Factors Influencing University Selection and Future Educational Trends: A Survey of Thai High School Students Applying to Study at KMUTT

Somsri Binraman, King Mongkut's University of Technology Thonburi, Thailand
Suchapa Netpradit, King Mongkut's University of Technology Thonburi, Thailand
Chanin Tungpantong, King Mongkut's University of Technology Thonburi, Thailand

The Asian Conference on Education 2024
Official Conference Proceedings

Abstract
This study investigates the factors influencing Thai high school students' university selection decisions and their perceptions of future educational trends. A survey was conducted among 139 applicants of KMUTT to technology-related programs in the 2023 academic year. The main respondents were female students (57%) recent high school graduates (around 18 years old) from public schools (86%) from all over Thailand. Regarding academic background, 45.32% graduated from the Science-Math stream, followed by Arts-Mathematics (25.18%) and Language Arts (14.39%). The dominant student interest resided in science and technology fields integrated with art and design (43.17%). A significant portion (33.09%) expressed interest in Education or Industrial Education, Engineering (9.35%) and Business Management (5.04%). Architecture, Fine Arts, Communication Arts, Mass Communication, and Law drew interest from a smaller percentage of students. Perceptions of future educational trends were largely consistent. Most students anticipated a shift towards blended learning, a focus on analytical thinking skills, and the integration of AI and robotics in teaching. University selection factors were evaluated using a 5-point scale. "Better career opportunities" received the highest score (mean=4.61), followed by "support from family" (mean=4.56) and "meeting personal needs" (mean=4.42). Issues that still need to be addressed include providing sufficient information for University program admission and promoting student preparation for further study. This survey provided valuable insights for universities to design learning programs that cater to current high school students' evolving needs and aspirations. Additionally, analyzing applicants' information could help schools enhance their guidance for students.

Keywords: Future Educational Trends, University Selection, High School Students

Introduction

Choosing a university for higher education is currently a major decision for high school students, as it affects their educational path and future job market opportunities. Therefore, studying the factors that influence the decision to choose a university, as well as important trends that may affect the future education of high school students, is something that colleges recognize as important. The university will analyze the importance of the decision and understand the factors that affect the decision-making process, as well as predict trends that play an important role in educational development. We will conduct an analysis of the important factors influencing students' university selection. Studying these important factors is important for universities that want to select students with diverse abilities that meet university needs, as well as respond to policies that are being changed in education in line with future labor market needs.

In addition to analyzing the factors that influence university selection, this research also explores important trends for future education, such as the importance of digital learning, interdisciplinary education, and more skill-based learning. In analyzing such educational trends, it is possible to know about the changing trends of universities in the future to adapt to the changing world. This research aims to study the decision-making process of current students and strategic planning for educational institutions to enhance their competitiveness in the future job market.

This research will comprehensively analyze both the factors affecting university selection and the future educational trends of students. This study presents an overview of the impacts of changes in higher education. This research aims to study the factors affecting university selection and the perspectives of future educational trends among high school students, focusing on those who applied to study in related technology fields in the Faculty of Industrial Education and Technology at King Mongkut's University of Technology Thonburi (KMUTT). The results of this study will serve as guidelines for improving and developing the curriculum to be in line with the needs and expectations of future students.

Methodology

This research utilized a survey method through questionnaires to collect data from high school students applying to the Faculty of Industrial Education and Technology at King Mongkut's University of Technology Thonburi. The questionnaire consisted of questions regarding factors influencing university selection and future educational trends. The sample group included 240 high school students who applied for the 2024 academic year to study in the fields of Printing and Packaging Technology, Educational and Communication Technology, and Applied Computer-Multimedia.

Data was collected using an online questionnaire via Google Forms, which included both closed-ended and open-ended questions. The survey employed a 5-point Likert scale for opinion assessment, ranging from 1 (least) to 5 (most) for collected data analysis, as shown in Table 1. The collected data was then analyzed using descriptive and inferential statistical methods. The questions in questionnaire included of 3 sections:

- Section 1: General Information of Respondents.
- Section 2: Questionnaire on Higher Education Preferences, Interests, and Educational Goals, 6 questions with multiple choice for selection and 1 open-ended questions.

- Section 3: Questionnaire for Opinions, consisting of 5 closed-ended questions with a 5-level rating scale and 2 open-ended questions.

The topics of multiple choice for selection in Section 2 included of 7 questions:

1) Academic program studying in high school
2) Subjects interested during studying in high school
3) Interest of fields in higher education
4) Reasons for interested fields
5) Factors influence decision for higher education
6) Change in the future of educational trends
7) Important role in the future of interested fields (open-ended question)

The topics of questions in Section 3 included of 5 questions for rating:

1) Higher education at university gives better career opportunities.
2) Preparation of students for university application.
3) Support from family for university study.
4) Sufficient information about the field of study in university.
5) Higher education meets your personal needs.

There are 2 additional open-ended questions: 1) plans or goals for study in university and 2) additional opinion on future education.

Table 1: The Descriptive and Inferential Statistical Methods With 5-point Likert Scale

Scale	Scale Interval	Opinion for Quality
5	4.50-5.00	Most
4	3.50-4.49	High
3	2.50-3.49	Moderate
2	1.50-2.49	Low
1	1.00-1.49	Least

Results and Discussion

General Information of Respondents

From a total of 240 participants, it was found that 139 students responded to the questionnaire. The main students were female, totaling 80 students (58%), followed by males 59 students (42%), and 1 student did not specify their gender. The respondents were aged around 18, accounting for 109 students (78%) and aged around 19, accounting for 18 students (13%). Most of the students came from public schools (government-run schools) across the country, totaling 116 students (83%), while 23 students (17%) were from private schools, as shown om Figure 1.

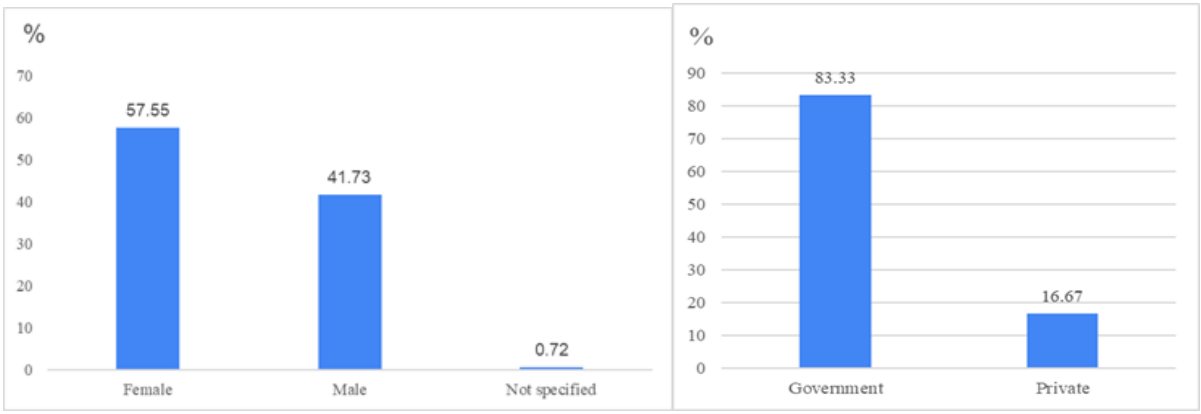

Figure 1: The General Information of the High School Students as Respondents

Questionnaire on Higher Education Preferences, Interests, and Educational

The survey showed that among the high school students as the respondents, most of them (63 students) graduated from the Science-Mathematics field, accounting for 45.32%. The second largest group with 35 students graduated from the Arts-Calculations field at around 25.18%. The third group with 20 students graduated from the Arts-Languages field or 14.39%. The remaining students graduated from other fields with smaller numbers, as shown in Figure 2. For studying the higher education level at KMUTT, there are many programs relating to Sciences, Engineering, and Technology accepting the applicants graduated the school from the field of Science-Mathematics.

The information showed that most students who applied to study at the university were interested in studying Education, with 82 students, making up 58.99%. This was followed by Science and Technology with 62 students, or 44.60%, and Business Administration with 52 students, or 37.41%, respectively, as shown in Figure 3.

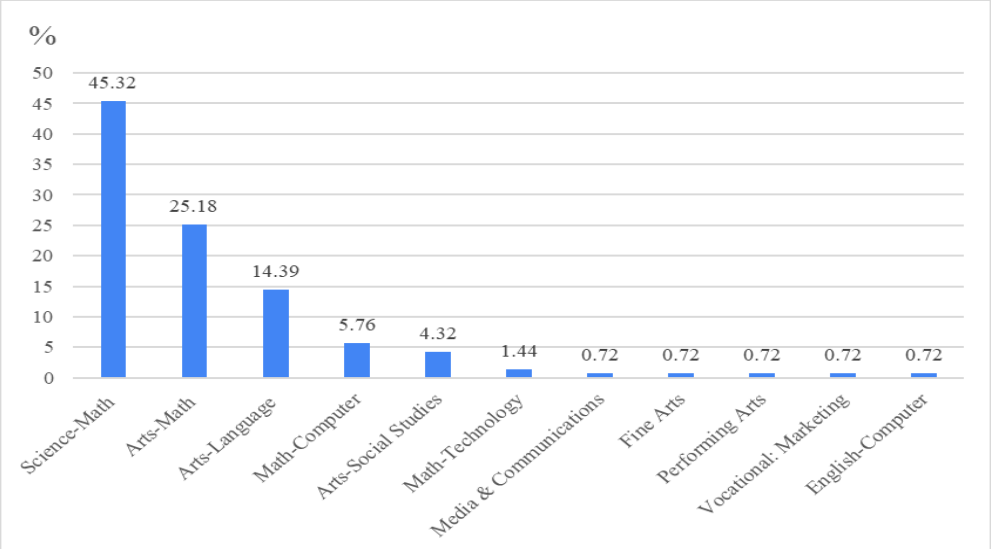

Figure 2: The Graduated Field of High School Students

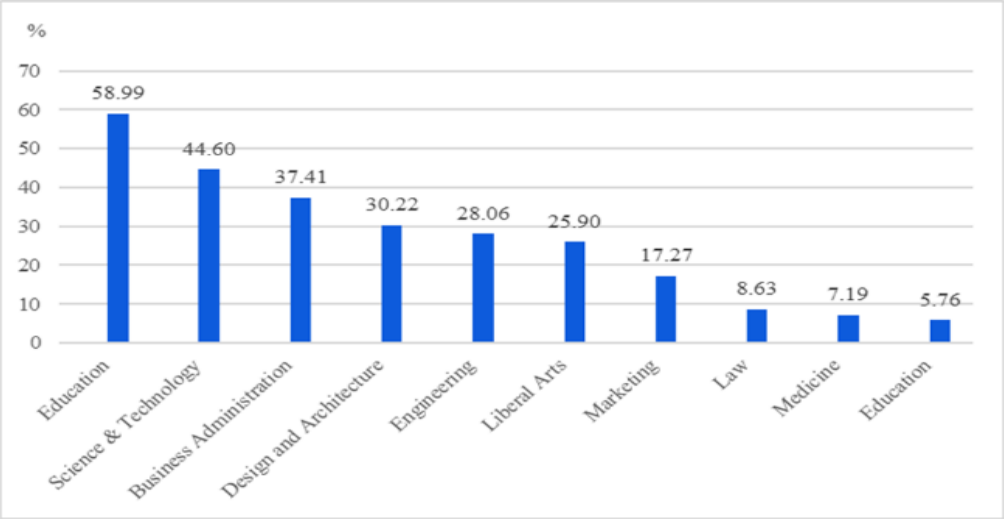

Figure 3: The Interesting Program of High School Students for Study at the University

The respondents also gave the reasons for interested fields, as shown in Figure 4. The results showed that 62.59% of the respondents were concerned about the high opportunity to work. The second reason was the good income at 50%. The last reason was desire to help society at 15.11%.

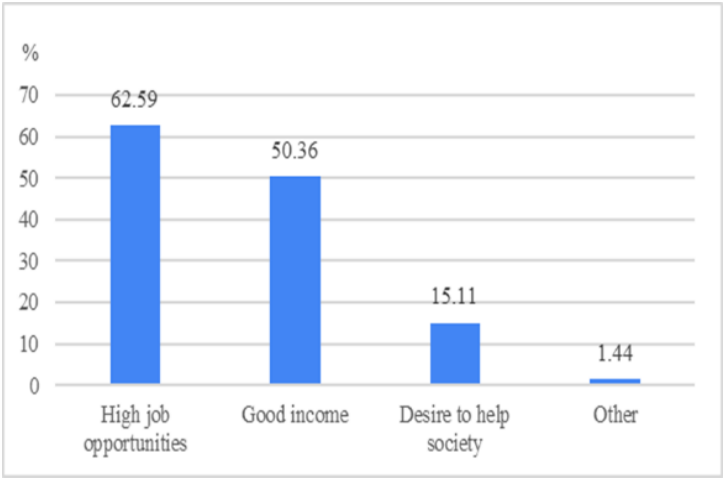

Figure 4: The Reasons for Interested Fields

From the survey responses of 139 participants, the factor that most influenced their decision in program selection for study at higher education was personal interest responded by 126 students, 90.65%. The next factors were labor market trends and economic conditions, responded by 50 students, 35.97%, and family advice, responded by 47 students, 33.81%, respectively, as shown in Figure 5.

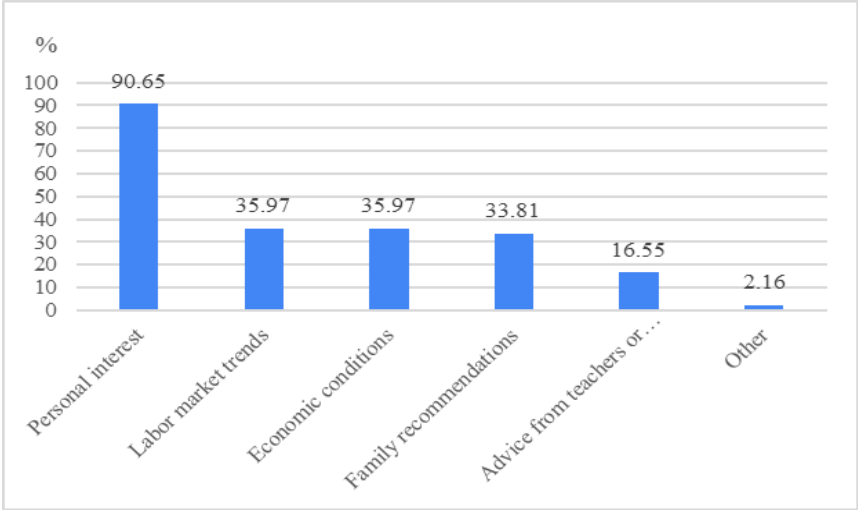

Figure 5: The Factor Influences the High School Students' Decision in Program Selection for Higher Education

Additionally, the researcher inquired about how future education trends might be changed. According to the responses from 139 respondents as in Figure 6, the following opinions were expressed regarding future education trends: Blended Learning was the most popular, agreed with 53 students, 38.13%. With 40 students, or 28.78% of respondents agreed with the use of AI and robotics in teaching and learning. The next trends emphasis on critical thinking skills and artificial intelligence skills, agreed with 33 students, or 23.74%. The least popular trend was online learning and teaching, responded by 12 students, or 8.63%.

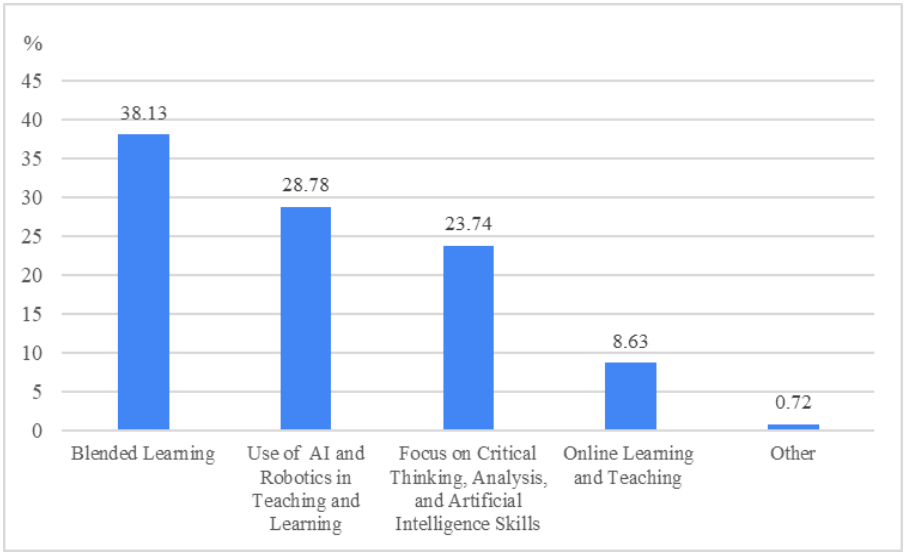

Figure 6: The High School Students' Opinion About the Future Education Trends

The Closed-Ended Questions With a 5-Level Rating Scale

The high school students who applied to study at KMUTT responded to the questionnaire in the Google Form. They expressed their opinion on the study in higher education level with a 5-level rating scale in the closed-ended questions, as shown in Table 2**.**

Table 2: The Students' Opinion on Higher Education

Item	Evaluation Topic	Mean	S.D.	Definition
1	Higher education at university gives better career opportunities.	4.61	0.56	Most
2	Preparation of students for university application.	4.16	0.76	High
3	Support from family for university study.	4.56	0.77	Most
4	Sufficient information about the field of study in university.	4.12	0.75	High
5	Higher education meets your personal needs.	4.42	0.71	High
	Total mean score	4.37	0.71	High

Among the 139 respondents, the topic "Pursuing higher education will provide better career opportunities" had the highest mean score ($\bar{X}$=4.61 and S.D.=0.56). The second topic was "Receiving support from family to pursue higher education" ($\bar{X}$=4.56 and S.D.=0.77). The third topic was "Feeling that higher education will meet personal needs" with $\bar{X}$=4.42 and S.D.=0.71.

For additional open-ended questions, they responded about plans or goals for study in university as follows:

Academic and Career Goals

- Intend to pursue a master's degree to expand knowledge and career opportunities in the future.
- Focus on learning fully in every subject to apply the knowledge in developing a stable and efficient career.
- Aim to explore myself through learning in various fields to find my strengths and interests in a suitable career.
- If possible, I want to secure a scholarship to study abroad, especially in Austria, as a long-term goal.

Self-Development

- Plan to use every opportunity to improve myself through society, studies, and activities to prepare for real-world work.
- Commit to learning and gaining experience through both education and participation in university activities.
- Plan to study foreign languages and seek opportunities to participate in exchange programs to enhance international experience.

Contribution and Knowledge Sharing

- If they gain useful knowledge, they would like to share it and use it to help others.

Overall Perspective on Education

- They want to apply the knowledge and experience gained to fulfill my dream career and create a stable income in the future.

- Overall, university education is a significant opportunity for me to develop myself, preparing for a stable career and life, both in terms of knowledge, skills, and experience.

They responded about the additional opinion on future education as follows:

- Education should be developed into a more systematic approach to ensure that all children have equal access to learning opportunities. It should emphasize a blend of theoretical knowledge and practical application.
- Learning methods should be diverse, with activities that encourage knowledge and idea exchange, aligned with labor market demands, and prepared for international standards.
- Classroom hours should be reduced, allowing more time for activities that build skills and experiences, while technology should be integrated into the learning process.
- Education must adapt to global changes, promoting learning that focuses on critical thinking, problem-solving, and resilience in overcoming unexpected challenges.
- The use of electronic devices for learning should be encouraged, alongside opportunities for hands-on practice in real-world scenarios.

Conclusion

Most of the survey respondents were female, aged 18, and primarily studying in government educational institutions. Most of the participants had a background in science-mathematics, followed by arts-mathematics and arts-language fields. Most respondents expressed interest in pursuing higher education in fields related to science and technology, followed by education/teaching. The primary reasons for choosing their fields of interest were personal preference and high employment opportunities. Regarding future education trends, most respondents believed that learning would shift towards a blended learning model, emphasizing critical thinking skills and incorporating AI and robotics in teaching. The respondents overwhelmingly agreed that pursuing higher education would provide better career opportunities, followed by strong family support for continuing their studies. In conclusion, most students aspire to pursue university education, preferring a blended learning approach that leverages AI technology to enhance learning experiences.

Suggestions

Based on the findings of this research, the following suggestions are proposed:

1. Universities should enhance the quality of academic programs to meet higher standards and address labor market demands.
2. Efforts should be made to promote the university's reputation through public relations and collaborations with other institutions.
3. Foster a learning environment that supports the development of students' skills and abilities.
4. Increase opportunities for internships and job placements to better prepare students for entering the workforce.

Acknowledgements

The authors would like to express their deepest gratitude to King Mongkut’s University of Technology Thonburi (KMUTT), Bangkok, Thailand, for providing the necessary support

and resources to make this study successful. We would also like to acknowledge the cooperation and assistance of the sample group, printing and packaging technology, educational and communication technology and applied computer-multimedia, which were crucial to the study. Their support greatly improved the quality and scope of this study.

References

De Bruijn-Smolders, M., & Prinsen, F. R. (2024). *Effective student engagement with blended learning: A systematic review*. Heliyon, No.10 Vol.23.

Fauzi, M. A. (2022). *E-learning in higher education institutions during COVID-19 pandemic: current and future trends through bibliometric analysis*. Heliyon, No.8, Vol.5.

Labrague, L. J., Aguilar-Rosales, R., Yboa, B. C., Sabio, J. B., & de los Santos, J. A. (2023). *Student nurses' attitudes, perceived utilization, and intention to adopt artificial intelligence (AI) technology in nursing practice: A cross-sectional study*. Nurse Education in Practice, p. 73.

Qi, R., Jia, Y.-H., Chen, W.-N., Bi, Y., & Mei, Y. (2025). *An evolutionary optimization-learning hybrid algorithm for energy resource management. Swarm and Evolutionary Computation*, p. 92.

Ren, Y., Xu, Z., Zhang, Y., Liu, J., Meng, L., & Lin, W. (2025). *A rollout heuristic-reinforcement learning hybrid algorithm for disassembly sequence planning with uncertain depreciation condition and diversified recovering strategies*. Advanced Engineering Informatics, p. 64.

Xu, Y., Zhou, G., Cai, R., & Gursoy, D. (2024). When disclosing the artificial intelligence (AI) technology integration into service delivery backfires: Roles of fear of AI, identity threat and existential threat. *International Journal of Hospitality Management*, 122.

Zhou, L., & Hao, Y. (2024). *Strategies to Enhance Learning Engagement in the Fundamentals of Nursing Course within a Chinese Blended Learning Environment: A Prepost Study*. Teaching and Learning in Nursing.

Contact email: Somsri.bin@kmutt.ac.th