



Analysis of the Entrepreneurial Character of Class XI Phase F Bio E Students at SMAN 2 Padang

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Article History:

Received: 2025-11-25; Revised: 2025-12-02 ; Accepted: 2025-12-15

Abstract: *This study aims to analyze the entrepreneurial character of students in Class XI Fase F Bio E at SMAN 2 Padang as an essential 21st-century competence encompassing confidence, decision-making ability, cooperation, creativity, and adaptability. The research employed a descriptive quantitative method using a questionnaire consisting of 18 entrepreneurial character indicators. Data were collected from all students in the class and analyzed using descriptive statistical techniques to obtain the mean score of each indicator as well as the overall score. The results show that the students' entrepreneurial character is categorized as fairly good, with an average score of 59.98. The highest indicators were cooperativeness and profit orientation, while the lowest were time efficiency, confidence, and quick decision-making. These findings indicate that although the students' entrepreneurial character has developed, it is not yet evenly distributed across all indicators, with several personal aspects still requiring improvement. The study concludes that targeted character development efforts are needed to strengthen weaker indicators and support the comprehensive development of entrepreneurial competencies.*

Keywords: *Entrepreneurial Character, Students, Biology Learning.*

Abstrak: Penelitian ini bertujuan untuk menganalisis karakter kewirausahaan siswa kelas XI Fase F Bio E di SMAN 2 Padang sebagai kompetensi abad ke-21 yang esensial, mencakup kepercayaan diri, kemampuan pengambilan keputusan, kerja sama, kreativitas, dan ketahanan. Penelitian ini menggunakan metode deskriptif kuantitatif dengan kuesioner yang terdiri dari 18 indikator karakter kewirausahaan. Data dikumpulkan dari seluruh siswa di kelas tersebut dan dianalisis menggunakan teknik statistik deskriptif untuk memperoleh skor rata-rata setiap indikator serta skor keseluruhan. Hasil menunjukkan bahwa karakter kewirausahaan siswa dikategorikan sebagai cukup baik, dengan skor rata-rata 59,98. Indikator tertinggi adalah kerja sama dan orientasi keuntungan, sementara yang terendah adalah efisiensi waktu, kepercayaan diri, dan pengambilan keputusan cepat. Temuan ini menunjukkan bahwa meskipun karakter kewirausahaan siswa telah berkembang, distribusinya belum merata di semua indikator, dengan beberapa aspek pribadi masih memerlukan perbaikan. Studi ini menyimpulkan bahwa upaya pengembangan karakter yang terarah diperlukan untuk memperkuat indikator yang lemah dan mendukung pengembangan kompetensi kewirausahaan secara komprehensif.

Kata kunci: Karakter Kewirausahaan, Siswa, Pembelajaran Biologi.

INTRODUCTION

Education in the 21st century places strong emphasis not only on cognitive achievement but also on the development of character and essential life competencies. Current educational paradigms highlight the importance of preparing learners who are able to

think independently, adapt to change, and demonstrate responsible behavior in various contexts (Trilling & Fadel, 2009; Boyles, 2012). One of the key characters that needs to be fostered through formal education is entrepreneurial character. Entrepreneurial character refers to a set of attitudes and personal traits such as self-confidence, independence, creativity, responsibility, initiative, perseverance, and the courage to take calculated risks, which enable individuals to identify opportunities and respond proactively to challenges (Boyles, 2012; Amiri & Marimaei, 2012; Suryana, 2014).

The importance of entrepreneurial character has been widely discussed in educational research. Several studies report that students with strong entrepreneurial character tend to demonstrate higher resilience, innovation, problem-solving ability, and adaptability in both academic and real-life contexts (Rae, 2014; Fayolle & Gailly, 2015; Neck & Greene, 2011). Entrepreneurial character is also associated with increased motivation, responsibility, and readiness to face uncertainty, which are crucial competencies in the rapidly changing global environment (Kuratko, 2016). Therefore, developing entrepreneurial character at the secondary school level is considered a strategic effort to prepare students for future academic pathways and the world of work (OECD, 2019).

In the Indonesian context, the Kurikulum Merdeka explicitly emphasizes character development as an integral part of learning. This curriculum encourages schools to integrate character values within subject matter through meaningful learning experiences (Kemendikbudristek, 2022). Entrepreneurial character aligns closely with the goals of the Kurikulum Merdeka, which aims to develop independent, critical, creative, and responsible learners (Hidayat et al., 2020). Character education within this curriculum is viewed as a foundation for strengthening students' personal and social competencies (Suryani & Rochintaniawati, 2021).

Biology learning offers significant potential for the development of entrepreneurial character. As a science subject closely related to real-life phenomena, biology encourages students to observe, analyze problems, make decisions based on evidence, and take responsibility for their conclusions (Bybee, 2013). Science learning environments that emphasize inquiry, problem-solving, and contextual learning have been shown to support the development of entrepreneurial traits such as initiative, critical thinking, and adaptability (Hidayat et al., 2020; Suryani & Rochintaniawati, 2021; Zubaidah, 2018). Through biology learning, students can develop not only scientific understanding but also character attributes relevant to entrepreneurial behavior.

Previous research on entrepreneurial character in education has largely focused on the implementation of specific learning models or instructional strategies to enhance entrepreneurial traits (Neck & Greene, 2011; Fayolle & Gailly, 2015). However, understanding the existing profile of students' entrepreneurial character remains an essential step before designing effective interventions. A clear analysis of entrepreneurial character provides foundational information regarding students' strengths and aspects that require further development (Amiri & Marimaei, 2012; Kuratko, 2016). Based on this theoretical background, this study focuses on analyzing the entrepreneurial character of senior high school students in biology learning. The findings are expected to contribute empirically to the literature on entrepreneurial character in secondary education and serve as a reference for future instructional design and research.

METHOD

This study employed a descriptive quantitative research design using a survey approach. This type of research was selected because it aims to describe systematically and accurately the entrepreneurial character of students without manipulating variables or providing treatment.

The research was conducted at SMAN 2 Padang, a public senior high school implementing the Kurikulum Merdeka. The selection of this location was based on its relevance to the research focus, particularly the implementation of character education within biology learning at the senior high school level.

The research subjects consisted of students of Grade XI Phase F Bio E at SMAN 2 Padang. The data sources in this study were primary data obtained directly from students through questionnaire responses. The students were selected as respondents because they were directly involved in biology learning activities that potentially support the development of entrepreneurial character.

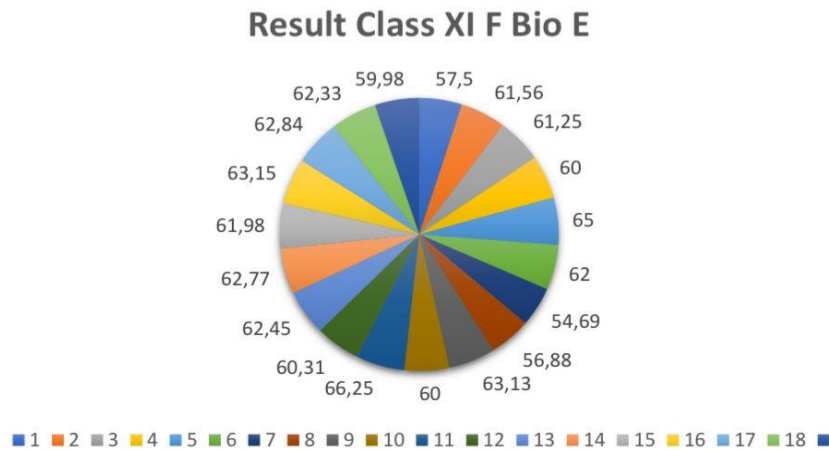
Data collection was carried out using a non-test instrument in the form of an entrepreneurial character questionnaire. The questionnaire was adapted from entrepreneurial character indicators proposed by Amiri and Marimaei and consisted of 18 indicators.

RESULT AND DISCUSSION

The results of the analysis of students' entrepreneurial character in Class XI Phase F Bio E are presented in Table 1, which summarizes the scores for each indicator and the overall average.

Table 1. Results of the Entrepreneurial Character of Class XI Phase F Bio E Students

No	Indicator	Result Class XI F Bio E
1	Confidence	57,50
2	Responsibility	61,56
3	Perseverance / Determination	61,25
4	Taking responsibility for decisions	60,00
5	Profit orientation	65,00
6	Creativity	62,00
7	Time competence / Efficiency	54,69
8	Ability to make decisions quickly	56,88
9	Ability to learn from mistakes	63,13
10	Commitment	60,00
11	Cooperativeness	66,25
12	Risk Taking	60,31
13	Initiative	62,45
14	Forward Thinking	62,77
15	Leadership	61,98
16	Task Orientation	63,15
17	Motivation	62,84
18	Adaptability	62,33
	Rata-rata	59,98



Diargam 1. Result Class XI F Bio E

Based on the results of the analysis of the entrepreneurial character table for class XI Phase F Bio E students, it can be seen that the development of entrepreneurial character is in the quite good category with an overall average score of 59.98. However, there are quite clear variations in scores among the 18 indicators measured, indicating that there are certain aspects that are students' strengths, while other aspects still need strengthening.

The indicators with the highest scores are Cooperativeness (66.25) and Profit Orientation (65.00). A high level of cooperative attitude shows that students are able to collaborate well in groups, accept differences of opinion, and actively participate in joint activities. This finding is in line with learning habits in secondary schools which use a lot of group work, thereby strengthening students' social competence. In addition, a high score on profit orientation shows that students have a tendency to understand the value of benefits, efficiency and results orientation in completing tasks. This ability is one of the basic characteristics of entrepreneurs who think objectively and have the drive to achieve targets.

Other indicators which are also in the quite strong category are Learn from Mistakes (63.13), Task Orientation (63.15), Forward Thinking (62.77), and Motivation (62.84). This shows that students are able to reflect, are oriented towards completing tasks, have forward thinking, and are motivated in carrying out learning activities. These attitudes reflect students' readiness to face academic and non-academic challenges.

However, there are several indicators that receive low scores and are of serious concern. The lowest indicator is Time Efficiency (54.69). This shows that some students still have difficulty managing their time, completing assignments according to targets, or are less effective in utilizing study time. Low time management skills have a direct impact on reducing the quality of students' independence and productivity, so they need to receive intervention through positive habits or time management training.

Other low indicators are Confidence (57.50) and Quick Decisions (56.88). Low self-confidence shows that students are still hesitant in expressing their opinions, afraid of being wrong, and not ready to appear independent. This condition is reinforced by the low ability to make quick decisions, which indicates that students lack confidence in

making quick and correct decisions. In fact, these two indicators are the main foundation in forming an entrepreneurial spirit that dares to act and make decisions based on rational considerations.

The Responsibility (61.56) and Taking Responsibility for Decisions (60.00) indicators are in the middle category. This shows that even though students have a fairly good sense of responsibility, the courage to take responsibility for the decisions they take still needs to be improved. This may be closely related to low self-confidence and the ability to make quick decisions.

Overall, the character patterns that emerge show that students have a strong tendency towards social aspects and commitment, such as cooperation, motivation, and results orientation, but are still weak in personal aspects, such as self-confidence, time management, and courage in making decisions. This imbalance between social and personal aspects occurs because the learning environment demands more group work than individual decision making. Apart from that, a passive learning culture can also make students more comfortable following instructions rather than taking the initiative themselves.

By looking at these results, it can be concluded that the entrepreneurial character of class XI Phase F Bio E students is at a fairly developed stage, but requires systematic strengthening, especially in personal aspects related to independence, courage and decision making. Strengthening these aspects will help students develop as individuals who are more confident, independent and ready to face the demands of future life.

CONCLUSION

Based on the results of the analysis of the entrepreneurial character of students in class XI Phase F Bio E. However, several personal indicators such as time efficiency, confidence, and quick decision making show low scores, indicating weak self-confidence, time management, and the courage to make decisions quickly and independently. These findings indicate that the development of entrepreneurial character is not evenly distributed across all indicators, so more focused strengthening efforts are needed, especially on personal aspects related to independence and decision making.

REFERENCESS

- Amiri, M., & Marimaei, M. (2012). The relationship between entrepreneurial personality traits and entrepreneurial intention. *Journal of Basic and Applied Scientific Research*, 2(12), 12587–12595.
- Boyles, D. (2012). *21st century skills: why they matter, what they are, and how we get there*. in bellanca, J., & brandt, R. (Eds.), *21st century skills: rethinking how students learn*). Bloomington, IN: Solution Tree Press.
- Bybee, R. W. (2013). *The case for STEM education: Challenges and opportunities*. NSTA Press.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93.

- Hidayat, R., Syarif, M., & Fadillah, A. (2020). Penguatan pendidikan karakter dalam pembelajaran di sekolah menengah. *Jurnal Pendidikan Karakter*, 10(2), 123–134.
- Kemendikbudristek. (2022). *Kurikulum Merdeka dan Profil Pelajar Pancasila*. Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Kuratko, D. F. (2016). *Entrepreneurship: Theory, process, and practice* (10th ed.). Cengage Learning.
- Neck, H. M., & Greene, P. G. (2011). Entrepreneurship education: Known worlds and new frontiers. *Journal of Small Business Management*, 49(1), 55–70.
- OECD. (2019). *Entrepreneurship education and training programmes around the world*. OECD Publishing.
- Rae, D. (2014). Entrepreneurial learning: Periphery and core. *Journal of Small Business and Enterprise Development*, 21(3), 386–399.
- Suryana, Y. (2012). *Kewirausahaan: Pendekatan karakteristik wirausahawan sukses*. Prenadamedia Group.
- Suryani, I., & Rochintaniawati, D. (2021). Pendidikan karakter dalam pembelajaran sains untuk menghadapi tantangan abad ke-21. *Jurnal Pendidikan IPA Indonesia*, 10(1), 15–25.
- Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. Jossey-Bass.
- Zubaidah, S. (2018). Keterampilan abad ke-21 dan implementasinya dalam pembelajaran. *Jurnal Pendidikan*, 3(2), 1–17.