

AIGC-Empowered Youth Entrepreneurship in Dongguan: Mechanisms and Development Pathways

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Abstract: Artificial Intelligence-Generated Content (AIGC) is changing how young people develop ideas, create content, and operate start-ups. This study examines its role in youth entrepreneurship in Dongguan using 260 valid questionnaires and a local entrepreneurial case. The results show high awareness of AIGC among respondents, but limited use in actual entrepreneurial activities. AIGC mainly supports entrepreneurship by reducing resource costs, identifying business opportunities, and improving operational efficiency. Its application is constrained by limited digital skills, tool costs, copyright risks, insufficient practical training, and weak incubation support. Based on the survey and case findings, this study proposes development pathways involving young entrepreneurs, universities, industrial parks, and local industries. The findings offer evidence on how AIGC can be integrated with youth entrepreneurship in a manufacturing-oriented city.

Keywords: AIGC; Youth entrepreneurship; Technology empowerment; Dongguan

Online publication: September 30, 2026

1. Introduction

Artificial Intelligence-Generated Content (AIGC) is increasingly used in content creation, product design, marketing, and business operations. For young entrepreneurs with limited capital and human resources, these tools can reduce the cost of idea development, content production, and market testing. Their value, however, depends on whether users can apply them to real entrepreneurial tasks rather than simply use them as general-purpose tools.

Dongguan offers a useful setting for examining this issue. The city has a strong manufacturing base and active industries in cultural and creative products, e-commerce, and digital services. These industries provide young people with opportunities to connect digital creativity with product development and market demand.

Young entrepreneurs still face practical difficulties, including limited resources, weak digital skills, and insufficient experience in turning ideas into viable projects. The growing use of AIGC may change how these constraints affect entrepreneurial activities.

Studies on generative AI have discussed entrepreneurship education, entrepreneurial competence, and business innovation. Research on its practical use in youth entrepreneurship remains limited, especially in manufacturing-oriented cities. Evidence is also needed on why widespread use of AIGC does not necessarily lead to deeper entrepreneurial application.

This study examines AIGC use among young people in Dongguan based on 260 valid questionnaires and a local entrepreneurial case. It focuses on three issues: the current use and constraints of AIGC in entrepreneurial activities, the mechanisms through which AIGC supports entrepreneurship, and the development pathways suited to Dongguan's industrial environment. The study provides local evidence for understanding the role of AIGC in youth entrepreneurship and its connection with manufacturing-based entrepreneurial opportunities.

2. Literature review and theoretical framework

Studies on AIGC have gradually extended from technological development to entrepreneurship and education. Xu *et al.* ^[1,2] reviewed the evolution of AIGC and discussed its industrial opportunities and future prospects. Lv ^[3] examined the relationship between AIGC, employability, and entrepreneurial competencies. Qiao ^[4] focused on the opportunities, challenges, and policy responses faced by entrepreneurial firms under the development of AIGC. Research in education and creative industries has explored the use of AIGC in entrepreneurship courses, talent cultivation, and cultural and creative practice ^[5,6]. Chen *et al.* ^[7] discussed the application of AIGC to youth innovation and entrepreneurship in the Greater Bay Area, with particular attention to its role in reducing costs and improving efficiency.

Existing research confirms the potential value of AIGC in entrepreneurial activities, but evidence from specific local and industrial settings remains limited. Dongguan has a strong manufacturing base, making the connection between AI-generated ideas and industrial resources particularly relevant to youth entrepreneurship. How young people use AIGC in entrepreneurial practice, what limits deeper application, and what local support is needed deserve further examination.

This study draws on technology empowerment theory to examine the role of AIGC in three areas: resource acquisition, opportunity identification, and business operations. The innovation and entrepreneurship ecosystem perspective is used to consider the support provided by universities, industrial parks, government, and local industries. These two perspectives provide the basis for analyzing the application, constraints, and development pathways of AIGC-enabled youth entrepreneurship in Dongguan.

3. Research design and empirical findings

A questionnaire survey was conducted among university students in Dongguan. A total of 260 valid questionnaires were collected. Economics and management students accounted for 48.08% of the sample, and more than 80% of respondents had participated in innovation and entrepreneurship competitions, associations, or related projects. The questionnaire showed acceptable reliability and validity, with a Cronbach's alpha of 0.814 and a KMO value of 0.857.

AIGC was widely used among the respondents, but its entrepreneurial application was much lower. More

than 90% had used or had some knowledge of AIGC tools, and 64.62% had used them in entrepreneurial preparation. Only 16.54% reported in-depth application of AIGC in entrepreneurial projects, while 40.38% had entrepreneurial ideas but had not put them into practice. The results indicate a gap between general use of AIGC and its integration into entrepreneurial activities.

Practical capability and resource access were the main barriers. About 60% of respondents reported insufficient practical AIGC skills, while fewer than 20% were familiar with copyright and compliance requirements. The cost of commercial tools was identified as a problem by 64.23% of respondents, and 68.46% expressed concerns about copyright. University support also showed room for improvement: 56.54% believed that existing courses and lectures did not meet their practical needs. Only 26.54% reported access to specialized AIGC incubation services in relevant entrepreneurial parks.

Respondents showed a clear preference for practice-oriented support. Entrepreneurial competitions and practical training were selected by 71.15%, followed by free computing resources (67.69%), industry-oriented courses (61.54%), and copyright and compliance training (55.00%). These results suggest that wider access to AIGC alone is insufficient. Entrepreneurial application also requires practical skills, affordable resources, and institutional support.

4. Empowerment mechanisms and development pathways

The survey results suggest that the value of AIGC in youth entrepreneurship lies mainly in resource, opportunity, and operational empowerment. Resource empowerment is most visible in content production and early-stage business development. Young entrepreneurs can use AIGC for copywriting, visual design, market research, and other tasks that would otherwise require additional staff or external services. This is particularly useful for small teams with limited start-up capital.

Opportunity empowerment refers to the use of AIGC in idea generation, market analysis, and product development. Dongguan's manufacturing base provides a practical setting for this function. Young entrepreneurs can use AI-generated ideas and content to explore product concepts and connect them with local manufacturing resources. The cultural and creative sector is one example, where digital design can be linked with product development, packaging, and online marketing.

Operational empowerment becomes more important after a project enters the market. AIGC can assist with promotional content, customer communication, new-media operations, and repeated content production. The case of Dongguan Dingyaxin Culture and Technology Co., Ltd. illustrates this process. Located in the Lingjing Market OPC Youth Entrepreneurship Community in Binhaiwan New District, the company applies AI tools to IP design, visual packaging, content production, and new-media operation. Its small-team model shows how AIGC can support asset-light entrepreneurship by reducing routine production work and shortening the time from idea development to market communication.

These effects are subject to practical constraints. The survey shows that respondents are concerned about tool costs and copyright, while many lack practical skills in applying AIGC to entrepreneurial projects. Heavy reliance on similar models may also lead to homogeneous content and products. Training should therefore move beyond basic tool use and focus on entrepreneurial tasks, industry knowledge, and copyright compliance.

A workable development path requires support from several actors. Young entrepreneurs need stronger AIGC skills and greater awareness of copyright and content compliance. Universities can introduce

industry-oriented training through entrepreneurial competitions, practical courses, and real business tasks. Industrial parks can provide access to computing resources, AIGC tools, and professional services for small entrepreneurial teams. Dongguan's manufacturing enterprises can also participate by providing product development needs, production resources, and market scenarios. Such cooperation can help connect AI-based creativity with local manufacturing capacity and turn AIGC use into more practical entrepreneurial activity.

5. Conclusion

Based on 260 valid questionnaires and a local entrepreneurial case, this study examined the use of AIGC in youth entrepreneurship in Dongguan. The findings show that AIGC is widely known and used among the respondents, but its application to actual entrepreneurial projects remains limited. Its main value lies in reducing resource costs, supporting opportunity identification, and improving operational efficiency. Limited practical skills, commercial tool costs, copyright concerns, and insufficient practical support restrict deeper application.

The findings also indicate that AIGC alone cannot solve the difficulties faced by young entrepreneurs. Its entrepreneurial value depends on users' skills and access to industrial and institutional resources. For Dongguan, closer links between young entrepreneurs, universities, industrial parks, and manufacturing enterprises may help turn AI-generated ideas into products and market activities.

This study is limited by its sample, which mainly consists of university students in Dongguan. The findings therefore cannot represent all young entrepreneurs in the city. Future research could include non-student entrepreneurs and young people from Hong Kong and Macao, and use longitudinal data to examine how AIGC affects entrepreneurial activities at different stages of business development.

Funding

This research was supported by the project "Research on the Development Pathways and Mechanisms of AIGC-Empowered Youth Innovation and Entrepreneurship in Dongguan" (Project No. GKY-2025KYYBW-34).

Disclosure statement

The authors declare no conflict of interest.

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