

Research Article

Factors Influencing Youth's Perception of Artificial Intelligence from the Perspective of Employment

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Abstract

The global unemployment rate in youth present a much bigger increase compared to adults, which indicates the exclusiveness young people have suffered from the job market. AI, as one of the contributors, will worsen youth's status by being prioritized as one of the hiring factors. In this case, a survey of 520 respondents of various ages is conducted to check different performances of using AI and viewing AI, especially those who are under 25 years old. By using frequency count, response rate and penetration rate and cross (chi-square) analysis, we have come to three results: 1) young groups present high acceptance towards using AI, both from their frequency of using relevant tools and the areas these tools are applied to; 2) young people share the worries that AI will replace the repetitive labor positions, only after the exposure of personal information; 3) Gen AI tools youth use and application areas are in accordance with the way how they spend their time, so school is the most favorable way for knowledge acquisition. It is easy to infer, based on the above results, that young generation has a rather ambivalent attitude towards AI. On one hand, they are used to using AI and Gen AI tools for the improvement of learning, working or even entertainment. On the other hand, they clearly know how AI will do harm to their lives and what AI's disadvantages are. This research thus gives rise the emergency of integrating relevant AI acquisition into the present education system and future researches are recommended to explore a successful design of AI acquisition in schools at all levels.

Keywords

Youth, Perception, Artificial Intelligence/AI, Influence Factors, Job Market

1. Introduction

According to *Global employment trends for youth 2024* published by International Labour Organization (ILO). In 2023, 64.9 million youth¹ were unemployed worldwide, contributing to the 13% global youth unemployment rate that year. Although encouraging rate was the lowest in the past 15

years, a much larger share (20.4%) of youth were not in employment, education or training. Noticeably, the ratio of youth-to-adult unemployment rate saw an increase from 2.6% in 2000 to 3.5% in 2023 and it is between 2 and 6 times higher than adult rates, [1] Of all the reasons leading to the exclu-

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siveness young people have suffered, the rapid development of artificial intelligence (AI) is one of it. According to 2025 *AI Skills Report* from Pluralsight, 50% companies prefer to hire job candidates with AI skills. 95% of organizations regard AI proficiency as one of the hiring factors. Under the circumstance, exploring the influence AI has exerted on the perception of people, especially that of youth group, is of great importance for schools at all levels to conduct future training related to AI skills.

2. The Origin Development of AI and Its Growing Influence on Job Market

Kaplan and Haenlein (2019) define AI as “a system’s ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation”. [2] Russell and Norvig (2020) give a modern conception of AI as “agents” or systems for it can perform different actions based on the change of the environment. [3] Buchanan (2005) regards AI as a tool to influence job displacements, failings in automated systems and privacy protections. [4].

As algorithm gains its advancement, the byproducts of its application in various fields-generative AI (Gen AI)-has come to the spotlight. By taking advantage of models as foundations, Gen AI can create contents in formats such as text, image, video or sound. Chat-GPT and Gemini, as two typical representatives of large language models (LLMs), have soon gained its widespread applications. Gilbert (2023) finds out three effects AI has exerted on job market: job displacement, augmentation and creation. [5] Hui, X. et al (2025) examine the short-term effects of the recently released Gen AI tools on the employment outcomes of freelancers and find suggestive evidence that top freelancers are disproportionately affected by AI. [6] Frey and Osborne (2023) describe Gen AI models as “key bottlenecks to the automation of social tasks” with the increasing value of in-person and social interactions [7]. It is true that Gen AI has given rise to a better work experience in quality, quantity, productivity and even cost savings. But at the same time, its potential threat towards job security has also aroused discussions.

Some researches give alarm to unstoppable replacement of AI and disappearing jobs. According to the *Future of Jobs Report 2023*, 50% of employers worldwide expect AI to promote job growth in the next 5 years. The fastest-growing

jobs by 2027, for employers, will be AI and machine learning specialists, sustainability analysts and business intelligence analysts. [8] Deloitte (2023) holds that AI can automate and augment administrative and problem-solving tasks in cognitive jobs like accounting, in social jobs like sales and in physical jobs like plumbers. [9].

While more researches focus on the positive news for employees. On one hand, more jobs can be generated by AI. Acemoglu and Autor (2010) assume that most routine manual and cognitive work was going to be affected by AI and automation, predicting that this was going to create an increasing demand for creative jobs and data analysts. [10] Gmyrek, Berg and Bescond (2023) do the research and conclude that since Gen AI could have significant implications for a wide range of work-related tasks, it may affect job demands. [11] According to *Jobs of Tomorrow: Large Language Models and Jobs*, AI-induced employment will also cover new occupations, such as prompt engineers, AI modellers, data trainers, as well as governance and ethics specialists. [12] On the other hand, the influence of AI would not be as big as it is predicted. LinkedIn (2023) finds out that some particular jobs will be “insulated” from AI in areas like healthcare, construction or hospitality. [13].

Empirical research is also available for exploring the connection between AI using and job hunting. Engberg, E. et al (2025) investigate the impact of AI on employment in Sweden and conclude that AI exposure aligns with greater use of AI services and more possibly a AI-skilled worker will be hired. [14].

3. Research

To find out the what has influenced the youth’s perception towards AI from the perspective of employment, we conduct a survey about the AI’s uses and applications on 520 people of various ages and different social statuses by using stratified sampling method in March 2025. A total of 585 questionnaires were collected, among which 520 were valid, with an effective response rate of 88.9%. After a careful review from experts and pre-test, the reliability and validity of the questionnaires are both high. Among the valid 520 respondents, the group under the age of 25 (inclusive) (U25)² accounts for 42.11%. 23.65% of the respondents are yet to be employed. 58.85% of respondents own a diploma higher than Bachelor Degree.

Table 1. Frequency Results of Basic Information.

Questions	Options	Frequency	Percentage (%)
How old are you?	18 years and under (hereafter U18)	58	11.15
	19-25 years (inclusive) (hereafter B19-25)	161	30.96
	26-35 years (inclusive) (hereafter B26-35)	134	25.77

Questions	Options	Frequency	Percentage (%)
What's your gender?	36-45 years (inclusive) (hereafter B36-45)	98	18.85
	46-55 years (inclusive) (hereafter B46-55)	46	8.85
	56 years and over (hereafter O56)	23	4.42
	Man	277	53.27
	Woman	243	46.73
	Students (including undergraduate, postgraduate and doctoral students)	123	23.65
	Teachers/researchers	60	11.54
What is your occupation?	Enterprise employees	156	30.00
	Professional	102	19.62
	Public functionary	50	9.62
	Retiree	8	1.54
	None Of the Above	21	4.04
What is your education level?	High school and below	45	8.65
	Graduate from vocational school	169	32.50
	Bachelor Degree	244	46.92
	Master Degree	42	8.08
	Doctoral Degree	20	3.85
Amount to		520	100.0

4. Analysis

4.1. Different Ages' Performances on Using AI and Acquiring AI

Based on the data from the survey, we have done the cross analysis between different ages and their corresponding performances on the frequency of using Gen AI tools and their desired way of AI acquisition.

Table 2. Cross (chi-square) Analysis Results.

Questions	Options	Age (%)						Amount to	χ^2	p
		18 years and under	19-25 years (inclusive)	26-35 years (inclusive)	36-45 years (inclusive)	46-55 years (inclusive)	56 years and over			
How often do you use AI tools?	Multiple times/day	21(36.21)	70(43.48)	31(23.13)	26(26.53)	9(19.57)	13(56.52)	170(32.69)	39.152	0.006**
	Several times/week	19(32.76)	56(34.78)	53(39.55)	41(41.84)	15(32.61)	6(26.09)	190(36.54)		
	Several times/month	8(13.79)	17(10.56)	20(14.93)	18(18.37)	11(23.91)	1(4.35)	75(14.42)		
	Rarely used	4(6.90)	9(5.59)	20(14.93)	10(10.20)	7(15.22)	2(8.70)	52(10.00)		
	Never used	6(10.34)	9(5.59)	10(7.46)	3(3.06)	4(8.70)	1(4.35)	33(6.35)		
Amount to		58	161	134	98	46	23	520		

Questions	Options	Age (%)						Amount to	χ2	p
		18 years and under	19-25 years (inclusive)	26-35 years (inclusive)	36-45 years (inclusive)	46-55 years (inclusive)	56 years and over			
What are the ways/channels you hope to acquire Gen AI knowledge in the future?	School teaching and practice	38(65.52)	75(46.58)	48(35.82)	40(40.82)	21(45.65)	13(56.52)	235(45.19)	26.756	0.031*
	Self-study	12(20.69)	54(33.54)	44(32.84)	29(29.59)	11(23.91)	7(30.43)	157(30.19)		
	Job (part-time) training	8(13.79)	24(14.91)	34(25.37)	26(26.53)	13(28.26)	2(8.70)	107(20.58)		
	None Of the Above	0(0.00)	8(4.97)	8(5.97)	3(3.06)	1(2.17)	1(4.35)	21(4.04)		
Amount to		58	161	134	98	46	23	520		
* p<0.05 ** p<0.01										

Based on cross (chi-square) analysis of the respondents' ages and frequency of using Gen AI tools, there is a significant difference at the 0.01 level ($\chi^2 \approx 39.152$, $p=0.006<0.01$). 56.52% of respondents from O56 and 43.48% from B19-25 share the choice of "multiple times/day", showing significantly a higher percentage than the average level (32.69%). In choosing "several times/week" (average level 36.54%), B36-45 tops at 41.84%. In the frequency rate of "several times/month", B46-55 takes up 23.91%, which is much higher than the average level (14.42%).

Based on cross (chi-square) analysis, results of the respondents' ages and the way they prefer to acquire AI knowledge show a significant difference at the 0.05 level ($\chi^2 \approx 26.756$, $p=0.031<0.05$). U18 and O56 hold preference of "school" as the way to acquire Gen AI relevant knowledge, the former showing up at 65.52% whereas the latter reaching at 56.52%, both of which are significantly higher than the average level (45.19%). "Job (part-time) training", with its average level at 20.58%, enjoys the priority in both B46-55 and B36-45 groups with 28.26% and 26.53% respectively.

It is not hard to draw the conclusion that, based on the

above analysis, the performances of different ages vary in the frequency of using Gen AI tools and the way of AI acquisition. The younger one is, the more frequently one will use Gen AI relevant tools and the more one will rely on school for knowledge acquisition. In the respondents, those who are between 36 to 55 years old show a clear preference to "job (part-time) training" for knowledge input probably because workplace is more accessible than other ways for employees in such age groups.

4.2. Youth's Opinions Towards AI's Influence on Job Market

To find out the opinions young people share towards the AI's influence on job market, A single choice of "Which of the following models do you think AI will have more impact on the future job market?" is set. Based on the 219 respondents from U18 and B19-25, 36.07% think that AI will replace the repetitive labor positions. Only 9.13% respondents think the job market will remain still with suffering little influence from AI.

Table 3. Frequency Count of the Views AI will Exert on Future Job Market.

Questions	Options	Frequency	Percentage (%)
Which of the following models do you think AI will have more impact on the future job market?	Create more emerging professions (such as AI trainers)	61	27.85
	Replace repetitive labor positions	79	36.07
	Human machine collaboration has become mainstream	48	21.92
	The job market is not affected	20	9.13
	Unpredictable	11	5.02
Amount to		219	100.0

4.3. Youth's Behavior Patterns and Their Potential Worries

To go deeper in figuring out youth's habits of using Gen AI tools and their attitude towards AI's future development, we set three multiply choices as "Which Gen AI tools have you used? " "In which area(s) do you mainly use Gen AI tools? "

"Which of the following do you agree with about AI? "

With doing the response rate and penetration rate analysis of the above three questions, we aim to explore whether a shared rule is available in young group regarding the specific tools they use and their possible views towards AI's development.

Table 4. Response Rate and Penetration Rate Summary of the Use of Gen AI Tools.

Options	Respond		Prevalence (n = 219)
	n	Response ratio	
Natural language processing (ChatGPT, Wenxin Yiyang)	143	19.59%	65.30%
Voice assistants (Siri, Xiao Ai)	123	16.85%	56.16%
Image generation tools (Midjourney, DALL E)	102	13.97%	46.58%
Data analysis tools (e.g. Deepseek)	138	18.90%	63.01%
Intelligent recommendation system (e-commerce/video platform)	85	11.64%	38.81%
Academic research assistant (literature analysis, code generation)	61	8.36%	27.85%
Smart home devices (smart speakers, robot cleaners)	75	10.27%	34.25%
None Of the Above	3	0.41%	1.37%
Note: When $\chi^2 = 164.312$ p = 0.000			

Among the commonly used Gen AI tools, it is clear to see that natural language processing is the most popular choice with 65.30% as its prevalence. Such a result is consistent with an increasing reputation Chat-GPT has gained around the globe and its application areas the young people can apply to.

Moreover, data analysis tools and voice assistants also win the acknowledgement with 63.01% and 56.16% respectively, which is in accordance with an increasing demand of software in phones, personal computers and even smart watches.

Table 5. Response Rate and Penetration Rate Table of the Areas in which Gen AI tools Have Been Used.

Options	Respond		Prevalence (n = 219)
	n	Response ratio	
Learning (literature retrieval, language learning)	133	19.36%	60.73%
Work (copywriting, data analysis)	137	19.94%	62.56%
Life services (smart home, shopping recommendation)	107	15.57%	48.86%
Entertainment (games, AI painting)	121	17.61%	55.25%
Public safety (face scanning, temperature measurement)	106	15.43%	48.40%
Academic research (experimental design, paper writing)	79	11.50%	36.07%
None Of the Above	4	0.58%	1.83%
Note: When $\chi^2 = 128.556$ p = 0.000			

To check out the most commonly used areas in which Gen AI tools have been applied to, learning and working are the top two with 60.73% and 62.56% supporters respectively. Another choice dominating young people is entertainment with 55.25% as its prevalence. What worth noticing is the prevalence of life services and public safety. Even though Gen

AI tools are more commonly seen in public devices, especially during the Pandemic. However, the gap between public uses (48.40%) and learning uses (60.73%) indicates that young groups are more familiar and more concerned with technological updates in occasions where they spend most of their time, such as learning, working and entertainment.

Table 6. Response Rate and Penetration Rate Summary of Potential Worries of AI's Future.

Options	Respond		Prevalence (n = 219)
	n	Response ratio	
Privacy and data security (personal information falling into the wrong hands, resulting in serious economic losses and invasion of personal privacy)	178	18.39%	81.28%
Jobs are replaced (some low-skilled occupations are replaced by AI automation, resulting in higher unemployment and poverty rates)	135	13.95%	61.64%
Over-dependence can lead to a lazy mind and a stifling of creativity and imagination	122	12.60%	55.71%
The risk of online fraud is increasing (such as AI-generated GIFs and simulated voices for online fraud)	132	13.64%	60.27%
Add to the psychological problems (addiction to virtual friends)	96	9.92%	43.84%
The technology gap is widening (the gap between AI developed regions and AI underdeveloped regions is gradually increasing)	90	9.30%	41.10%
Ethical issues in academia (e.g. wider use of AI for writing papers)	119	12.29%	54.34%
Technical loss of control (caused by human factors or missing data samples, resulting in algorithmic bias)	96	9.92%	43.84%
Note: $\chi^2 = 47.785$ $p = 0.000$			

In the multiple choices concerning potential worries of AI's future, 81.28% agree on "Privacy and data security", which overwhelms other worries. What comes next is that 61.64% of youth choose "Jobs are replaced", 60.27% choose "The risk of online fraud is increasing", 55.71% worry "over-dependence lead to lazy mind" and 54.34% pick up "ethical issues". In the above choices winning over 50% of agreement, it is not hard to see that even though young people rely on AI and are familiar with AI, they have clear awareness of the negative effect resulting from the development of AI.

5. Conclusion, Limitations and Recommendations

It is not hard to see that, from the above analysis, young generation has a rather ambivalent attitude towards AI. On one hand, they are used to using AI and Gen AI tools for the improvement of learning, working or even entertainment. On

other hand, they clearly know how AI will do harm to their lives and what AI's disadvantages are. To better explain such a dilemma is that such a generation is born in an Internet age. The pace of new technological creations is unprecedented in the past 20 years, which contributes to their dependence on new technological inventions for an ever-changing world. Therefore, compared to other age groups, those who are under 25 years old show a rather higher acceptance of AI. Their familiarity of AI is in accordance with their ways of spending their time. So the tools they have used are often what their daily occasions call for. Besides, the invention of cellphone and computer give rise to further Gen AI creations and thus lay the foundation of immediate experience of learning and using. However, an objective high acceptance of AI doesn't necessarily mean a positive recognition. With a clear awareness of AI's disadvantages, not only do the young groups worry the exposure of personal information and the possible replacement of their work, but also do they prioritize school as the preferable way for self-improvement in AI.

Therefore, based on the habit patterns they show and the

views they share, it is not hard to see the emergency of integrating AI knowledge into the present education system. The distribution of questionnaires is realized on-line, so the ages and social status of the respondents varies. In terms of the data concerning young people, further research can cover more samples. Future researches are recommended to explore

a successful design of AI acquisition in schools at all levels.

Notes

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Abbreviations

ILO	International Labour Organization
AI	Artificial Intelligence
GenAI	Generative AI
LLMs	Large Language Models
U18	The Group of Respondents Who Are 18 Years and Under
B19-25	The Group of Respondents Who Are 19-25 Years (Inclusive)
B26-35	The Group of Respondents Who Are 26-35 Years (Inclusive)
B36-45	The Group of Respondents Who Are 36-45 Years (Inclusive)
B46-55	The Group of Respondents Who Are 46-55 Years (Inclusive)
O56	The Group of Respondents Who Are 56 Years and over

Author Contributions

Ruijia Xie: Funding acquisition, Project administration, Writing – original draft, Writing – review & editing.

Daming Zhao: Data curation, Formal Analysis, Investigation.

Hong Qiu: Methodology, Resources, Software.

Muchen Li: Data curation, Supervision.

Conflicts of Interest

The authors declare no conflicts of interest.

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1 Based on ILO modelled estimates and available national labour market statistics, the term “youth” refers to the age group of 15 to 24 years old whereas “adults” refers to the group whose age are 25 and over.

2 U25=U18+B19-25, which means the total of the group 18 years and under plus the group between 19-25(inclusive).