

---

**THE INFLUENCE OF *OPENNESS* ON THE RISK MANAGEMENT OF "X" UNIVERSITY STUDENTS WHO USE *ARTIFICIAL INTELLIGENCE* IN MALANG CITY**

**Moh. Ajril Sabillah<sup>1</sup>, Muchamad Adam Basori<sup>2</sup>, Fathul Lubabin Nuqul<sup>3</sup>**

Universitas Islam Negeri Malik Ibrahim Malang; Indonesia

e-mail: \*[ajrilsabillah@gmail.com](mailto:ajrilsabillah@gmail.com)<sup>1</sup>, [mbasori09@bsi.uin-malang.ac.id](mailto:mbasori09@bsi.uin-malang.ac.id)<sup>2</sup>, [lubabinnuqul@uin-malang.ac.id](mailto:lubabinnuqul@uin-malang.ac.id)<sup>3</sup>

Received :20 February 2024

Accepted : 28 April 2024

Published : 30 April 2024

DOI [10.22373/psikoislamedia.v9i1.22620](https://doi.org/10.22373/psikoislamedia.v9i1.22620)

**ABSTRACT**

This research was conducted with the aim of exploring the level of *openness* and risk management abilities possessed by "X" University students in Malang City regarding the development of *artificial intelligence* (AI) technology in the millennial era. Using a quantitative approach and probability sampling method, 377 respondents became research subjects. The research results show that the majority of students show a sufficient level of *openness* (78.26%), although their risk management towards AI tends to be high (47.5%). Further analysis revealed that *openness* had a significant influence on students' risk management abilities ( $p < 0.05$ ). In conclusion, these findings highlight the need for a balanced approach between *openness* to innovative technology such as AI and awareness of the importance of risk management in dealing with its impact, especially for academic communities such as students at "X" University in Malang City

**Keywords:** *Openness, Risk Management, Students, Artificial intelligence*

**PENGARUH *OPENNESS* TERHADAP MANAJEMEN RISIKO MAHASISWA UNIVERSITAS "X" YANG MENGGUNAKAN *ARTIFICIAL INTELLIGENCE* DI KOTA MALANG**

**ABSTRAK**

Penelitian ini dilakukan dengan tujuan untuk mendalami tingkat keterbukaan dan kemampuan manajemen risiko yang dimiliki oleh mahasiswa Universitas "X" di Kota Malang terhadap perkembangan teknologi *artificial intelligence* (AI) dalam era milenial. Dengan menggunakan pendekatan kuantitatif dan metode probabilitas sampling, sebanyak 377 responden menjadi subjek penelitian. Hasil penelitian menunjukkan bahwa mayoritas mahasiswa menunjukkan tingkat keterbukaan yang cukup (78,26%), meskipun manajemen risiko mereka terhadap AI cenderung tinggi (47,5%). Analisis lebih lanjut mengungkapkan bahwa keterbukaan memiliki pengaruh signifikan terhadap kemampuan manajemen risiko mahasiswa ( $p < 0,05$ ). Kesimpulannya, temuan ini menyoroti perlunya pendekatan yang seimbang antara keterbukaan terhadap teknologi inovatif seperti AI dan kesadaran akan pentingnya manajemen risiko dalam menghadapi dampaknya, khususnya bagi komunitas akademik seperti mahasiswa Universitas "X" di Kota Malang

**Kata Kunci:** *Openness, Manajemen Risiko, Mahasiswa, Artificial intelligence*

## **Introduction**

Technology has become an important focal point in the millennial era, affecting various aspects of life quickly and profoundly. Digital innovation, especially in the form of artificial intelligence, has changed the way humans interact with the world. The increased use of Artificial Intelligence (AI), as demonstrated by the Populix survey, shows a significant trend in Indonesia, where more than 70% of the population has adopted this technology, with the majority of users in adolescent and adult age groups, including students. AI has a wide range of uses in a variety of sectors, from education to business and health care, which significantly influence the way students interact with technology in the context of their lectures and everyday lives. However, in addition to the benefits, the use of AI carries risks that need to be carefully managed. Research by Rahmawati (2017) highlights potential threats to digital security faced by AI users, such as data theft and information manipulation. In this context, students as one of the major users of AI, especially in their academic activities, need to have good risk management skills. According to Fachrezi (2021) risk management is an important strategy for identifying, evaluating, and managing risks that arise in connection with the use of this technology.

Students at "X" University in Malang City are the focus of research due to the phenomenon of openness towards new technologies, especially AI, which is in the role of risk management in addressing its impacts. According to Revelia (2016), openness to new technology is the key for students in identifying opportunities and developing themselves creatively and innovatively. However, this must be balanced with good risk management skills so that they can avoid negative consequences and address potential risks that may arise. In this study, there are two dimensions that need to be focused on whether increasing openness to AI technology and developing risk management capabilities. Students, as the primary users of this technology, must be empowered with a strong understanding of how to optimally leverage AI while also anticipating and managing the associated risks. According to Fatkhullah (2022), in the context of education, this demands an active role of an educational institution, such as University "X", in providing training and support to students in developing these skills.

## **Method**

In this study, a quantitative approach model was used with a descriptive quantitative method to measure variables objectively without comparing or linking them to each other. The

aim of this quantitative approach is to determine how significant the influence of Openness is on risk management among students who use artificial intelligence at the University in Malang, in accordance with the research hypothesis. The sampling technique was carried out using the probability sampling method, meaning that each subject in the population has a known chance of being selected as a sample. Data collection was conducted using simple random sampling, where samples are chosen randomly due to the general nature of the research, ensuring that every element of the population has an equal opportunity to be selected as a sample. The determined sample size is 377 students of the University "X". This approach allows for the collection of accurate and representative data to produce in-depth analysis regarding the relationship between openness and risk management in the use of AI technology in academic settings.

## Results

Descriptive data analysis is conducted to understand the groups of respondents from the data that has been collected. In this test, the respondents will be categorized into high, medium, and low levels for each variable. To determine the categorization of the Level of Openness and risk management, the mean, standard deviation, maximum value  $i$ , and minimum value  $i$  are required. After analyzing using SPSS, the following results were obtained.

**Table 1**  
**Categorization of Student's Openness**

Category	Criteria	Frequency	Percentage
high	$X > 94$	58	15,4%
medium	$83 < X < 94$	295	78,26%
low	$X < 94$	24	6,4%
Total		377	100%

Table 1 Openness provides an overview of the data distribution in a category measured by specific criteria. Out of a total of 377 observed data points, 58 data points (15.4%) fall into the High category with variable X values greater than 94. A total of 295 data points (78.26%) are

included in the Medium category with X values ranging from 83 to 94. Meanwhile, the Low category, which has X values less than 83, consists of 24 data points (6.4%).

**Table 2**  
**Categorization of Student Risk Management**

Category	Criteria	Frequency	Percentage
high	$X > 93,7$	179	47,5%
medium	$82,3 < X < 93,7$	119	31,5%
low	$X < 82,3$	79	21%
Total		377	100%

Table 2 Risk Management provides an overview of the data distribution within specific categories measured in a specific criteria. Out of a total of 377 observed data points, 179 data points (47.5%) fall into the High category with variable X values exceeding 93.7. A total of 119 data points (31.5%) are classified as Medium, with X values ranging from 82.3 to 93.7. Meanwhile, the Low category, which includes data with X values below 82.3, shows a total of 79 data points (21%).

**Table 3**  
**Simple Linear Regression Test**

Summary <sup>b</sup> Model						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.517 <sup>a</sup>	.267	.265	10.90035		
a. Predictors: (Constant), OPENNESS						
b. Dependent Variable: RISK MANAGEMENT						
Coefficient						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.156	7.352		.293	.769
	OPENNESS	.964	.082	.517	11.701	.000
a. Dependent Variable: RISK MANAGEMENT						

Based on the results in the table 3 above, it reveals a significance value (Sig.) of less than 0.05, and the calculated  $t$  (11.701) is greater than the table  $t$  (1.968), thus it can be concluded that there is a significant effect of the level of Openness on Risk Management. Therefore, the null hypothesis ( $H_0$ ) is rejected, and the alternative hypothesis ( $H_a$ ) is accepted, which means that there is an effect of the level of Openness on Risk Management among students who use Artificial Intelligence of the University in Malang City. Based on the constant coefficient in the regression model, which is 2.156, this means that if there is no level of Openness ( $X$ ), the consistent value of Risk Management ( $Y$ ) is estimated to be 2.156. Furthermore, the regression coefficient for the Openness variable is 0.964. This indicates that for every 1% increase in Openness, there will be an increase of 0.964 in the Risk Management score. With a positive regression value, it can be concluded that there is a positive relationship between the level of Openness and Risk Management, and the regression equation can be expressed as  $Y=2.156+0.964X$ . Furthermore, based on the results in the table 3 above, the R Square value of 0.267 interpreted that approximately 26.7% of the variation in Risk Management can be explained by the level of Openness, while the remaining 73.3% may be influenced by other factors, which are not studied in this research.

## **Discussion**

### **1. The Students' Level of Openness**

The research results show that a small portion of students at the University in Malang City has a high level of Openness, accounting for 15.4% of the total 377 data points. Students in this category tend to exhibit a progressive attitude, initiative, and creativity in various aspects of life, with a strong willingness and ability to embrace new ideas and face changes positively. According to Hastini (2021), individuals may also be more open to new experiences, flexible in adapting, and have a strong motivation for self-development. Further analysis of the behavior and characteristics of students in the High category can provide deep insights into the factors influencing high levels of Openness and its implications in academic and social contexts.

Meanwhile, the majority of students, amounting to 78.26% of a total of 377 data points, fall into the medium category with a moderate level of openness. Students in this category demonstrate a willingness to learn and grow, but tend to be less bold in taking risks or seeking new

experiences compared to those in the high category. They may prefer a more structured and stable path, yet remain open to organized learning opportunities. Further analysis of the characteristics of students in the moderate category can provide a deeper understanding of the factors influencing this moderate level of openness and how it affects their academic engagement and personal well-being.

On the other hand, a small portion of students, amounting to 6.4% of the total 377 data, falls into the low category with a low level of openness. Students in this category tend to be conservative, less innovative, and reluctant to face new situations or ideas. Further analysis of the characteristics and behaviors of students in the low category can provide insights into the factors influencing this low level of openness and how it affects their academic and social experiences. Thus, it can be predicted that students with a high level of openness will continue to demonstrate progressive attitudes and high creativity, while students with a moderate level of openness may require additional support to stimulate exploration and courage in facing risks. Students with a low level of openness may need personalized approaches and individual guidance to help stimulate their level of openness. This implication supports the need for appropriate program planning and interventions to optimize the potential for student self-development in the campus environment.

## **2. Student Risk Management Level**

In the analysis of Risk Management regarding students' skills in Artificial Intelligence (AI), it was found that the majority of students fall into the high category, indicating their ability to manage risks associated with significant AI implementation. This suggests that they possess a deep understanding of the potential risks related to AI, such as data security, AI ethics, and social impact. Students in this category tend to be able to proactively identify, analyze, and manage the risks. This capability contributes to the development of safe, ethical, and sustainable AI solutions in the future. Focusing on students in the high category can provide strategic benefits for organizations or academic programs.

According to Ahmed (2007), he highlights the significant contributions of high-category students to the development of safe and sustainable AI solutions. They are able to identify risks, analyze their implications, and manage them proactively, paving the way for responsive and policy-based innovation. In addition, Arifuddin (2020) emphasizes that focusing on the high category can strengthen the risk management approach in facing the ever-evolving complexities

of technology. Meanwhile, students in the medium category demonstrate a moderate ability in AI risk management. Although they have a sufficient understanding of the risks associated with AI, they may require further development in advanced risk management. Nevertheless, their contributions remain positive in creating an environment that focuses on better AI risk management. Supports through training and mentoring programs can help them reach their full potential in contributing to the development of safe and effective AI technology.

Students who are in the low category show a low level of AI risk management skills. They may require extra attention in developing their understanding of the risks associated with AI. Additional supports in the form of training, guidance, or risk management resources are needed to help them improve their understanding and skills in risk management. This ensures that they can contribute effectively to the development of more responsible and effective AI technology. Harnessing the potential of students in the high category, it is necessary to implement strategies to strengthen academic programs or organizations. This involves the development of an in-depth curriculum in AI risk management, the provision of advanced training, and collaboration with relevant industries. Additionally, a holistic approach is needed to support students in the medium and low categories so they can reach their full potential in AI risk management. Thus, it can be ensured that all students can contribute to the development of ethical and sustainable AI technology in the future.

### **3. The Influence of Openness on Risk Management Among Students Using Artificial Intelligence of the University in the City of Malang**

This research produces data indicating that the level of openness and risk management falls within the medium category. The openness variable contributes 26.7% to risk management, while 73.3% of other factors outside of openness have not been studied in this research. Thus, the influence of openness on risk management among the students who use artificial intelligence in the University can be identified. Students with an openness to new things tend to have better risk management skills compared to those who do not share a similar tendency for openness.

According to Andi (2021), the aspect of values or positive assessment of new things also influences how students manage risks and shape their views on the potential benefits and positive impacts of AI technology. Students with a positive evaluation of new technology tend to develop an open mindset towards the positive values that can be generated by its use. For example, students

with their high level of openness may be encouraged to contribute to the development of safe, ethical, and sustainable AI solutions in the academic environment.

Although the level of openness contributes 26.7% to risk management, 73.3% is likely influenced by other factors that have not yet been studied. Additional factors such as leadership characteristics, organizational size, and others can also influence overall risk management. According to Misnawati (2023), the implementation of educational programs that focus on enhancing students' openness to new technologies and improving risk management skills can be considered a solution. Learning that involves case studies, risk simulations, and discussions on AI ethics can enhance students' understanding of the impacts and risks associated with the use of AI technology. Additionally, identifying and reinforcing other factors that influence risk management is also important for a holistic development strategy.

Thus, this solution not only focuses on enhancing the level of openness but also on other elements that contribute to effective and sustainable risk management in the context of using artificial intelligence in academic environments. Through this effort, it is hoped that students will be better prepared to face the risks associated with the use of AI technology and contribute to the development of intelligent and responsible AI solutions.

## **Conclusion**

The research results indicate that the majority of students at the University in Malang City exhibit levels of openness and risk management that fall within the medium category, signifying a moderate characteristic in their acceptance of new ideas and a balanced approach to managing risks. With around 78.26% of students falling into the moderate category for openness, they seem to have an openness to new experiences without being too extreme. Meanwhile, on the risk management scale, 31.5% of students are in the medium category, indicating a balance between risk tolerance and caution when facing risky situations. Most students demonstrate a moderate level of openness, in line with the Big Five Personality theory, which describes their ability to accept and accommodate new ideas as well as their willingness to face challenges with a balanced attitude. Students in the medium category may demonstrate a willingness to learn and grow, but they are not always inclined to take risks or seek new experiences as those in the high category might. The research findings also confirm that openness has a positive influence on risk management among the subjects, indicating that when students have the high level of openness,

they tend to also have a high tendency for risk management. Based on the findings of this study, several suggestions can be proposed to enhance benefits for institutions, students, and researchers. First of all, for institutions, it is recommended to utilize the results of this research as a foundation for developing policies or supporting programs that can more effectively reflect the characteristics of the majority of students in the medium category on the openness and risk management scale.

## References

- Andi, W, A. E. C. G. (2021). Pengaruh *Openness* Dan Entrepreneurial Selfefficacy Terhadap Entrepreneurial Intention Dimoderasi Entrepreneurship Education Dan Gender. *Ultima Management*, 13(1), 62–73.
- Ahmed, A., Kayis, B., & Amornsawadwatana, S. (2007). A review of techniques for risk management in projects. In *Benchmarking* (Vol. 14, Issue 1, pp. 22–36). <https://doi.org/10.1108/14635770710730919>
- Fachrezi, M. I. (2021). Manajemen Risiko Keamanan Aset Teknologi Informasi Menggunakan Iso 31000: 2018 Diskominfo Kota Salatiga. *JATISI (Jurnal Teknik Informatika dan Sistem Informasi)*, 8(2), 764-773.
- Fatkhullah, M., Habib, M. A. F., & Nisa, K. K. (2022). Identifikasi dan Manajemen Risiko untuk Mereduksi Kerentanan Pada Masyarakat. *Ekonomi, Keuangan, Investasi Dan Syariah (EKUITAS)*, 3(4), 856–867. <https://doi.org/10.47065/ekuitas.v3i4.1529>.
- Hastini, L. Y., Chairael, L., & Fitri, M. E. Y. (2021). Analisis Peranan Literasi Teknologi dan Informasi Sebagai Variabel Moderating Dalam Hubungan *Openness* To Experience, Conscientiousness, Agreeableness, Serta Neuroticism Dengan Perencanaan Karier Pada Generasi Z di Universitas Dharma Andalas. *Majalah Ilmiah UNIKOM*, 19(2), 69-76.
- Marketeers.com (2023, 20 Juni). Populix: 45% Masyarakat Telah Gunakan Teknologi AI untuk Efektivitas Kerja. Diakses pada 10 September 2019, dari <https://www.marketeers.com/populix-45-masyarakat-telah-gunakan-teknologi-ai-untuk-efektivitas-kerja/>
- Misnawati. (2023). ChatGPT: Keuntungan, Risiko, Dan Penggunaan Bijak Dalam Era Kecerdasan Buatan. In *Jurnal Prosiding Mateandrau* (Vol. 2, Issue 1).
- Prasetyo, A., Setyaning, tari, & Riyanto, E. (2023). Literature Review: Analisis Manajemen Risiko Pada Proyek. 8(1).
- Rahmawati, I. (2017). Analisis Manajemen Risiko Ancaman Kejahatan Siber (Cyber Crime) dalam Peningkatan Cyber Defense. *Jurnal Pertahanan & Bela Negara*, 7(2), 35-50.
- Revelia, M., Psikologi, F., Syarif, U., & Jakarta, H. (2016). Pengaruh *Big Five Personality* Dan *Adversity Quotient* Terhadap *Psychological Well-Being* San-tri Pondok Pesantren Darul *Muttaqien* Pengaruh *Big Five Personality* Dan *Adversity Quo-Tient* Terhadap *Psychological Well-Being* Santri Pondok Pesantren Darul *Muttaqien*.