assessed using the CGPA scale, which ranged from 3.50 to 4.00, 3.00 to 3.49, 2.50 to 2.99, and less than 2.50.

There were four parts to the questionnaire. Part A presented the demographic items of the respondents, which comprised gender and CGPA. Part B and Part C of the questionnaire used the same items adopted from Naidoo (2014) but for different learning styles and group and individual learning, respectively. Finally, part D measured the students’ soft skills. The items measured are communication, critical thinking and problem-solving, life-long learning and information management, teamwork, entrepreneurship, professional ethics and morals, and leadership skills. These are the soft skills the Ministry of Higher Education, Malaysia (MOHE) requires.

TABLE 4 MEASUREMENT OF VARIABLES

Variables	Operational Definition	Scale	Source
Learning Style	Learning style preferred by students either individual or group learning	5-point Likert Scale ranging from 1-5, from Strongly Disagree to Strongly Agree	Naidoo (2014)
Academic Performance	Academic results based on Cumulative Grade	3.50 to 4.0 3.00 to 3.49 2.50 to 2.99 less than 2.50.	University’s common CGPA grades



Soft-skill attainment	<p>Seven softskill identified by MOHE:</p> <ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Teamwork</li> <li>3. Professional ethics and morals</li> <li>4. leadership</li> <li>5. critical thinking and problem-solving,</li> <li>6. life-long learning and information management,</li> <li>7. Entrepreneurship</li> </ol>	5-point Likert Scale ranging from 1-5, from Strongly Disagree to Strongly Agree	MOHE Naido (2014)
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The data collected was processed using Statistical Package for the Social Sciences (SPSS) for descriptive and inferential analysis of the hypotheses testing. The reliability and validity of the measurement items were confirmed using factor analysis and Cronbach alpha. In the relationship between the two variables, correlation analysis was utilized. Finally, the hypotheses were tested using an independent sample T-test. The test analyzed the students’ views of improving their soft skills based on their learning styles.

## FINDINGS AND DISCUSSION

### A. Group Learning

Table 5 presents the descriptive statistics for accounting students’ group learning styles (degree and diploma).

TABLE 5 GROUP LEARNING STYLE

No	Items	Degree		Diploma	
		Mean	SD	Mean	SD
1	The group learning developed my problem-solving skills.	4.26	0.772	3.87	1.024
2	The group learning sharpened my analytical skills.	4.21	0.793	3.79	1.039
3	The group learning helped me develop my ability to work as a team member.	4.37	0.800	4.00	1.104
4	As a result of the group learning, I feel confident about tackling unfamiliar problems.	4.13	0.833	3.89	1.063
5	The group learning improved my written communication skills.	3.96	0.865	3.83	1.000
6	My group learning helped me to develop the ability to plan my work.	3.95	0.903	3.82	1.067
7	The group learning improved my oral communication skills	4.00	0.888	3.81	0.996
	<b>Total mean</b>	<b>4.13</b>		<b>3.86</b>	
	<b>N = 211</b>	<b>105</b>		<b>106</b>	

The degree students had a higher mean (mean = 4.26) than the diploma students (mean = 3.87) on the first item, ‘The group learning strengthened my problem-solving skills.’ Degree students scored better (mean = 4.21) than diploma students (mean = 3.79) on the item ‘The group learning strengthened my analytical skills’ (item no. 2). Diploma students scored lower (mean = 4.00) than degree students (mean = 4.37) on the third item involving group learning and the capacity to function as a team.

The degree students earned a mean of 4.13 on the fourth item, confronting unknown difficulties through group learning, whereas the diploma students achieved a mean of 3.89. Degree students (mean = 3.96) and diploma students (mean = 3.83) agreed that group assessment helps enhance communication skills for item no. 5. The average score for item no. 6 was 3.95 for degree students and 3.82 for diploma students. It appears that degree students agreed slightly more than diploma students that group learning aids in developing their capacity to plan their work. The mean score for degree students is 4.00 for the last item (item 7), ‘group learning improved my speech speaking.’

With 4.37 and 4.00, respectively, both degree and diploma respondents score the highest mean for item number 3 (teamwork skills) on the individual items. Item 6 has the lowest mean score for both respondent groups (ability to plan own work). The average score for degree students is 3.95, while the average score for diploma students is 3.82. The outcome shows that students in both programmes have the same preference for group learning outcomes. They agree the most on teamwork and disagree the least on work planning.

The overall result demonstrates that the degree students’ mean score (total mean 4.13) is greater than the diploma students’ (total mean = 3.86) for all seven group learning components. Thus, the degree students appeared more open to group learning than the diploma students. It explains that degree accounting students who work in groups learn MOHE soft skills more quickly than diploma accounting students. It may be because degree students engage in more group learning than certificate students.

## B. Individual Learning

Table 6 shows the descriptive statistics for individual learning. According to the findings, the total mean score for degree and diploma students is 3.91 and 3.78, respectively. Thus, overall, degree accounting students are more likely than diploma accounting students to think that individual learning styles aid in developing soft skills.

TABLE 6 INDIVIDUAL LEARNING

No	Items	Degree		Diploma	
		Mean	SD	Mean	SD
1	The individual learning developed my problem-solving skills.	4.17	.802	3.83	.941
2	The individual learning sharpened my analytical skills.	4.16	.822	3.74	.959
3	The individual learning helped me develop my ability to work as a team member.	3.23	.963	3.62	1.091
4	As a result of the individual learning, I feel confident about tackling unfamiliar problems.	3.82	.886	3.81	.896
5	The individual learning improved my written communication skills.	3.94	.875	3.81	.906

6	My learning helped me to develop the ability to plan my work.	4.11	.891	3.86	.920
7	The individual learning improved my oral communication skills	3.97	.860	3.76	.911
	<b>Total mean</b>	<b>3.91</b>		<b>3.78</b>	
	<b>N = 211</b>	<b>105</b>		<b>106</b>	

For Gen Z undergraduate accounting students, a preferred learning style (group or individual) was observed in this study (degree and diploma). According to the descriptive results, degree students scored higher in group learning (total mean = 4.13) than in individual learning (total mean = 3.91). As a result, degree accounting students favour group learning over individual learning. This is in line with Houldsworth and Mathews’ findings (2000). Similarly, diploma accounting students prefer group learning to individual learning (total mean = 3.86) (total mean = 3.78).

Furthermore, the results suggest that the degree students’ mean group learning score (4.13) is higher than the diploma students’ (3.6). As a result, it can also be argued that degree students prefer group learning over diploma students. This finding was confirmed through further analysis utilizing the Independent Sample T-Test.

### C. Soft Skills

The results of the descriptive analysis for soft skills variables for degree and diploma programmes are shown in Table 7. Teamwork skills have the highest average score (4.19), while entrepreneurship skills have the lowest average (3.90). (3.37). The same is true for the diploma programme, with cooperation skills receiving the highest mean score (3.96) and entrepreneurship receiving the lowest (3.44). As a result, it can be inferred that degree and diploma students agree the most on acquiring cooperation skills and the least on entrepreneurship skills.

In conclusion, degree accounting students agreed that they improved more in four soft skills: communication skills, cooperation skills, professional ethics, moral abilities, and leadership skills, compared to diploma accounting students. Simultaneously, the diploma accounting students agreed they had improved soft skills such as critical thinking and problem-solving, life-long learning and information management, and entrepreneurship.

TABLE 7 SOFTSKILLS ATTAINMENT

No	MOHE soft skills	Degree		Diploma	
		Mean	SD	Mean	SD
1	Communication skills.	4.05	.752	3.82	.871
2	Critical thinking and problem-solving skills.	3.62	.881	3.69	.919
3	Life-long learning and information management.	3.62	.881	3.69	.919
4	Team work.	4.19	.748	3.96	.935
5	Entrepreneurship skills.	3.37	.880	3.44	1.006
6	Professional ethics and morals.	3.95	.892	3.79	.983
7	Leadership skills.	4.12	.793	3.92	.852
	Total mean	3.85		3.76	
	N= 211	105		106	

### D. Academic Performance

Academic performance is the second variable in this study. Table 8 describes it. Below are the descriptive analysis results for academic performance.

TABLE 8 ACADEMIC PERFORMANCE (CGPA)

CGPA range	Degree		Diploma	
	Frequency	Percentage	Frequency	Percentage
3.50 – 4.00	26	24.8%	54	50.9%
3.00 – 3.49	51	48.6%	27	25.5%
2.50 – 2.99	28	26.7%	25	23.6%
Below 2.50	–	–	–	–
Total	105		106	
N=211	105	100%	106	100%

The academic performance of accounting (degree and diploma) students’ is measured based on their CGPA achievement. Most degree students (48.6%) had a CGPA between 3.00 and 3.49, followed by students with a CGPA between 2.50 and 2.99 (26.7%). 24.8 per cent of students with a CGPA between 3.50 and 4.00. On the other hand, out of 106 diploma students, 54 (50.9%) obtained a CGPA between 3.50 and 4.00. Twenty-seven (27) students (25.5%) have a CGPA between 3.00 and 3.49, and 25 students (23.6%) have a CGPA between 2.50 and 2.99. No students have a CGPA below 2.5 for both programmes.

### E. Hypotheses Testing

Before the hypotheses testing, the normality and reliability tests for the variables were performed. The normality test shows that the skewness value falls within the range of  $\pm 2$ . According to George and Mallery (2010), skewness values in this range indicate that the data is normal. Factor analysis for the variables shows a factor loading above the threshold value, i.e., above 0.8. The Cronbach’s alpha value of 0.955 for the degree programme and 0.975 for the diploma programme demonstrates highly reliable data.

**1. Correlation Test:** Spearman’s Correlation analysis was used to analyse the correlation between the variables (hypotheses H1a, H1b, H2a, and H2b). The hypotheses were tested to see if there is a link between academic performance, group learning, individual learning, and accounting students’ soft skills.

TABLE 9 SPEARMAN’S CORRELATION MATRIX

Variables	Group Learning	Individual Learning	Soft skills	CGPA
Group learning	1			
Individual Learning	0.620**	1		
Soft skills	0.602**	0.644**	1	
CGPA	-0.244**	-0.064	-0.177**	1

\*Correlation is significant at the 0.05 level (2-tailed)

\*\*Correlation is significant at the 0.01 level (2-tailed)

Hypothesis 1a identifies whether group learning positively correlates with students' academic performance (CGPA), and hypothesis 1b determines if group learning correlates positively with accounting students' soft skills attainment. The correlation test shows hypothesis 1a, group learning and CGPA have a negative association ( $r = -0.244$ ). Although there was a significant result in the correlation test, it was in the negative direction. Thus, the hypothesis is ruled out. On the other hand, correlation analysis for hypothesis 1b reveals a positive association between group learning and students' soft skills ( $r = 0.602$ ). As a result, the hypothesis is accepted.

The correlation between individual learning and accounting students' academic performance and soft skills are analysed using hypotheses 2a and 2b. Because the correlation value is less than 0.1 ( $r = -0.064$ ), the correlation results demonstrate that individual learning is not significantly correlated to students' academic performance. As a result, H2a is rejected. Instead, individual learning and students' soft skills positively correlate ( $r = 0.644$ ). Thus, hypothesis 2a is accepted.

These findings are consistent with Alshuaibi et al. (2018), where learning styles are related to academic performance. However, the results show that both variables are related in a negative direction. Both group and individual learning results prove positive associations between learning styles (group and individual learning) and students' soft skills. This finding is supported by Azasu et al. (2010). The results also show that the individual learning style scored a higher r-value ( $r = 0.644$ ) towards soft skills attainment than the group learning style ( $r = 0.602$ ). They support the arguments by Seemiller and Grace (2016) that Gen Z students are more individualistic than Gen X and Y.

**2. Independent Sample T-Test:** The independent sample T-test was used to analyse hypotheses 1c and 2c. In addition, mean differences between the two accounting programmes (degree and diploma) relating to learning styles were tested using Levene's test p-value of an independent sample T-test (Field, 2013). Table 10 presents the result from the independent sample T-test on the differences between Diploma and Degree students for individual and group learning styles.

TABLE 10 INDEPENDENT SAMPLE T-TEST

Variables	Program	N	Mean	T-test	
				T-value	Sig. (2-tailed)
Group learning	Diploma	106	3.8585	-2.248	0.026*
	Degree	105	4.1265		
Individual learning	Diploma	106	3.7763	-1.295	0.197
	Degree	105	3.9156		

\*Significant level at 0.05

Hypothesis 1c investigates whether there is a substantial difference in group learning styles between degree and diploma students. Table 8 reveals that the p-value for group learning is 0.026, suggesting that the mean of the two groups differs significantly. As a result, H1c is acceptable. However, the negative t-value (-2.248) indicates that the second group's mean (degree students) is significantly higher than the first (diploma students). Therefore, this study concluded that degree accounting students prefer group learning to attain the required soft skills and achieve high academic performance.

The outcome is probably because degree students experience group learning more than diploma students. The respondents for this study are final-year students in the degree and diploma programmes. The degree students were born in 1995 or 1996, which is the transition year from Generation Y to Z. This transition

period could be why the degree students prefer group learning compared to the diploma students. The degree students are probably more influenced by Generation Y characteristics that prefer group work (Seemiller & Grace, 2016).

Hypothesis 2c examines any significant difference between degree and diploma students in individual learning styles. The p-value of 0.197 for individual learning styles shows no significant difference between the means of the degree and diploma students. Thus, H2c is rejected. Moreover, the t-value of -1.295 suggests that the degree students' mean (second group) is higher than the mean of the diploma students (first group). These results show no significant difference in individual learning for the degree students, which means there is a significant difference for another group, i.e., diploma students. Therefore, it is perceived that diploma students prefer individual learning in achieving their performance.

Overall, the results reveal that degree accounting students prefer group learning styles, consistent with a study by Houldsworth and Mathews (2000). However, diploma accounting students preferred individual styles, as Seemiller and Grace (2016) argued. These findings confirmed the descriptive statistics, which showed that degree students favoured group learning approaches over diploma students. Table 11 summarises the results for the hypotheses testing.

TABLE 11 SUMMARY OF HYPOTHESES TESTING

Hypotheses	Findings
H1a – Group learning has a positive relationship with accounting students' academic performance (CGPA)	Rejected
H1b – Group learning have a positive relationship with accounting students' soft skills attainment	Supported
H1c – There is a significant difference in group learning styles between degree and diploma accounting students.	Significant to degree students
H2a – Individual learning have a positive relationship with accounting students' academic performance (CGPA)	Rejected
H2b – Individual learning have a positive relationship with accounting students' soft skills attainment	Supported
H2c – There is a significant difference in individual learning styles between degree and diploma accounting students.	Significant to diploma students

Generation Z students are identified as having different traits from Generation X and Y. Thus, this study has investigated the preferred learning styles for accounting undergraduate programmes at diplomas and degree levels. The study found no significant correlation between learning styles and academic performance. However, learning styles are positively correlated with soft skills attainment. Furthermore, degree and diploma students were found to have different preferences in learning styles. Diploma accounting students prefer individual learning, while Degree students prefer group learning. This study's respondents are final-year degree and diploma students from Generation Z, who use smart devices as part of communication and information-seeking tools (Gkorezis et al., 2017; Alshuaibi et al., 2018). Innovative technology has influenced students' performance (Yi et al., 2016). Previous studies also found that students using multiple learning techniques can perform better (Gulnara & Monowar, 2014; McAtee, 2023). Millennials are tech-savvy, prefer a collaborative learning style with blended learning and have effective in-person and online communication skills (Issacs et al., 2020).

## CONCLUSIONS

This study aimed to identify Gen Z students' learning styles and relationship with performance. Gen Z

students are more individualistic, not focused, and prefer fast responses and feedback. Therefore, they prefer to work alone rather than in a group. However, the preferred learning style among Gen Z is different according to their programme level. Individual learning appears to be preferred by diploma students, while group learning appears to be preferred by degree students. These findings may provide further insights to the education providers in preparing the most suitable teaching and learning methods for degree and diploma levels to encourage Gen Z students' performance. It is worth noting that individual learning is more suitable for diploma accounting students as they are expected to acquire more technical skills in the job market. The degree students would work at a managerial level when they graduate, requiring more teamwork and communication skills.

It can be concluded that suitable learning styles at different study levels will create a psychological element that influences students' performance. This finding is consistent with the Learning Styles theory. Previous research has examined various learning styles, such as technology-based, independent, auto-didactic, and independent learning methods, as well as gender-based unimodal and multimodal styles. In accounting courses, it is common for the HIL to use both individual and group learning in classes. Thus, findings from this research provide additional insight into learning approaches that are significant to educators in developing approaches that suit Gen Z, specifically at different study levels.

Several limitations are highlighted in this study. First, since this study was conducted briefly, further research might consider incorporating other variables influencing learning style preferences, such as students' gender and prior accounting knowledge. The target population was limited to only accounting undergraduate students in the Klang Valley. Therefore, the results should be generalised to other accounting undergraduate students in Malaysia within this limitation. Future research should also consider an in-depth study to identify the expectation gap between the students and the educators using interviews and consider adding any potential intervening variables to understand better how learning styles influence students' performance. With increased digital learning, in line with the Connectivist Learning Theory, investigations on how digital technology might affect students' learning styles are also worth researching. Connectivist Learning Theory states that effective use of technology is essential for learning, particularly among Generation Z students and future generations.

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