

Assessing the Creative Capacity and Digital Capacity of Gen Z in Vietnam

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ABSTRACT: This study assesses the creativity and digital competencies of Gen Z in the context of business and digital technology. Based on existing theory, research determines that creative competence helps individuals to be flexible in their thinking, develop new ideas, improve adaptability, and increase business opportunities. Meanwhile, digital competencies include the ability to use information technology, data management, and information security on digital platforms, which play an important role in the success of entrepreneurs in the digital age. The research data was collected through a survey of 530 individuals of Generation Z in Vietnam, of which 516 valid votes were analyzed. The results show that Gen Z has a relatively high level of creative capacity, especially in accepting risks and testing new ideas, but is still limited in confidently creating breakthrough ideas. Their digital capabilities are also at a good level, with data management and awareness of cybersecurity risks quite high. However, it is still necessary to improve the ability to deeply exploit digital tools to optimize work and business performance.

KEYWORDS: Capacity, digital capacity, creativity, Gen Z, business, performance, digital technology

I. INTRODUCTION

In the context of digital transformation taking place strongly globally, the exploitation and development of creative and digital capabilities has become an important factor to improve labour productivity, promote innovation and enhance the competitiveness of the economy. In particular, Gen Z – those born between 1997 and 2012 – are becoming a key workforce in the digital age.

Gen Z is known as the generation with fast access to technology, flexible thinking, and high creativity. However, in Vietnam, there have not been many studies to comprehensively assess the level of creativity and digital competence of this group. This poses an urgent requirement in researching, assessing the current situation as well as proposing solutions to effectively exploit their potential. Digital transformation trends and the need for digital human resources: The industrial revolution 4.0 requires workers to be able to use digital technology and innovative thinking to adapt to changes rapid change of the market. While the world has had many studies on the relationship between digital competence, creativity, and business success, in Vietnam, research on Gen Z is still limited. The assessment of their capacity is an important basis for proposing appropriate training policies and strategies to maximize the potential of Gen Z. Without proper orientation and policies, the creative potential and digital skills of Gen Z may be wasted or not properly promoted.

This study was conducted to understand the current situation of Gen Z's creative capacity and digital capacity in Vietnam today, thereby making recommendations to the state and businesses to exploit and promote the potential of the country's young generation. For the state, this research will provide a scientific database to develop education policies, train digital skills and support start-up for Gen Z, helping to optimize young human resources in the digital economy. For businesses, this study helps businesses better understand the creative capacity and digital skills of Gen Z, thereby having an effective strategy for recruiting, training, and exploiting human resources. For Gen Z individuals, this study helps the younger generation to be more aware of their strengths and weaknesses in the field of creativity and digital technology, thereby planning to develop themselves in line with market needs.

Moreover, this study not only helps to identify the current situation of Gen Z's creative capacity and digital capacity in Vietnam, but also proposes specific solutions to take advantage of and maximize their potential in work and business in work and business.

II. THEORETICAL OVERVIEW

A. Creative capacity

Creativity is defined as the ability to form new, unique, and valuable ideas that play an important role in solving problems and challenges in the business environment (Sterberg & Lubart, 1999). Previous studies have shown that entrepreneurs tend to have a higher level of creativity than non-entrepreneurs, thanks to their flexible thinking framework and ability to think outside the usual limits (Sternberg, 2004). This is especially true for Gen Z – a group of young workers who have quick access to technology and strong creative thinking. However, to fully exploit this potential, it is necessary to have support from both the State and businesses to create a favourable environment to help Gen Z promote their creative capacity in the digital economy.

Personal awareness of creative capacity is closely related to entrepreneurial intent. Specifically, research by Shook & Bratianu (2010) and Townsend et al. (2010) shows that highly creative individuals are more likely to adapt to changes in the work and business environment, thereby better grasping new opportunities. These opportunities help improve business performance, optimize costs, and increase profits (Lichtenstein et al., 2007). According to Otache & et al. (2021), highly creative individuals tend to choose the independent business path instead of working in the traditional way. This shows that, in order to retain and develop young talents, businesses need to create conditions for them to express creative ideas, contribute to the process of innovation and organizational development.

Creative intelligence not only influences the approach to problems, but also influences an individual's attitude during entrepreneurship and online business (Kollmann et al., 2022). Thus, in order to promote the entrepreneurial spirit in the younger generation, it is necessary to have coordination between the State in improving technology infrastructure, financial support for startups, along with the initiative of businesses in building a creative working environment. flexible. Only then can Gen Z maximize their creative capacity, contributing positively to the development of the digital economy in Vietnam.

B. Digital competencies

Digital competencies are defined as the set of knowledge, skills, abilities, and characteristics that help individuals effectively perform tasks in a digital environment (Oberländer et al., 2020; Rubach & Lazarides, 2021). In another approach, digital competency is understood as the ability to understand, use, and leverage information and communication technology (ICT) to accomplish personal and professional tasks and goals. This includes using computers, software, data, and the Internet to search for information, solve problems, and create value. In the context of the rapid development of the digital economy, digital competence has become an important factor, not only in work but also in the process of entrepreneurship and innovation. However, according to research by Bachmann et al. (2024), there is still a lack of comprehensive studies on the impact of digital competencies on entrepreneurs' business intentions, especially among young workers such as Gen Z.

Previous studies have shown that digital technology plays an important role in business processes and outcomes (Kollmann et al., 2022; Nambisan, 2017; Steininger, 2019). The rapid development of digital platforms places increasing demands on the digital skills of the workforce, especially in industries related to e-commerce, digital marketing, and data management. Possessing strong digital competencies not only makes it easier for individuals to adapt to the modern working environment, but also is a factor that promotes entrepreneurship and creativity in business (Bartolomé et al., 2021; Oggero et al., 2020; Reis et al., 2021). Thus, in order to maximize the potential of Gen Z, it is necessary to have the participation of both the State and businesses to build an ecosystem to support the development of comprehensive digital capabilities.

Recent studies have also shown that digital competency can be one of the key drivers of entrepreneurship, especially in the context of competitive markets and limited resources (Neumeyer et al., 2021; Ngoasong, 2018). Thus, in order to maximize the potential of Gen Z, it is necessary to have close coordination between the State and businesses in training, supporting and creating a flexible and creative working environment, helping the young generation make the most of their digital capabilities. thereby contributing to the development of the digital economy in Vietnam.

III. RESEARCH METHODS

A. Research sample

Research sample selection method: The random sample selection method will be used to give the most accurate and objective results. The survey questionnaire will be sent to Generation Z who are working and living in Vietnam.

Sample size: Sample size has a certain influence on the results of the study. If the denominator is large enough, the research results will be highly accurate. If the sample size is not large enough, it will be difficult to ensure accuracy. Therefore, the number of research samples needs to be large enough to ensure accuracy, and at the same time, it needs to be adequate and reasonable to minimize waste of time and costs.

Questionnaire design: The questionnaire consists of 3 main contents:

Part 1. About the research content and the purpose of the survey

Part 2. Questions about demographic factors: gender, age, qualifications, and business intent surveys.

Part 3. Questions to evaluate Gen Z's creativity and digital competencies

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Data collection and processing methods

Collect data: Use the online form to send and receive surveys of Gen Z through online submission and practical surveys. The process of building a questionnaire consists of 2 stages.

Stage 1: Pilot questionnaire: Based on a scale that is referenced and supplemented with information from the research team itself, research objectives, research factors, and approach to questions, the research team creates the initial questionnaire.

Phase 2: Investigation through a survey with Generation Z in Hanoi city obtained the results of more than 530 responses from volunteers, the group eliminated invalid votes.

The investigation period is from January 14 to February 25, 2025.

B. Research scale

Creative capacity

The creativity scale consists of 5 observed variables inherited from previous studies by Abdelfattah et al, (2022) and Duy & Duc (2023) with the following details:

Table 1: Creativity Scale.

Encode	Content	Consult
Creative capacity	NLST1: I find myself good at generating new ideas.	Duy & Duc (2023)
	NLST2: I like to start a new project, a change, despite the risks.	
	NLST3: I am confident in my ability to solve problems creatively.	Abdelfattah et al (2022)
	NLST4: I feel comfortable experimenting with new ideas.	
	NLST5: I have the ability to further develop other people's ideas.	

Source: Author's inherited from previous research

In which:

NLST1: I find myself good at generating new ideas. A person who is good at coming up with new and unique ideas for problems will have a flexible view of things and things. When he finds himself good at creating new ideas, he has a belief in his or her own creativity. This motivates them to be more confident when coming up with initiatives and developing unique ideas.

NLST2: I like to start a new project, a change, despite the risk of going wrong. Being willing to start a new project despite the risks is a sign of an enterprising spirit. This helps the executor not be afraid of challenges, failures, ready to embrace everything and overcome them to move on.

NLST3: I am confident in my ability to solve problems creatively. Confidence in solving problems creatively shows determination and differentiated thinking skills. This ability helps people constantly explore new options, bringing more optimal solutions.

NLST4: I feel comfortable experimenting with new ideas. The comfort of experimenting with new ideas demonstrates flexibility and not being afraid to change. People with this quality easily accept challenges and are constantly looking for ways to improve and improve work efficiency.

NLST5: I have the ability to further develop other people's ideas. The ability to further develop other people's ideas demonstrates teamwork skills and enhances value from the original idea. This helps to create an effective collaborative environment and encourages continuous improvement.

Digital competencies

The digital competency scale is inherited from the studies of Bachmann (2024) and Duong & Nguyen (2024) with 4 specific observation variables as follows:

Table 2: Digital Competencies Scale

Encode	Content	Consult
Digital competencies	NLS1: I can communicate using various digital tools when doing business online	Bachmann et all (2024)
	NLS2: I know about the dangers and risks in the digital environment when doing business online	
	NLS3: I can use digital tools and platforms according to my online business needs	
	NLS4: Can I manage metrics well while doing business online	Doanh & Nguyen (2024)

Source: Author's inherited from previous research

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In which:

NLS1: I can communicate using a variety of digital tools. A person who can flexibly use communication tools will have an advantage in business in particular and work in general. Each object we meet in each different situation, they will likely make a communication request on a particular channel, and there is no guarantee that there are only one or a few communication tools. So, communicate using many digital tools such as email, Zalo messaging application, Messenger, Lark, online conferencing via Zoom, Microsoft teams, Google meet, is an important skill in digital competence.

NLS2: I know about the dangers and risks in the digital environment. Along with the outstanding benefits that digital technology brings to people, the risks and dangers of information security and information transparency are always latent. Personal and internal information can be leaked, leaked to the outside, dangerous to digital security, from crooks to digital devices at risk and damage leading to loss of stored data. Understanding and being aware of these dangers and risks is the basis for people to be able to take remedial measures or limit their occurrence.

NLS3: I can use digital tools and platforms according to my needs. Autonomy in the selection and use of digital tools and platforms. Creating flexibility, suitable for individual needs and specific circumstances. At the same time, this reflects the importance of technology in supporting people to achieve efficiency. Personalization is highlighted, helping each person optimize according to their own preferences and goals, satisfying specific needs.

NLS4: I can manage metrics well in the digital economy. The ability to manage data effectively, showing the speaker's ability to organize and process information. In the context of the digital economy, this skill is especially important, reflecting the understanding and adaptation to modern technology trends. Good data management also demonstrates high professionalism, with the requirement of accuracy and prudence. At the same time, the quote emphasizes the core role of data in making business decisions and strategies. Thanks to this ability, individuals not only improve their work efficiency but also contribute to the sustainable development of the digital economy.

Reliability of the scale:

The creativity scale consists of 5 observed variables inherited from previous studies by Abdelfattah et al, (2022) and Duy & Duc (2023). The digital competency scale is inherited from the studies of Bachmann (2024) and Duong & Nguyen (2024) with 4 specific observation variables as follows:

Table 3: Results of scale evaluation

Get lost	Number Observed Variables	of	Outer loading	Outer (max) loading	Cronbach's alpha
Creative Capacity (NLST)	5		0.757	0.803	0.841
Digital Competencies (NLS)	4		0.796	0.836	0.831

Source: Author's analysis from dataset, 2025

IV. RESEARCH RESULTS

A. Characteristics of the study sample

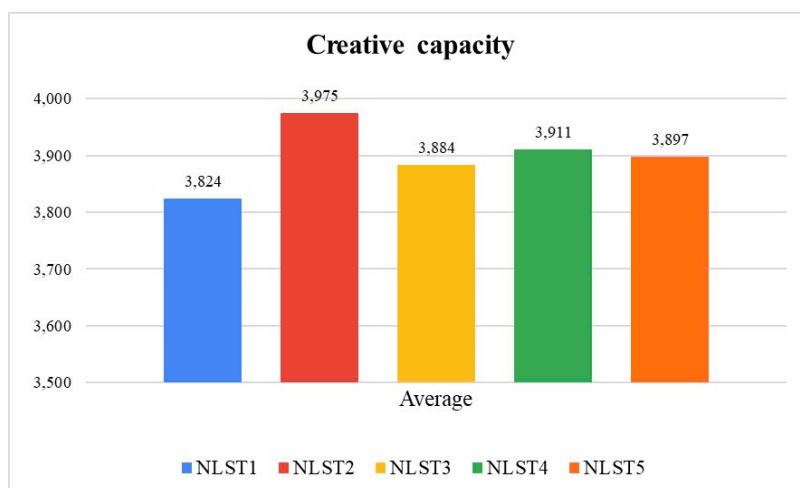
Through the results of the survey, 516 data were obtained to ensure analysis out of a total of 530 votes. Gender: The survey results show a clear gender gap between men and women, in which women dominate more with 57.8%.

In terms of age, the majority of survey participants were between the ages of 18 and 23, accounting for a total of 77.9%, of which 19 and 20 were the highest age groups, 38.2% and 14.3%, respectively. The percentage of Gen Z who participated in the survey in 2002 and 2001 was 8.9% and 5.6%, respectively.

Creative capacity

Individuals' creative abilities were assessed through 5 main aspects, with the average score ranging from 3,824 to 3,975, demonstrating confidence and potential for creative development at a fairly good level and relatively evenly among the observed variables.

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Finger 1: Result of creative capacity

Source: Author's analysis from dataset, 2025

The highest score is the variable "NLST2: I like to start a new project, a change, despite the risk of going wrong.". This score represents Gen Z's initiative, innovative spirit, and risk-averseness. Individuals have the ability to embark on new projects with determination and enthusiasm, regardless of the possibility of mistakes. This attitude reflects a strong creative mindset that is willing to push boundaries to achieve new things. This also shows that the individual is highly motivated to drive change and explore new opportunities.

The second highest with a score of 3,911, which is not much different from NLST2, is "NLST4: I feel comfortable experimenting with new ideas." The individual has an open attitude and is willing to experiment with new ideas, regardless of the uncertain outcome. This is an important strength, reflecting the spirit of learning and not hesitating in the face of initial failures. This comfort facilitates creativity, making it easy for individuals to access and develop new solutions. However, this score also suggests that this comfort may be affected by environmental factors or external pressures.

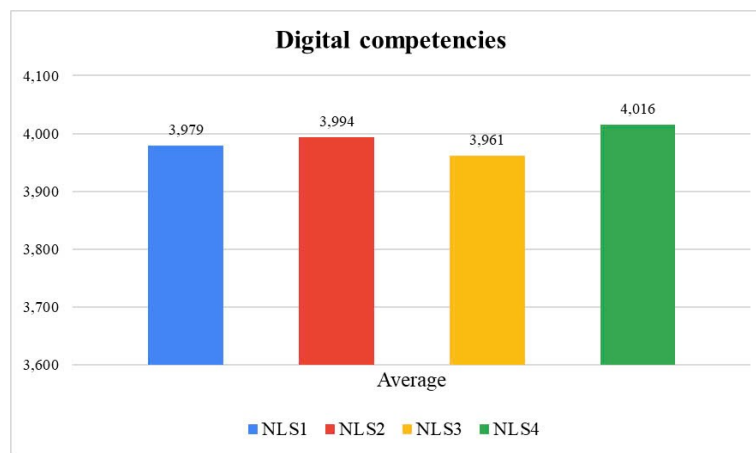
"NLST3: I am confident in my ability to solve problems creatively" creates "NLST5: I have the ability to develop other people's ideas" has a similar score (3,884 and 3,897 is lower than the average score of 3,898), showing a certain confidence of the individual in solving creative problems as well as the ability to develop ideas from others. Individuals tend to approach situations with innovative thinking, and are keen to complement and expand existing ideas. This reflects effective teamwork and complementary creative thinking. However, this confidence and ability to develop is still at a decent level, not really outstanding, especially in situations that require completely independent thinking.

When it comes to creativity, the ability to generate new ideas is one of the most important aspects, but here there is the lowest score - 3,824 of the variable "NLST1: I find myself good at generating new ideas". This suggests that individuals may have difficulty asserting their creativity with confidence, especially when under pressure to innovate. This limitation can stem from a lack of experience, an environment that doesn't stimulate enough creativity, or a fear of failure. When individuals don't feel good at creating ideas, they may be limited in proactively proposing unique or ground breaking ideas. Overall, this reflects that the creative foundation is already there, but needs reinforcement in thinking, a supportive environment, and practical experience to promote more confidence.

Looking at the bow, the creative capacity of the individual is quite well evaluated, with the highlight being the willingness to innovate, the relaxed attitude when experimenting with ideas, and the ability to collaborate creatively. However, the confidence in creating new ideas and solving creative problems independently still needs to be improved. This result reflects a solid foundation of creative capacity, but needs to be developed more evenly to achieve comprehensive effectiveness.

Digital Competencies

Based on the graph and variables provided, the average score of digital competencies (3,987) indicates that the individual has a good background in using and adapting to digital requirements. However, each variable reflects different aspects of digital capabilities, from communication to risk awareness and data management skills.



Finger 2: Result of Digital Competencies

Source: Author's analysis from dataset, 2025

With the highest score of 4,016, the observation variable "NLS4: I can manage data well in the digital economy" showed that the ability to manage data was evaluated quite well, as shown by the fact that individuals have been able to work with data effectively. including the organization, processing, and use of information in different contexts. Data management skills on digital platforms are extremely important, supporting individuals in many business activities, from market research to planning, measuring, and evaluating results. However, the level of basic or intensive management is based on the background and attitude of each person. There are individuals who can only manage the basics, and there are individuals who can manage intensively, causing disparities in society.

The variable "NLS2: I know about the dangers and risks in the digital environment" has the highest score (3,994), indicating that the individual is aware of potential risks in the digital environment, such as information security issues, cyber-attacks, ...online fraud or misuse of data. This shows high vigilance and a sense of self-protection when operating on digital platforms. However, there is still room for improvement, especially in not only identifying but also handling, preventing, or responding effectively to dangers. Equipping yourself with cybersecurity knowledge or taking related courses can help individuals strengthen this competency.

"NLS1: I can communicate using a variety of digital tools." with a score of 3,979 indicates that the individual has demonstrated the ability to communicate effectively through digital tools such as email, social media, messaging apps, or other online platforms. Gen Z has had the flexibility to connect and exchange information in the digital environment. However, this score has not yet reached its maximum, suggesting that there is still room for improvement, especially in digging deeper into the advanced features of digital tools or using them more creatively. On the other hand, a part of Gen Z is also not really confident in communicating on digital platforms, some people only focus on 1 to 2 main tools such as email or messaging but forget about other communication tools - effective assistants in business (meeting activities, discussion on digital platforms...)

"NLS3: I can use digital tools and platforms according to my needs" scored the lowest score - 3,961. However, this is still a good number, approximately 4. It itself has affirmed that the ability to use digital tools and platforms has been developed by the individual enough to serve a variety of needs such as studying, working, or playing. It is the foundation for Gen Z to enter the Online Business track. However, there is still a small part that is not confident in their abilities, has not really mastered digital to meet their needs. The reason comes from not having full access to new tools or lack of practical experience with specialized platforms or because individuals are afraid to learn and try new technologies.

In conclusion, the digital competence of individuals is quite well evaluated, with strengths in risk awareness and data management. The ability to use digital tools and platforms satisfies basic and popular needs well. The variables achieved a high average score, reflecting confidence and ability to adapt to the digital environment. This is a solid foundation to continue to promote in the current digitalization context.

B. Discussion of research results

An assessment of the current state of Gen Z's creative capacity in Vietnam from the research results shows that the level of creativity is relatively high but uneven. The results of the study show that Gen Z's creative ability has an average score ranging from 3,824 to 3,975, reflecting a fairly good level but uneven between aspects. The study also shows that the outstanding characteristics of Gen Z in Vietnam are: Gen Z is willing to take risks and start new projects (NLST2: 3,975); They have an innovative spirit, ready to experiment with new ideas (NLST4: 3,911); Ability to work in a team, develop other people's ideas (NLST5: 3,897).

However, Gen Z still has some limitations such as: Confidence in creating new ideas is still the lowest (NLST1: 3,824); The ability to solve problems creatively is still at a decent level (NLST3: 3,884). The reason may be Gen Z has an innovative spirit but

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is not fully confident in the ability to create independently. The lack of practical experience can make them not really dare to affirm their creative capacity. Influences from the educational and cultural environment reduce individual creativity, while still leaning towards traditional thinking. As a result, Gen Z tends to adapt well to the new business environment but has not really taken the lead in creating innovation trends. They may need support or team collaboration to foster creativity instead of creating breakthrough ideas on their own.

Assessing the current state of digital competence of Gen Z in Vietnam, the results of this study show that the level of digital competence is quite good but not optimal. Because the average score of digital competence is 3,987, showing a good level of proficiency in digital technology. However, there is still a disparity between the aspects. The typical strengths of Gen Z's digital capabilities in Vietnam are Gen Z has the highest ability to manage data in the digital economy (NLS4: 4,016); Good awareness of risks and safety in the digital environment (NLS2: 3,994); Communicate proficiently through a variety of digital tools (NLS1:3,979).

However, it is also possible to admit that Gen Z in Vietnam still has certain limitations in the ability to master and exploit digital tools that are not really optimal (NLS3: 3,961 – the lowest). The reason may be that Gen Z grew up with technology, so it is easy to access and use digital tools. However, they mainly use digital tools in a basic way without making the most of advanced features. Some individuals still depend on familiar platforms but do not have the flexibility to use many different digital tools. As a result, Gen Z can work effectively in the digital environment but has not fully exploited the potential of technology to optimize business performance. Suggestions for businesses may need more training on advanced digital skills such as data analysis, optimizing digital tools to help Gen Z better promote digital capabilities.

In general, the creative capacity of Gen Z in Vietnam is quite good but uneven, they have an innovative spirit and are ready to experiment but are not confident in their ability to create independently. Digital capacity has a solid foundation but is still limited in the ability to exploit digital tools in depth. To improve both competencies, it is necessary to have a methodical training strategy, create practical conditions for Gen Z to practice and encourage them to be creative in a more flexible environment.

Based on the research results, the research team proposes several recommendations for the State and Businesses to exploit and promote the digital capacity and creative capacity of Gen Z at work.

Regarding the recommendation for the State to improve education and training policies to integrate digital and creative skills into the curriculum: The Ministry of Education and Training should include courses on creative thinking, technological innovation, and data analysis in the curriculum from high school to university. Encourage practical education to support students to participate in internship and start-up programs right from the time they are in school to enhance practical experience. The State also needs to strengthen the construction of digital technology infrastructure to improve internet connectivity. Invest heavily in 5G networks, cloud computing, and big data to support a digital working environment for Gen Z. Develop free digital skills training platforms through providing courses on AI, programming, cybersecurity, and data management on public technology platforms.

Regarding proposals for businesses that need to build a flexible and creative working environment. It is possible to apply the Hybrid working model (combining online - offline) to suit the flexible working habits of Gen Z. Create creative workspaces such as: Invest in co-working spaces, innovation labs to encourage creativity at work. Empower Gen Z more to encourage them to propose new ideas, participate in the decision-making process to maximize their creative potential.

In addition, businesses should also train and develop digital competencies by organizing in-depth training courses on digital skills such as data analysis, AI, digital marketing, and programming to improve the technology skills of Gen Z. Conducting mentorship and practical training to connect Gen Z with industry experts to guide them to develop their skills digital and creative forces. Policies to encourage innovation and creativity at work such as: Setting up internal competitions on innovation to encourage Gen Z to come up with initiatives at work. Reward innovative ideas by creating a financial reward mechanism or promotion opportunities for employees who make creative contributions.

Employing Gen Z not only helps businesses increase their work performance but also helps them become a core force in the digital transformation process. To do that, the State needs to have support policies from the root, while businesses need to create a flexible, creative working environment and support training to maximize their potential.

V. CONCLUSION

The study affirms that Gen Z in Vietnam has a solid foundation in creativity and digital competence, but there are still some challenges that need to be overcome. They have an innovative spirit and are willing to experiment with ideas but are not really strong in creating breakthrough ideas. At the same time, the ability to use digital tools is good, but it is still necessary to improve the ability to exploit technology further to serve business needs. These findings are important in developing appropriate training and support programs to comprehensively develop Gen Z's competencies in the business environment and digital technology.

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