

# THE INTERSECTION OF SOCIAL MEDIA LEARNING AND ENTREPRENEURIAL ORIENTATION: EFFECTS ON ACADEMIC OUTCOMES FOR GEN Z HIGHER EDUCATION STUDENTS

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## Abstract

*This study examines the influence of social media learning and entrepreneurial orientation on the academic performance of Generation Z in higher education institutions. Conducted in Greater Jakarta from February to June 2023. It involved 216 gen Z participants. The research utilised Rasch Model Analysis and Chi-Square Analysis for data examination. The research results revealed that students proficient in entrepreneurial orientation and social media learning had better GPAs, although social media learning alone did not significantly impact academic performance. The study underscores the importance of combining entrepreneurial orientation with social media learning to enhance academic performance in Generation Z students. It highlights the need for further research, considering the limited geographical scope and the lack of data on specific educational social media platforms. This research contributes to understanding how to effectively use social media and entrepreneurial skills to improve academic outcomes in higher education settings.*

**Keywords:** Entrepreneurial Orientation, Social Media Learning

## Introduction

The role of social media in e-learning is remarkable in the educational sector. The popularity of various social media platforms (e.g. Facebook and Instagram) improves learners' interactions with instructors. It enables students to discuss course content, share ideas, and form peer groups to participate in activities. E-learning professionals primarily use social media platforms to share course materials, deliver learning practices, and communicate with learners. Furthermore, social media platforms are one of the best resources for learners to interact with instructors to ask questions and clear doubts (Sajitha, 2022).

The utilization of social media has experienced a swift and substantial rise, positioning it as a highly favored online pursuit within the Indonesian context. A noteworthy 68.9% of the populace consistently engages with social media platforms. According to a survey conducted in Indonesia, 83% of the respondents expressed that their primary motivation for using social media platforms is to acquire information. The demographic cohort known as Gen Z exhibits the highest level of engagement with social media platforms within the context of Indonesia (We Are Social, 2023). The data demonstrates the significance of incorporating social media as a learning tool for Gen Z students in higher education.

Despite a substantial body of literature on the use of social media as formal educational tools in universities, little has been done to provide a comprehensive empirical study for social media learning as the enablers of higher education students' academic performance (Barton et al., 2018; Alamri, 2019; Boahene et al., 2019; Sharma and Behl, 2022). Therefore, the link between social media and academic performance in students remains unclear.

Furthermore, an essential determinant is the concept of entrepreneurial orientation. According to Kadarusman (2020), the proportion of entrepreneurs in Indonesia stands at approximately 3.1% of the overall population, a figure that is comparatively lower than that of neighboring countries including Singapore, Malaysia, Thailand, and Vietnam.

The deficiency in entrepreneurial mindset may potentially impact students' academic performance. This study emphasizes the importance of entrepreneurial orientation (EO) in relation to student learning. Entrepreneurial orientation (EO) refers to "the strategic decision-making processes and organizational styles of organizations engaged in entrepreneurial activity" (Lumpkin & Dess, 2001).

To the best of our knowledge, there is still few previous research has proposed an empirical study about entrepreneurial orientation as an enabler to support higher education students' academic performance (Mentoor & Friedrich, 2007; Rubin & Callaghan, 2019; Kumar et al., 2020; Bazan et al., 2022). Thus, it is essential to study the possible interaction between the degree of EO and academic performance. This work will generate new insights into the most effective way to teach college students, utilizing social media and an entrepreneurial orientation, which can improve their academic performance.

## **Literature Review**

### **Social Media Learning**

Learning using social media is becoming more common in a variety of educational settings. Chen & Bryer (2012) and Nguyen et al. (2015) argue that social media platforms provide unique opportunities for knowledge acquisition and interaction in formal and informal learning environments. According to research, social media can help in innovation (Nguyen et al., 2015).

Social media has the potential to improve the teaching and learning experience in higher education, particularly for learners from Generation Z (Cilliers, 2021). Facebook, for example, can be a transformative instrument for learning, enabling fuller dialogues, higher involvement, and broad connections (Chen & Bryer, 2012; Cilliers, 2021). This enables instructors to support informal learning while also incorporating it into the formal learning environment (Chen & Bryer, 2012). Furthermore, through active digital culture, social media can bridge the gap between formal and informal learning (Greenhow & Lewin, 2019).

Social media also plays an essential part in young people's acquisition specifically Gen Z. Learners can receive knowledge using social media platforms, which helps them perform better academically. Accessing information, exchanging information and knowledge, and participating in debates are all methods of learning knowledge through social media. Social media can be used by academic institutions to increase student academic performance and productivity (Shoid et al., 2016).

Social media tools have been developed to assist instructors in integrating social media into their teaching practices in order to overcome barriers to social media use in higher education. Based on an algorithm, this tool evaluates teaching scenarios and recommends the most appropriate classes of social media platforms, as well as advice on how to utilize them for teaching purposes (Gülbahar et al., 2017).

The use of social media as a learning tool in educational settings is being driven by the implementation of learner-centered environments in universities (Liburd & Christensen, 2013). In this approach to teaching and learning (T&L), the instructor is considered as a facilitator of the learning process rather than a disseminator of knowledge. Nonetheless, this method is classified as active learning, in which the student engages and participates in the learning process, as opposed to passive learning, in which the learner makes a one-way effort (Hamadi & El-Den, 2024). On social media, you can find advanced adaptive learning. Because social media offers access from anywhere, at any time, and by anybody with an internet connection. It makes it easier to use for users (Nuraini et al., 2020).

Furthermore, social media is a medium that people of all ages can freely access, which stimulates people's interest in using it. Social media has a huge impact on today's world due to its independence and quiet (Allcott et al., 2020). For these reasons, technological advancements have enabled students and teachers to transcend obstacles and establish a more casual, collegial, and participatory learning environment (Delello et al., 2015). Individuals have more freedom to interact, especially in this day and age of online savvy (Bellucci et al., 2019). The rise of social media converts public-domain judgments about organizations into new community information (Thaariq, 2020).

Furthermore, the study conducted by Herlina et al. (2023) revealed a significant association between gender and social media learning. Nevertheless, it is worth noting that gender does not exert a substantial moderating effect on the proficiency with which individuals acquire social media skills.

Thus, social media learning provides unique potential for knowledge acquisition, participation, and innovation in a number of educational environments. This can increase academic achievement by improving the teaching-learning experience, bridging formal and informal learning, and bridging formal and informal learning. However, it is critical to examine the possible risks and problems of social media use, as well as to support and guide teachers in incorporating social media into their teaching practices.

### **Entrepreneurial Orientation**

Entrepreneurial orientation (EO) refers to a company's predisposition to seek out new market opportunities and engage in entrepreneurial activities (Covin & Lumpkin, 2011). This is reflected in qualities such as innovation, proactiveness, risk-taking proclivity, competitive aggressiveness, and autonomy (Cho & Lee, 2018; Mulda, 2020). EO has been examined in a variety of circumstances and has been demonstrated to have a considerable impact on firm performance. According to research, self-concept attributes such as self-confidence and self-efficacy might influence entrepreneurial orientation and, as a result, business performance (Poon et al., 2006).

Entrepreneurship education has also been shown to improve entrepreneurial orientation and business success. Entrepreneurship education can increase individuals' abilities to discover and exploit new opportunities, take competitive action, and accept risk by providing them with the knowledge and skills required for entrepreneurship (Cho & Lee, 2018).

Non-profit organizations, such as universities, can benefit from an entrepreneurial mindset. In the university environment, it is critical to analyze the institution's unique characteristics and implement a consistent operationalization of entrepreneurial orientation (Riviezso, 2014). In a recent study conducted by Rinaldi et al. (2021), it was observed that students who possess prior entrepreneurial experience exhibit notable variations in their entrepreneurial orientations. Additionally, individuals belonging to Generation Z exhibit a strong inclination towards entrepreneurship. Furthermore, empirical evidence has indicated that

individuals with a bachelor's degree exhibit lower levels of entrepreneurial orientation compared to those who have only completed high school (Rinaldi et al., 2022). In conclusion, entrepreneurial orientation is a term that describes a company's predisposition to engage in entrepreneurial activities and seek out new market opportunities. It is manifested in qualities such as innovative thinking, proactiveness, risk-taking, competitive aggressiveness, and autonomy. Entrepreneurial orientation has been shown to have a substantial impact on firm success and can be influenced by elements such as self-concept and entrepreneurial education.

### **Social Media Learning and Academic Performance**

In recent years, the relationship between social media and academic achievement has emerged as a fascinating research issue. Several research have looked into this relationship, with varying results. Several studies have demonstrated that social media has a positive impact on academic performance. A study conducted in Saudi Arabia, for example, discovered that social media use was positively associated to academic performance (Alamri, 2019). These findings suggest that social media can be used to enhance learning and academic outcomes.

Several research have also looked at mediating factors in the association between social media and academic achievement. One study discovered, for example, that cognitive engagement mediated the association between social media use and academic achievement. This shows that students' level of commitment and involvement in their studies may influence the impact of social media on academic achievement.

Overall, there is a complex and varied relationship between social media and academic performance. Although some study suggests that social media might improve academic performance, other studies show that it can have a negative influence, especially when used excessively or for non-academic objectives. It is critical for students to strike a balance between using social media as a learning tool and avoiding overuse, which can impair academic performance.

Barton et al. (2018) evaluated the impact of social media use on attention, motivation, and academic achievement. According to the findings of this study, when social media was used for academic reasons, there was no negative link with academic achievement. The survey did, however, find that students rarely reported utilizing social media for academic purposes. This implies that the impact of social media on academic achievement may be affected by how it is utilized.

Sharma and Behl (2022) did a comparative study on the impact of social media on student's academic performance based on extraversion and introversion personality qualities. According to the study, Facebook use is related to lower academic achievement among social media users as compared to non-users or users of other social media networks. Other research, however, has found the reverse results, demonstrating that students may gain from conversing on social networking platforms.

Boahene et al. (2019) explored the relationship between social media use, academic self-efficacy, and academic success. According to this study, using social media for educational reasons is favourably associated with academic success. However, this study also shows that excessive social media use can have a negative impact on academic achievement. This highlights the significance of balancing social media use for educational purposes.

Al-Rahmi et al. (2014), on the other hand, discovered a significant adverse relationship between Facebook use and academic achievement. According to the findings, social media use among students has no substantial impact on academic achievement. Another study discovered that using social media for academic purposes and multitasking on social media had no effect on students' academic performance (Hameed et al., 2022). These disparate findings underscore the need for more research into the relationship between social media use and academic performance.

The effect of social media use on academic achievement among users is a complicated and diverse problem. Although some research reveals a detrimental link, others show no influence or even a favourable relationship. Gender, personality qualities, and the goal of social media use may all have an impact on the relationship. It is critical that educators and students understand the possible influence of social media use on academic performance and strike a balance between the benefits and the distractions.

### **Entrepreneurial Orientation and Academic Performance**

Academic achievement has been proven to be significantly influenced by entrepreneurial orientation. Several research examined this relationship and produced evidence to back it up.

Kumar et al. (2020) discovered that the entrepreneurial approach has a positive relationship with academic achievement, which comprises proactive, inventive, and risk-taking behaviour. This shows that people with a higher entrepreneurial orientation are more likely to excel academically.

Rubin and Callaghan (2019) studied the relationship between entrepreneurial orientation and academic research productivity. They discovered that people with a higher entrepreneurial orientation were more productive in research, which was associated with higher academic success. Furthermore, entrepreneurial academics are more willing to pursue new technological prospects in their study, enhancing their academic performance even further.

Mentoor and Friedrich (2007) also investigated the success of entrepreneurship education courses at South African universities. They measured changes in students' attitudes before and after the course using the Entrepreneurial Attitude Orientation (EAO) scale. According to the findings of the study, this course has a positive effect on students' entrepreneurial mindset orientation, indicating that entrepreneurship education can help increase academic accomplishment.

Furthermore, Bazan et al. (2022) explored the impact of a university's entrepreneurial focus on the entrepreneurial tendencies of its faculty. They discovered that the business focus of the university positively influenced an academic's entrepreneurial instincts. It demonstrates that colleges with a strong entrepreneurial emphasis can create an environment that stimulates entrepreneurial engagement among academics, leading to improved academic achievement.

As a result, entrepreneurial attitude has a substantial impact on academic success. Individuals with a stronger entrepreneurial mindset perform better academically and are more prolific in research. Entrepreneurship education and entrepreneurial focus at universities can also help improve academic achievement. These findings emphasize the significance of developing an entrepreneurial attitude and offering entrepreneurship education in academic contexts.

## Methods

### Research Design and Approaches

The study aims to generate new insights into the most effective way to teach Gen Z students in higher education institutions, utilising social media and its relationship with academic performance. It also wants to explore the relationship between entrepreneurial orientations which can improve academic performance. The study was conducted to provide an explanatory study. It has been carried out once. The study used a sample survey to gather data for a specific time. The study was performed during January and June 2023.

### Data Collection

For this research, a convenience sample of 216 Gen Z students from various higher education institutions in Greater Jakarta, Indonesia. This sampling method was chosen because the sampling frame is unavailable and due to its relative speed and ease. However, care was taken to avoid bias in acquaintance with the sampling approach. The data collection process was initiated by distributing online questionnaires in Google Forms to respondents, who were asked to complete the questionnaires voluntarily. At the initial stage, we distributed 300 online questionnaires to the respondents, and we collected back these questionnaires for further analysis. During this process, we removed approximately 40 incomplete questionnaires. Then we removed 44 outliers, which were determined using the Person Item in the Rasch Model

### Research Instrument

The research instrument was developed based on scholarly literature, with the questionnaire items adapted from the work of (Afsar et al., 2018; Saeed et al., 2019). The research items are presented in Table 1.

**Table 1.** Research Items

Variables	Code	Items
Entrepreneurial Orientation	A1	Take the initiative to achieve desires
	A2	Trying to make wishes come true
	A3	Responsible for decisions taken
	I1	Observing unique products/services
	I2	Investing in long-term development
	I3	Looking for new, more productive ways
	I4	Be creative at work
	P1	Take the initiative to act
	P2	Be the first person for new products/services
	P3	Monitoring technology trends
	P4	Looking for opportunities
	P5	Finding out future customer needs
	R1	Investing in opportunities with high returns and risks
	R2	Taking action to achieve goals
	R3	Utilize diverse resources to grow
	R4	Taking risks with new ideas
	R5	Explore for opportunities
	CA1	Seeking competitive opportunities
	CA2	Competing with others
	CA3	Apply price cuts to be more competitive
	CA4	Learning increases competitiveness
	CA5	Creating new strategies to increase competitiveness

Social Media Learning	C1	Gathering information to understand the problem
	C2	Make observations to obtain information
	C3	Looking for information to innovate
	C4	Anticipating change
	C5	Asking experts/mentors to increase knowledge
	C6	Learning from experience
	S1	Sharing knowledge to help others
	S2	Working together to find solutions
	S3	Practicing the knowledge possessed
	S4	Building relationships to exchange information
	S5	Archive photos/videos/documents for easy use
	S6	Open for comparative studies (benchmarking)
	U1	Learning to develop yourself
	U2	Working together to increase knowledge
U3	Participate in work or business related training	
U4	Sharing experiences to increase knowledge	
U5	Learning from experience for renewal	
U6	Asking experts/mentors to gain new knowledge	

Source: Authors (2023)

The Rasch Model is used to examine the validity and reliability of research instruments because it gives validity and reliability test results for instrument items and responses from respondents to test the respondent's level of comprehension of the research items being tested.

The reliability test results (Table 2) show that both research instruments indicates that all responses are excellent (0.87; 0.89), and both research instrument items are outstanding (0.91; 0.96). Additionally, the research instrument also has a strong Cronbach alpha (0.94; 0.92). It implies that these values account for the good correlations between the items and the respondents' responses.

**Table 2.** Validity dan Reliability Testing Results

Research Variables	Alpha Cronbach	Item Reliability	Person Reliability	Item Validity
Social Media Learning	0.94	0.91	0.87	18 items accepted
Entrepreneurial Orientation	0.92	0.96	0.89	22 items accepted

Source: Primary Data (2023)

### Data Analysis

The data collected will undergo analysis using both Rasch Model and Chi-square techniques. Specifically, Rasch Model analysis was carried out using WINSTEPS software version 5.2.1.0. This method holds particular premise for quantitative analysis in the human sciences, especially when dealing with ordinal data from research instruments (Boone et al., 2014; Sumintono, 2014). The Rasch Model utilizes probability to forecast respondents' responses accurately and transforms ordinal data, such as Likert scale ratings, into an interval scale known as "unit of opportunity logarithms" (logit) (Boone et al., 2014; Boone & Noltemeyer, 2017; Sumintono, 2014).

Moreover, in the comparative study involving ordinal data, Rasch Model analysis will be employed alongside subtotal analysis, a technique aimed at examining the performance of specific subgroups within a larger dataset. This approach provides deeper insights into the behavior of different subsets of respondents or items within the overall measurement framework provided by the Rasch model.

Additionally, Chi-square analysis will be employed for hypothesis testing. This method is used to identify significant relationships between categorical variables and is employed for both exploration and hypothesis testing purposes. It entails constructing a contingency table to compare observed frequencies against theoretically expected frequencies under the null hypothesis, determining whether differences are random or significant (Albert & Johnson, 1999; Johnson & Wichern, 2007). The Chi-square analysis was carried out using SPSS 27.

### Common Method Bias

Moreover, to prevent common method bias, Rasch Model Analysis can assist in reducing the number of biased responses on self-report questionnaires (Boone et al., 2014; Sumintono, 2014). Person Measure Analysis is used to test for the responses' bias, with the MNSQ value should be higher than 0.5 and lower than 1.5 (Boone et al., 2014; Sumintono, 2014).

## Result and Discusssion

The study was conducted from February to June 2023 in Tangerang and Jakarta. After examining the collected data, only 216 respondents can be analyzed further. In this questionnaire, respondents were divided into groups based on their age. The results obtained are 11% of respondents aged 19-20, 76% of respondents aged 21-22, and 13% of respondents aged more than 23. Female respondents were 48%, and male respondents were 52%.

This study aims to determine whether there is a significant difference in academic performance based on social media learning and entrepreneurial orientation. The Rasch Model's hypotheses testing (Table 3) shows that both social media learning and entrepreneurial orientation significantly differ in higher education students' academic performance. It means that research hypotheses are accepted since the Welch-2sided values were smaller than the 0.05 significance limit ( $0.036 < 0.05$  and  $0.006 < 0.05$ ).

**Tabel 3.** Comparative Testing Results

Variables	Student's GPA		Welch-2sided ( $< 0.05$ )	Results
	$< 3.00$ (logit)	$> 3.00$ (logit)		
Social Media Learning	2.01	2.84		
All	2.76		0.036	H1 Supported
Entrepreneurial Orientation	1.87	2.88		
All	2.78		0.006	H3 Supported

This study also aims to determine whether social media learning and entrepreneurial orientation correlate significantly with the academic performance. Table 4 shows that social media learning does not significantly influence the academic performance ( $0.704 > 0.05$ ). On the other hand, entrepreneurial orientation significantly correlates with academic performance ( $0.016 < 0.05$ ).

**Tabel 4.** Hypothesis Testing Results

Pearson Chi-Square	$p$ Value ( $\alpha < 0.05$ )	Results
Social Media Learning	$0.704 > 0.05$	H2 Not Supported
Entrepreneurial Orientation	$0.016 < 0.05$	H4 Supported

Prior research has demonstrated the significance of social media learning and an entrepreneurial orientation for academic performance. This study confirmed those theories on higher education Gen Z students.

This study found that students who actively engage in social media learning have significantly higher GPAs than those who do not. This finding is consistent with previous research that found social media learning plays an important role in education quality, which is related to student performance (Barton et al., 2018; Alamri, 2019; Boahene et al., 2019; Sharma and Behl, 2022). Based on these data, we can conclude that social media learning is crucial for predicting students' academic performance. Many students acquire information from social media without reading the book. When completing assignments, the majority of students today prefer to learn from YouTube, Instagram, or Tiktok.

However, an unexpected finding was that social media learning had an insignificant positive relationship with academic performance. The same results were also reported by other studies (Al-Rahmi et al. 2014; Hameed et al., 2022). This result is difficult to explain, but it may be related to social media distractions. Previous research has indicated that the utilization of social media for non-academic purposes and excessive engagement with social media platforms may not significantly affect academic achievement (Barton et al., 2018; Boahene et al., 2019). The social media can be a two-edged sword. It could provide students with enhanced knowledge if they use it productively for course-related learning only. However, they frequently learn many things outside of the course material. As is well-known, today's students can be easily distracted by a variety of short videos and endless social media content.

In addition, the research discovered that Gen Z students with a greater entrepreneurial orientation have significantly higher GPAs than those with GPAs below 3.00. It is also supported by the correlation test, which revealed a significant and positive correlation between entrepreneurial orientation and academic performance. This finding broadly supports the work of other studies in this area linking entrepreneurial orientation with academic performance (Mentoor & Friedrich, 2007; Rubin & Callaghan, 2019; Kumar et al., 2020; Bazan et al., 2022). This may be due to the fact that learning activities require innovativeness, proactiveness, and risk-taking in order to be effective. Students who lack these characteristics will not be able to learn effectively in class. Entrepreneurial students have a tendency to exhibit distinctive classroom behaviors, which contribute to their superior academic performance.

These findings may help us comprehend the university's requirements and instructions for enhancing the performance of Generation Z students. First, social media could be utilized more frequently in classroom

activities. However, the instructor must ensure that students are concentrating on social media learning. To improve performance, the university can also focus on increasing the entrepreneurial orientation of its students. For instance, the university may organize entrepreneurial experience for students. Rinaldi et al. (2021) discovered that students with entrepreneurial experience have significantly different entrepreneurial orientations.

## **Conclusion**

This study seeks to determine whether social media learning and entrepreneurial orientation substantially influence the academic performance of college students. The investigation was conducted in Tangerang and Jakarta with 216 participants from February to June of 2023. Using Rasch Model Analysis and Chi Square Analysis, it was analyzed.

Students who actively engage in social media learning have substantially higher GPAs than those who do not, according to this study. Unexpectedly, social media learning was found to have an insignificant correlation with academic performance. In addition, the study found that students of Generation Z with a greater entrepreneurial orientation have substantially higher GPAs. Additionally, the correlation test revealed a significant correlation between entrepreneurial orientation and academic performance.

The findings of this study have a number of practical implications, especially for the university's requirements and instructions for enhancing Generation Z students' academic performance. Social media should be utilized more frequently in classroom activities, and the university should concentrate on increasing students' entrepreneurial orientation.

It will be necessary to conduct additional research taking these variables into account. It must examine the types of social media learning and entrepreneurial orientation that improve academic performance. In addition, it should identify the subject or course most affected by social media learning and entrepreneurial orientation.

The current study still needs some improvement. Further research could enhance our understanding in several areas. Firstly, expanding the geographical scope beyond Jakarta and Tangerang would provide a more comprehensive view of the relationship between social media learning, entrepreneurial orientation, and academic performance among Generation Z students. Moreover, increasing the sample size beyond 216 respondents would strengthen the statistical power and generalizability of the findings.

Additionally, future studies should delve into the specifics of social media platforms utilized by students for educational purposes, as this could elucidate nuances in their learning behaviors and preferences. Exploring whether students have initiated entrepreneurial endeavors would also be valuable, offering insights into the practical implications of social media learning on entrepreneurial activities.

Despite its limitations, this study serves as a valuable foundation for future research on the interplay between social media learning, entrepreneurial orientation, and academic performance among Generation Z students in higher education. Expanding upon these findings can provide deeper insights and contribute to a more comprehensive understanding of this dynamic relationship.

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