2025

Internet Usage Trends in Macao

(Executive Summary)

澳門互聯網研究學會
Macao Association for Internet Research

The data in this report are the accumulated research results from the "The Macao Internet Project" (MIP) conducted by Macao Association for Internet Research (MAIR) and eRS e-Research Lab. For citation, please follow the format below:
Macao Association for Internet Research (2025). *Internet Usage Trends in Macao 2025.* Macao: MAIR.

Know more about MAIR and MIP:

Executive Summary

Major Indicators

The "Internet Usage Trends in Macao 2025" is an annual report on Internet usage in Macao. It is a comprehensive result of the ongoing monitoring of Internet usage and the Information & Communication Technologies (ICT) environment of Macao residents over the past two decades by the Macao Internet Project (MIP).

Since 2001, the MIP has been researching the use and impact of the Internet and other ICT among Macao residents. For the past 25 years, large-scale random telephone surveys and special studies have been conducted, with data collected from a representative sample of the Macao population. The annual survey results present the statistical data and development trends in Internet usage.

The survey for the year 2025 was conducted in April 2025. 1,213 qualified Macao residents aged 6-84 were successfully interviewed. The sampling error is ±2.87% at the confidence level of 95%. The response rate (AAPOR-RR3) is 38% and the cooperation rate (AAPOR-CR3) is 80%. All survey results in this report are weighted by gender and age according to the officially released demographic data, to reduce sampling errors and increase the representativeness of the sample.

			Percentage of residents	Percentage of netizens	Percentage of households
The Internet Use	Internet Adoption Rate		93%	-	-
	Mobile Internet Adoption Rate		91%	97%	-
The Internet Usage Pattern	Computer Ownership	Computer	-	-	83%
		Desktop	-	-	55%
		Laptop	-	-	67%
		Tablet	-	-	71%
	Internet Connection Devices (Top 3)	Mobile phone	91%	97%	-
		Tablet	59%	66%	-
		Laptop	52%	57%	-
	Internet Using Places (Top 3)	Home	82%	90%	-
		Workplace	28%	31%	-
		Any place	24%	26%	-
	Internet Connection Methods (Top 2)	Broadband/Fiber Broadband	76%	85%	-
		Wireless	73%	81%	-

			Percentage of residents	Percentage of netizens
Internet Activity	Social Communication	Overall Use Rate of Social Media	91%	99%
		WeChat	88%	95%(mobile netizens 96%)
		YouTube	74%	80%
		WhatsApp	62%	66%(mobile netizens 67%)
		Facebook	61%	66%
		Instagram	47%	53%
		Xiaohongshu	46%	51%
		TikTok	39%	43%
		Bilibili	27%	30%
		Sina Weibo	20%	23%
		Telegram	19%	21%
		X	19%	21%
		TouTiao	16%	18%
		Snapchat	13%	15%
		Kuaishou	13%	14%
		Threads	11%	12%
		LinkedIn	9%	10%
	News and Information	Reading News	69%	77%
		Making comments in social groups	66%	73%
		Reposting news/comments/messages	36%	40%

			Percentage of residents	Percentage of netizens
Internet Activity	Audio-visual and Entertainment	Watching movies/videos	82%	91%
		Listening to music	73%	81%
		Playing online/mobile games	57%	64%
		Online reading	44%	49%
		Online radio/podcast listening	36%	40%
		Live streaming	4%	5%
	Online Services	E-government (adults)	73%	81%
		Online financing/banking	58%	65%
		Online meals ordering	57%	64%
		Online booking	48%	53%
		Online booking of travel services	47%	52%
		Online medical consultation/hospital registration	43%	48%
		Taxi-hailing	41%	46%
		Online meetings/video conferences	36%	40%

			Percentage of residents	Percentage of netizens
Shopping and Transaction		Online Shopping Rate	72%	77%
	Online shopper: Type of goods or services (Top 3)	Skin care/daily necessities/dietary supplement/cosmetics	-	60%
		Textile/clothing/shoes & socks	-	32%
		Food	-	28%
	Online shopper: Main platforms for online shopping (Top 3)	Taobao/Tmall	-	82%
		Pinduoduo	-	16%
		mFood, Aomi	-	15%
	Online shopper: Ratio of live streaming shopping		-	20%
	Online shopper: Monthly online shopping amount as a percentage of total monthly expenditure (%)		-	13.4
	Online shopper: Average monthly online spending (MOP)		-	1,385
	Online payment		81%	88%
	Mobile payment		81%	88%

			Percentage of residents	Percentage of netizens
Internet Privacy and Security		Evaluating the current state of Internet Privacy and Security in Macao	55%	61%
		Experienced Internet Privacy and Security issues	35%	38%
	Specific issues encountered	Device infected with virus or Trojans	11%	18%
		Account or password stolen	14%	16%
		Internet fraud	16%	15%
		Personal privacy violated	15%	13%

			Percentage of residents	Percentage of netizens
Generative AI		Awareness of Generative AI	71%	78%
		Those who aware of Generative AI: Willingness to use Generative AI in the future	-	58%
		Use Rate of Generative AI	45%	49%
	Those who have used Generative AI: Products or services used (Top 3)	DeepSeek	-	67%
		ChatGPT	-	47%
		Poe	-	20%
	Those who have used Generative AI: Main functions used (Top 3)	Obtaining/searching for information, answering questions		75%
		Text creation/editing/summarization		28%
		Translating		10%
	Those who aware of Generative AI: Evaluation of the degree of help of AI in learning/work (1-5 points)			3.7

Internet Usage Overview

- The Internet adoption rate remains at 93%, with the adoption rate for mobile Internet (91%) nearly matching the overall rate.
- The Internet adoption rate is higher than the global average and is among the top in Asia.
- The Digital Divide Index (DDI) has narrowed to almost zero.
- Leisure and entertainment are the main purposes for netizens, while the lack of skills poses the greatest barrier for non-netizens to go online.

Internet Usage Characteristics

- A high percentage of households own computers, with tablet ownership higher than desktops and laptops.
- Mobile phones are the primary device for netizens, showing a clear trend towards mobile Internet usage.
- Evening is the main time period for netizens to go online, with a significant increase in the online ratio from 3 PM to 8 PM compared to ten years ago.

Internet Activities

- Social Communication
  - Virtually all netizens engage with social media, primarily for communication with friends.
  - Usage rates of WeChat, YouTube, Facebook, and WhatsApp are high and have remained stable in recent years.
  - WeChat has the highest usage rate, with nearly all age groups being WeChat users.

- News and Information
  - In recent years, the rate of netizens browsing news online has remained around 80%, while the rate of making
  - comments in social groups has stayed around 70%, and the rate of reposting news/comments/ messages has been maintained at about 40%.
  - Middle-aged and young people, as well as those with higher levels of education, are more likely to engage in various information-related activities online.

- Audio-visual and Entertainment
  - Watching videos or movies online and listening to music online are the most common audio-visual and entertainment activities for netizens.
  - Minors, young netizens, and student groups have higher rates of engaging in various online audio-visual entertainment activities.

- Online Services
  - Among various activities, minor netizens use online food ordering and online meetings/video conferences more frequently.
  - Middle-aged and young people, those with higher levels of education, and employed netizens have higher rates of using various online services.

- Shopping and Transactions
  - The online shopping rate among adult netizens continues to rise to 81%, with Taobao being the main platform for online shopping, and beauty, daily care & supplements being the most frequently purchased items.
  - Among netizens who shop online, 51% reported an increase in the frequency of online shopping over the past three years. Among netizens who shop online, 20% have engaged in live-streaming shopping.
  - The online payment rate and mobile payment rate among adult netizens have continued to rise to 90%. Mobile payment has become the primary method of payment for both online and offline shopping.

Internet Privacy and Security

- 60% of netizens consider the current state of Internet privacy in Macao to be safe, a proportion similar to the past.
- Nearly 40% of netizens report having experienced Internet privacy and security issues, with the most common issue being devices infected with viruses or Trojans.

Generative AI Usage

- Nearly 80% of netizens are aware of Generative AI, and nearly half of netizens have used it, showing a significant increase in awareness and usage rates compared to 2024.
- Younger and student groups have higher usage rates.
- The frequency of using Generative AI among netizens is mainly once or several times a week.
- DeepSeek is the most commonly used Generative AI by netizens, followed by ChatGPT.
- The most used function of Generative AI is obtaining/ searching for information, answering questions, followed by text creation/editing/summarization.
- The average rating for the helpfulness of Generative AI in learning/work is 3.7 points (1-5 points), with more frequent users giving higher ratings.
- Nearly 60% of netizens are willing to use Generative AI in the future, with the rate of willingness to use it higher than in 2024.
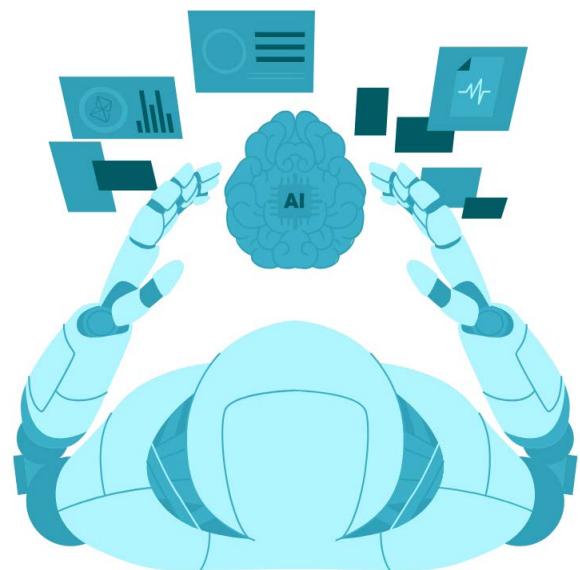
Conclusion

3.1 Internet Penetration Remains High at 93% Emphasizing the Need for Cybersecurity Protection

The Internet continues to gain widespread popularity in Macao, with the Internet adoption rate among residents stabilizing at 93% in recent years, placing Macao in a leading position in Asia and well above the global average (68%). Among different demographic groups, the Internet usage rate among highly educated individuals (with tertiary education or above) reaches 100%, while it is 69% for those with primary education or below. Significant differences are observed across age groups, with Internet usage among middle-aged and elderly populations showing continuous growth over the years. The Internet adoption rate among the 41-60 age group has risen from 11%-20% in 2001 to 95%-99%, while the rate for those aged 60 and above has increased from 3% to approximately 70%, highlighting the development of Internet accessibility for the elderly. Additionally, the digital divide in Internet adoption remains at a near-zero level, comparable to 2024, indicating a significant narrowing of gaps in Internet access and usage across different groups, with almost equal opportunities for online access.

Mobile Internet has become deeply integrated into residents' lives. In recent years, the mobile Internet adoption rate (91%) in Macao has approached the overall Internet adoption rate (93%), with smartphones becoming the primary device for Internet access, while desktop computer usage has gradually declined. Beyond traditional devices, the usage rates of smartwatch (21%) and televisions (40%) as Internet access devices have also been steadily increasing. Furthermore, homes remain the primary location for Internet usage. Compared to a decade ago, users' online time now shows a trend of "concentration in the evening and growth during the day," aligning with their daily routines. The increase in daytime usage also reflects the diversification of Internet application scenarios.

Internet users engage in a variety of online activities, with the Internet becoming their primary means of accessing information, social interaction, entertainment, consumption, work, and learning. Leisure and entertainment are the main purposes for 87% of users, followed by information access (32%) and communication (28%), indicating the dominant role of the Internet's leisure attributes. Although educational, shopping, and financial management functions account for less than 10% of usage, they remain important purposes.

As Internet adoption and applications expand, online privacy and security issues have gradually become a focal point of public concern, with an increasing demand for personal information protection and cybersecurity. Data show that in 2025, 61% of users rated Macao's online privacy situation as secure, with the rate remaining stable at around 60% in recent years. There are some differences in perceptions of online privacy and security across different demographic groups, with teenagers feeling the most secure, while less than half of those aged 55 or above share this sentiment, reflecting greater concerns about online risks among older populations. In 2025, 38% of users reported experiencing online privacy or security issues, including device viruses/malware, stolen accounts or passwords, encountering online scams, and personal privacy violations. This rate has decreased compared to 2024 (49%), suggesting possible improvements in users' protective measures or awareness. Notably, thanks to anti-fraud campaigns and technical interception by relevant organizations, the percentage of users encountering online scams dropped from 31% in 2024 to 15% in 2025. The types of online privacy and security issues experienced by users also vary across demographic characteristics. Highly educated and employed individuals are more likely to encounter security issues, while younger individuals and those with primary education or below report the lowest rates of experiencing risks, possibly due to their limited depth and breadth of Internet usage, making it harder for them to detect risks.

Implications for Society and Government: Strengthening Digital Inclusion and Focusing on Youth Internet Literacy Development

Macao's Internet usage is characterized by "high penetration and universal age coverage." Although the digital divide has nearly disappeared, future efforts should focus on enhancing digital inclusion for the elderly and those with lower education levels, creating an Internet environment suitable for the elderly. Consideration could be given to establishing community-based "Silver Digital Learning Centers," integrating senior activity centers and libraries to provide large-font interface tutorials, anti-fraud practical courses, and voice-assisted tools. Meanwhile, while Macao has achieved a high Internet adoption rate, attention must still be paid to the needs of non-Internet users, with skill deficits being their primary barrier to Internet access. This highlights the importance of basic skill training. Various sectors of society can offer free or low-cost digital foundational courses to help vulnerable groups acquire basic Internet skills, enabling more residents to access the Internet.

Moreover, in an era where Internet usage is nearly universal, the concept of Internet literacy is continuously evolving, and its importance is increasingly significant, especially for young netizens. Future society should actively assist young people in enhancing their Internet literacy, mastering relevant knowledge and skills of the Internet, helping them face various challenges and risks, and thereby better seizing opportunities for comprehensive personal development and growth.

Strengthening Internet Safety Education and Building a Cybersecurity Protection System

Cybersecurity threats are becoming increasingly diverse and concealed. By 2025, device infections and account theft in Macao remain prominent issues, with the elderly also expressing significant cybersecurity concerns. Additionally, generative AI deepfake technology (referring to the use of AI to create fake images or voices) can realistically mimic specific individuals' appearances and voices, and there have already been AI-related fraud cases in society that require attention. In the future, on one hand, the government could disseminate "anti-fraud scenarios" through television and community lectures, focusing on identifying phishing links, counterfeit calls, and AI deepfake frauds, and issuing public alerts for high-frequency or new types of fraud patterns. On the other hand, businesses also need to implement protective responsibilities by regularly organizing cybersecurity training for employees. Simultaneously, various sectors of society should participate in educational campaigns, focusing particularly on the Internet use of youth and student groups, with home-school connections helping children surf the Internet safely. Additionally, the elderly need to learn basic anti-fraud knowledge, and community centers and senior associations can hold lectures and activities to assist the elderly in enhancing their cybersecurity awareness, aiming for the goal of safe Internet use for all.

3.2 Social Media Applications are Diversified
Content Dissemination Needs to Focus on Differentiation

The use of social media in Macao is characterized by a coexistence of high concentration and diversification. The usage rate of social media among netizens is as high as 99%, indicating that almost everyone uses it, and it has remained stable over the past three years, showing that social media has become an indispensable part of the daily lives of Macao residents. Among various social media platforms, WeChat dominates, with a usage rate close to 90% or above across different demographics, and it is the most used social media platform among people aged 55 or above. WeChat has become the primary communication tool across all age groups.

Besides WeChat, the usage rates of other major social media platforms remain stable, with YouTube ranking second (74% among residents, 80% among netizens), indicating the significant influence of video content on the Internet in Macao. This is followed by WhatsApp and Facebook, both with usage rates exceeding 60%, and they are more popular among young and middle-aged adults, highly educated individuals, and employed people. It is noteworthy that although the usage rates of emerging social media platforms such as Xiaohongshu and TikTok are not as high as the leading platforms, their usage rates among netizens also exceed 40%, and their influence may further increase in the future. Gender, age, and education level significantly affect social media preferences. For instance, underage netizens have a higher usage rate of YouTube, while females, those aged 18-54, and highly educated netizens have a higher usage rate of Xiaohongshu. People aged 18-34 and highly educated individuals prefer platforms such as Instagram, TikTok, Bilibili, Sina Weibo, Threads, and Telegram.

The primary purpose of Macao netizens using social media is to communicate with friends (48%), followed by watching live streams/videos (35%) and browsing information other than news (27%). This shows that the core function of social media remains to maintain interpersonal relationships, but leisure entertainment and information browsing are also important needs for netizens.

Implications for Government and Business: Deepening the Application of Social Intelligence and Developing Differentiated Content Dissemination Strategies

The thriving development of Macao's social media ecosystem offers new opportunities for both the government and businesses to better serve residents. Given the current 99% social media usage rate among Macao netizens and the dominant presence of WeChat alongside a diverse range of platforms, both sectors can leverage their respective strengths to enhance service efficiency.

For government departments, it is advisable to make fuller use of social media to improve public service efficiency. Platforms like WeChat can serve as primary traffic inlets, boosting the dissemination of public information and facilitating resident services such as appointment scheduling, policy inquiries, and fee payments. Additionally, a multi-platform government communication system can be established, utilizing short videos, live streams, and other formats for policy interpretation and promotion. Tailored dissemination strategies should be employed for different target groups: for instance, in-depth policy analyses can be shared on Facebook to attract highly educated audiences, concise information can be conveyed to younger demographics through Instagram Stories, and city image content can be curated on Xiaohongshu to appeal to younger and female audiences. Moreover, with the rapid advancement of generative AI, the application scenarios for social intelligence platforms are expanding. The government can deepen their use of social intelligence by employing tools like smart listening to monitor public sentiment or policy feedback on social media in real-time, thereby staying attuned to online public opinion. They can also utilize intelligent writing to generate customized content, making policy information more accessible and comprehensible.

For the business sector, social media is a crucial channel for elevating service standards and driving industrial upgrading. Companies can establish comprehensive digital service systems by deeply integrating social media into customer service processes. Furthermore, they can develop differentiated content dissemination strategies based on user profiles and behavioral characteristics across various platforms to enhance marketing conversion efficiency. Social intelligence can also be utilized to promptly gauge public sentiment towards products, thereby effectively improving service efficacy. Lastly, generative AI can be employed to enhance user experience on social media through personalized content, intelligent recommendation systems, and automated customer service, thereby strengthening interactions with potential clients.

3.3 Online Shopping Expands Rapidly Mobile Payments Drive Integration

The Internet not only provides Macao residents with diversified information, social, and entertainment options but also drives the comprehensive digitization of various livelihood services, seamlessly connecting online and offline life, further enhancing convenience and efficiency. Among various online services, the adoption rate of e-government is relatively high, with the Internet usage rate among adult netizens increasing significantly from 43% in 2017 to 81% in 2025, and the satisfaction score reaching 7.3 out of 10, indicating significant achievements in government digital services. Among other online services, the rate of netizens using online financial/banking services increased by 17 percentage points from 48% in 2018 to 65%; the rate of using reservation services increased by 13 percentage points from 40% in 2018 to 53%; the rate of using ride-hailing services increased by 19 percentage points from 27% in 2018 to 46%; the rate of using online food ordering increased by 17 percentage points from 47% in 2020 to 64%; and more than 40% of netizens conducted hospital registration/consultation (48%), booked travel services (52%), and held meetings/video conferences (40%) online. Additionally, the use of practical services shows a trend towards younger users, with underage netizens having higher usage rates in online food ordering (35%), online ride-hailing (15%), and video conferencing (26%) compared to other services, reflecting their demand for convenient life applications.

For Macao residents, online shopping has shifted from a niche activity to a common consumer habit. Data show that the rate of adult netizens engaging in online shopping continues to rise, reaching 81% in 2025, a significant increase from 63% in 2019. Among those who shop online, the average monthly spending accounts for 13% of total monthly expenses, and 51% report an increase in the frequency of online shopping over the past three years, reflecting the continued acceleration of online consumption post-pandemic and the popularization of online shopping behavior. In terms of online shopping platforms, mainland e-commerce has a strong influence on Macao's online shopping market, with 82% of online shoppers prefer Taobao/Tmall, followed by Pinduoduo (16%). Local online shopping platforms are mainly food delivery platforms, including Aome and mFood (both at 15%), related to the growing demand for localized services. Moreover, the rise of live-streaming shopping in recent years has seen 20% of online shoppers purchasing through live streams, with higher participation among women and middle-aged groups. Some netizens reported watching live streams without making purchases (29%). Additionally, 21% of netizens indicated that they are prone to impulsive purchases during online shopping (21%), showing that promotional strategies may influence consumer decision-making.

In terms of payments, the rate of adult netizens using online payments reached 90% in 2025, nearly doubling from 49% in 2017. The rate of mobile payments among adult netizens approached 89% , a significant increase from 20% in 2018. The mobile payment rate exceeded 60% across different demographic groups, and 88% of netizens preferred mobile payments in physical stores, significantly leading over traditional methods such as cash (27%) and credit cards (8%). This indicates that mobile payments have become the mainstream payment method for Macao residents, possibly related to consumption reward activities launched by relevant departments (mobile payments can draw electronic discounts). Furthermore, the willingness of adult netizens to use mobile payments in the future continues to rise, reaching 94% in 2025, while concerns about mobile payment security dropped to an all-time low of 39% in 2025. It is evident that as mobile payments become more popular, netizens' willingness to use them increases, and security concerns gradually decrease.

Implications for Society, Government, and Business: Promote Deep Integration of Online and Offline Services, Continuously Improve Service Quality.

With the in-depth development of the digital economy, online services have become an important engine for the progress of Macao society. Currently, residents' reliance on Internet services is deepening, which not only reshapes traditional consumption patterns but also brings new development opportunities to various industries. In the future, Macao needs to grasp the opportunities of digital transformation as a whole. The government can continue to optimize e-government platforms, expand service coverage, enhance the convenience and satisfaction of services, and simplify processes for high-frequency services (such as online reservations and document submissions) to improve efficiency. At the same time, small and medium-sized enterprises are encouraged to actively embrace new technologies, improving service quality through big data analysis and intelligent applications. All sectors of society should work together to strike a balance between convenience, safety, and inclusiveness through government-business-society collaboration, promoting the deep integration of online and offline services, and injecting new momentum into the diversified development of Macao's economy and the enhancement of digital competitiveness.

Continuously Innovate Business Models, Transform Data Insights into Precise Marketing.

The popularity of online shopping and mobile payments is increasingly evident. The business community needs to face the digital wave head-on, continuously innovate business models, strengthen the integration of online and offline channels, deepen localized services, focus on user experience, and continuously innovate in areas such as product supply, payment processes, and logistics distribution to meet the growing demand for online shopping and the trend towards payment convenience. Additionally, enterprises need to fully utilize digital means to transform data insights into precise marketing. For example, using big data, generative AI, and other technologies to analyze consumer behavior and characteristics, optimize their products and internal processes, and use technology to enhance shopping scenarios, thereby improving user experience and increasing corporate competitiveness. Furthermore, the rise of live shopping means that companies can explore emerging sales models, considering expanding brand influence through live marketing while designing more attractive promotional strategies for target user groups. Given that some netizens are prone to impulsive purchases during live shopping, enhancing interactivity in live sessions is crucial. Techniques such as limited-time discounts and limited-quantity products can be used to stimulate consumer desire.

3.4 Generative AI Rises Prominently Collaboration Drives AI Innovation

In recent years, Generative AI technology has continued to break through, upgrading from multimodal large models to real-time interactive applications, driving global industrial transformation and becoming one of the core driving forces of digital economic development. By 2025, the awareness rate of Generative AI among Macao netizens reach 78%, showing a rapid growth trend compared to 2023 (50%) and 2024 (64%). The usage rate of Generative AI among netizens is also increasing rapidly, with 49% in 2025 compared to 17% in 2023 and 27% in 2024, indicating that the influence of Generative AI in Macao is continuously expanding. It is entering a period of rapid expansion in Macao, resonating with the global technology boom. The core users of Generative AI consist of students, highly educated individuals, and young groups, which highly overlap with the high-awareness groups. Additionally, the usage rate among those aged 55 or above and homemakers/retirees is less than half of the overall level, showing significant application barriers for Generative AI.

Among the Generative AI tools used by Macao netizens, DeepSeek ranks first with a usage rate of 67%, followed by ChatGPT (47%), Poe (20%), Doubao (13%), and Kimi (7%). The most common frequency of using Generative AI among netizens is once or several times a week (37%), followed by once or several times a month (21%), once every few months (18%), and once or several times a day (15%). The most used function by netizens using Generative AI is "obtaining/ searching for information and answering questions," while the usage rates of other functions are relatively low. This reflects that although Generative AI has become more popular than before, its use among some netizens has not yet become normalized and is still in the trial and superficial use stage, with both frequency and depth of application needing improvement.

By 2025, 58% of netizens are willing to use Generative AI, a significant increase from 33% in 2023 and 49% in 2024, with young groups and highly educated individuals showing relatively higher willingness to use. The overall average evaluation of netizens on the help of Generative AI to learning and work is 3.7 points (out of 5), indicating that most netizens believe AI is helpful for learning/work, with student groups giving higher evaluations. Moreover, the future willingness to use Generative AI among netizens who have used it before (75%) is much higher than those who have not (30%). The higher the frequency of using Generative AI, the higher the evaluation of its helpfulness, with the group that uses it "once or several times a day" scoring 4.4 points, significantly higher than the 2.4 points of the group that "hardly uses it," both reflecting the characteristic of Generative AI being driven by user experience for continuous application.

Implications for All Sectors of Society: Generative AI Drives the Development of the Digital Economy and Collaborates to Create an Environment for AI Applications.

The rapid development of Generative AI technology is profoundly reshaping the global industrial landscape and innovation ecosystem. As seen from Macao's development trend, this technology has quickly shifted from cognitive popularization to practical applications, demonstrating its strong potential to promote the development of the digital economy. Currently, although the penetration rate of Generative AI in Macao has increased, regular use has not yet taken shape, indicating that there may be certain disconnections between technology and the needs of people's livelihoods. All sectors of society should strengthen discussions and applications of Generative AI.

For the government, it is advisable to actively explore scenarios for the practical application of AI, prioritizing the promotion of AI application demonstrations in areas such as education and healthcare, transforming AI from a "novel tool" to a "daily infrastructure," and allowing the technology to benefit more residents. Additionally, due to the changes in work patterns and the job market brought by Generative AI, the government also needs to pay attention to the potential impact of new technologies on Macao's employment structure, proactively planning a labor skills training system to enhance residents' employment competitiveness.

For the academic community, how to effectively integrate Generative AI into teaching practices to innovate educational models, and how to cultivate AI literacy from basic education while promoting AI applications in society, are important topics worthy of deep thought and exploration. Systematically developing students' technical application and innovation capabilities is also crucial.

For enterprises, it is essential to pay special attention to the issue of accessibility after the practical application of technology, striving to lower the technical usage threshold for elderly and low-educated groups to ensure technological inclusivity. It is worth noting that the rapid rise of innovative AI tools like DeepSeek is changing the market landscape. Enterprises can innovate based on local needs, developing more practical scenario-based solutions, potentially forming unique competitive advantages.

Looking ahead, the development of Generative AI will focus more on value orientation and practical application effectiveness. This requires the government, academia, and enterprises to break through conventional thinking, establish more open and flexible collaboration models, create an environment conducive to innovation, and strengthen the connection between basic and applied research to develop products and services that truly create value. In this process, it is essential to maintain a balance between technological development and humanistic care. Through the positive interaction of government guidance, academic support, and enterprise practice, ensure that AI innovation achievements benefit the broad population of Macao residents, creating a virtuous cycle where technological progress and social value creation complement each other.