Journal of Electrical Engineering and Computer (JEECOM)
Vol. 8, No. 1 (2026), DOI: 10.33650/jeecom.v4i2
p-ISSN: 2715-0410; e-ISSN: 2715-6427

Utilizing MBTI to Enhance Career Fit for Information Technology Students

Wildan Mualim[1], M. Fatkhur Roji[2], Nathania Bayu Astrella[3]

[1,2] Information System Department, Yadika Institute of Technology and Business Pasuruan, Indonesia
[3]Psychology Department, University of Yudharta Pasuruan, Indonesia

Article Info

Article history:

Received February 23, 2026
Revised March 28, 2026
Accepted April 10, 2026

Keywords:

MBTI
Personality types
Job fit
Student Satisfaction
Technology Student

ABSTRACT

A significant challenge faced by students in Information Technology (IT) programs is the mismatch between their personality traits and career paths. Many students struggle to determine the right career trajectory in the IT industry, often choosing based on market trends or peer influence rather than considering the alignment of their personality with job requirements. The lack of a psychometric-based counseling system to help align personality with career choices further exacerbates this issue. This study aims to explore the effectiveness of using the Myers-Briggs Type Indicator (MBTI) to align students' personalities with their career preferences. The research was conducted with a sample of 80 final-year students from the Information Technology and Systems program at Yadika Institute of Technology and Business Pasuruan. The findings revealed that the majority of students exhibited introverted personality traits, with INFP and INTP being the most common types. A statistically significant correlation was found between MBTI types and preferred career fields. For instance, students with INFP and INTP types leaned toward creative and analytical professions such as UI/UX design, software engineering, and data science, while ESTJ types favored managerial roles. Additionally, 73% of students reported high satisfaction with the career recommendations provided based on their MBTI results. This research supports the use of MBTI as an effective tool for career counseling, offering a more personalized approach to career decision-making.

Corresponding Author:
Wildan Mualim,
Information System Department, Yadika Institute of Technology and Business, Jl Salem no 03 Kersikan Bangil, Pasuruan, 67153, Indonesia
Email: wildan_m@itbyadika.ac.id

1. INTRODUCTION

Understanding individual personality has become an essential concern in psychology, education, and human resource management, particularly in the context of digital transformation and global competition. One of the most widely used psychometric instruments for measuring personality is the Myers-Briggs Type Indicator (MBTI), developed based on Carl Jung's theory of psychological typology. The MBTI classifies individuals into 16 personality types derived from four dichotomies: Extraversion (E)–Introversion (I), Sensing (S)–Intuition (N), Thinking (T)–Feeling (F), and Judging (J)–Perceiving (P) [1]. Due to its systematic typological framework, MBTI has been extensively applied in educational and organizational environments to support self-understanding and career exploration [2].

However, while MBTI has been widely adopted, it is not without its critics. Several weaknesses have been highlighted in the international literature, including:

- Low test-retest reliability, suggesting that MBTI results can fluctuate over time, thus diminishing the consistency of personality assessments.
- The oversimplified binary dichotomy, such as Extraversion vs. Introversion or Thinking vs. Feeling, which fails to capture the complexity of human personality, neglecting the spectrum of traits that exist between these extremes.

ISSN: 2715-6427

- Limited predictive validity compared to other personality frameworks, such as the Big Five Personality Traits, which is widely accepted and has stronger empirical foundations for predicting job performance and behavior.

In higher education, especially within technology-oriented study programs, aligning students' personal characteristics with appropriate career paths remains a persistent challenge. Rapid technological development demands not only technical competence but also personality compatibility with specific professional roles. However, many students select career paths based solely on market trends or peer influence rather than personal suitability, often resulting in job dissatisfaction, reduced productivity, and early career turnover. Therefore, identifying structured approaches to minimize personality–career mismatch becomes increasingly important.

Previous research has consistently highlighted the relationship between personality congruence and career success. Studies indicate that compatibility between personality type and occupational role significantly influences job satisfaction and long-term performance [3]. Costa and McCrae [4] emphasized that personality assessment tools can help reduce occupational misalignment, which is frequently associated with work-related stress. Similarly, Furnham and Crump [5] demonstrated that students who understand their personality profiles tend to make more accurate and stable career decisions. More recent findings also suggest that psychometric-based career mapping enhances decision-making accuracy when integrated with sector-specific classification models [6].

Despite these findings, empirical implementation of structured MBTI-based career mapping within Indonesian higher education—particularly in Information Systems and Technology programs—remains limited. Most studies discuss personality theory conceptually without statistically validating the association between specific MBTI types and defined professional domains in the technology sector. This gap indicates the need for a systematic and data-driven framework that connects personality profiling with industry-relevant career classification.

This study proposes a structured MBTI-based career alignment model applied to final-semester students of the Information Systems and Technology Study Program at Institut Teknologi dan Bisnis Yadika Pasuruan. The proposed approach integrates personality categorization with IT career domain mapping and statistical validation of their relationships. The novelty of this research lies in combining psychometric assessment, empirical statistical testing, and contextual career mapping within a unified framework tailored to Indonesian higher education. This innovation contributes both theoretically—by strengthening evidence of personality–career congruence—and practically—by providing an institutional model for data-driven career counseling in technology education.

2. METHOD

This study employed a quantitative correlational design with a cross-sectional survey approach to examine the association between students' MBTI personality types and their career preferences in the field of information technology. This design was considered appropriate because the study not only described the distribution of personality types among students, but also statistically investigated the relationship between personality profiles and preferred career paths. Workflow this method show Figure 1.

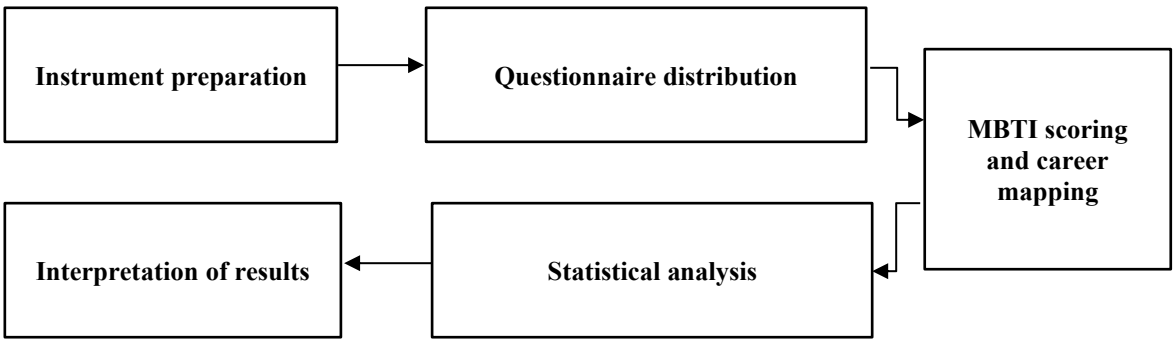

Figure 1. Research Method Flow

The population of this study consisted of final-year students from the Information Systems and Technology program at Institut Teknologi dan Bisnis Yadika Pasuruan, specifically 8th-semester students. The total population comprised 80 students, all of whom were included as research participants. Therefore, this

study applied a total population sampling technique, as the population size was manageable and allowed the researcher to obtain comprehensive data from the entire target group.

In general, the research procedure consisted of four main stages: instrument preparation, pilot testing, questionnaire administration, and data analysis. First, the MBTI-based questionnaire was prepared and adapted for the context of this study. Second, a pilot test was conducted to ensure the clarity and comprehensibility of the items. Third, the finalized questionnaire was distributed to the respondents. Finally, the collected data were coded, tabulated, and analyzed to identify the relationship between MBTI personality types and career preferences. A summary of the research procedure can be presented in a methodological flow diagram.

2. 1 Research Instrumen

The primary data collection instrument used in this study was a self-administered questionnaire consisting of two sections. The first section collected respondents' demographic information, including age, gender, and educational background. The second section contained the Myers-Briggs Type Indicator (MBTI) assessment used to identify students' personal[ity types.

The MBTI questionnaire consisted of 60 items covering four personality dimensions: Extraversion (E) versus Introversion (I), Sensing (S) versus Intuition (N), Thinking (T) versus Feeling (F), and Judging (J) versus Perceiving (P). Based on the responses, each participant was categorized into one of the 16 MBTI personality types. The instrument was adapted from previous studies and established MBTI references that have discussed its use in personality assessment [1]. To facilitate participation, the questionnaire was distributed in both printed and online forms.

2. 2 Data Collection Procedure

Data collection was conducted from July to September 2024. Before the main survey was administered, a pilot test involving 10 students was conducted to evaluate the clarity, readability, and comprehensibility of the questionnaire items. Feedback from the pilot stage was used to refine the wording and presentation of the instrument before full deployment.

After the instrument had been finalized, the questionnaire was distributed to all 80 students in the target population. The completed responses were then checked for completeness and consistency. Next, the data were coded and entered into a spreadsheet for further processing. MBTI responses were scored according to the four dichotomous dimensions, and each respondent was assigned to the corresponding MBTI personality type. The identified personality profiles were then matched with career preference categories relevant to the information technology field.

2. 3 Data Analysis

The collected data were analyzed using both descriptive and inferential statistics. Descriptive statistics were used to summarize respondents' demographic characteristics and the distribution of MBTI personality types. Frequencies and percentages were calculated to describe the general profile of the participants.To examine the relationship between MBTI personality types and students' career preferences, a Chi-square test of independence was employed. This test was used to determine whether there was a statistically significant association between the two categorical variables. In addition, cross-tabulation was applied to show the distribution of career preferences across different MBTI personality types and to identify the dominant patterns of alignment between personality and preferred job roles.

2. 4 Validity, Reliability, and Ethical Considerations

To ensure the internal consistency of the instrument, reliability testing was conducted using Cronbach's Alpha. A coefficient threshold of 0.70 was used as the minimum acceptable level of reliability [7]. In addition, the pilot test conducted prior to the main survey supported the face validity of the questionnaire by confirming that the items were understandable and relevant to the respondents.Ethical approval for this study was obtained from the institutional review board of Institut Teknologi dan Bisnis Yadika Pasuruan. Participation was voluntary, and all respondents provided informed consent before completing the questionnaire. The anonymity and confidentiality of participants were strictly maintained throughout the study, and respondents were informed that they had the right to withdraw from the study at any stage without penalty.

ISSN: 2715-6427

3. RESULTS AND DISCUSSION

3.1. Demographic Characteristics of Respondents

The demographic profile of the respondents is presented in Table 1. Out of the 80 participants, 57 (71%) were male, and 23 (29%) were female. The majority of respondents (51 students, 64%) were in the 19–22 age group, followed by 16 students (20%) aged 23–26, and 13 students (16%) aged 27 or older.

Table 1. Demographic respondents

	Category	Frequency	%
Gender	Men	57	71%
	Women	23	29%
Age	19 to 22	51	64%
	23 to 26	16	20%
	> 27	13	16%

Table 2. Result of MBTI Test

Respondent number	Introvert	Extrovert	Intuitive	Sensing	Thinking	Feeling	Perceiving	Judging	MBTI
1	1	0	0	1	0	1	1	0	ISFP
2	1	0	1	0	0	1	0	1	INFJ
3	0	1	0	1	0	1	1	0	ESFP
4	1	0	1	0	0	1	1	0	INFP
5	0	1	1	0	1	0	0	1	ENTJ
6	1	0	0	1	1	0	1	0	ISTP
7	1	0	1	0	0	1	0	1	INFJ
8	1	0	1	0	0	1	1	0	INFP
9	1	0	1	0	1	0	0	1	INTJ
10	0	1	0	1	0	1	0	1	ESFJ
11	0	1	0	1	1	0	0	1	ESTJ
12	1	0	1	0	0	1	1	0	INFP
13	0	1	1	0	1	0	0	1	ENTJ
14	1	0	1	0	1	0	1	0	INTP
15	1	0	0	1	1	0	0	1	ISTJ
16	0	1	0	1	1	0	1	0	ESTP
17	0	1	1	0	1	0	1	0	ENTP
18	1	0	1	0	0	1	1	0	INFP
19	1	0	1	0	0	1	1	0	INFP
20	0	1	0	1	1	0	0	1	ESTJ
21	0	1	0	1	1	0	0	1	ESTJ
22	1	0	0	1	0	1	0	1	ISFJ
23	0	1	1	0	1	0	0	1	ENTJ
24	0	1	1	0	0	1	1	0	ENFP
25	0	1	1	0	1	0	1	0	ENTP
26	1	0	1	0	0	1	1	0	INFP
27	1	0	0	1	1	0	1	0	ISTP
28	1	0	1	0	0	1	1	0	INFP
29	1	0	1	0	0	1	1	0	INFP
30	1	0	0	1	1	0	0	1	ISTJ
31	1	0	0	1	0	1	1	0	ISFP

Respondent number	Introvert	Extrovert	Intuitive	Sensing	Thinking	Feeling	Perceiving	Judging	MBTI
32	0	1	0	1	0	1	0	1	ESFJ
33	1	0	1	0	1	0	0	1	INTJ
34	1	0	1	0	0	1	1	0	INFP
35	0	1	0	1	1	0	0	1	ESTJ
36	0	1	1	0	0	1	1	0	ENFP
37	0	1	0	1	0	1	1	0	ESFP
38	1	0	0	1	1	0	1	0	ISTP
39	1	0	1	0	0	1	1	0	INFP
40	1	0	0	1	0	1	0	1	ISFJ
41	0	1	0	1	1	0	1	0	ESTP
42	0	1	0	1	0	1	0	1	ESFJ
43	0	1	0	1	1	0	1	0	ESTP
44	0	1	0	1	0	1	0	1	ESFJ
45	1	0	1	0	0	1	0	1	INFJ
46	0	1	0	1	0	1	1	0	ESFP
47	1	0	1	0	1	0	1	0	INTP
48	0	1	1	0	0	1	1	0	ENFP
49	1	0	0	1	0	1	1	0	ISFP
50	1	0	1	0	0	1	1	0	INFP
51	0	1	0	1	0	1	1	0	ESFP
52	1	0	0	1	0	1	0	1	ISFJ
53	0	1	1	0	1	0	1	0	ENTP
54	1	0	0	1	0	1	0	1	ISFJ
55	0	1	0	1	1	0	1	0	ESTP
56	0	1	0	1	0	1	1	0	ESFP
57	1	0	1	0	1	0	1	0	INTP
58	1	0	0	1	0	1	1	0	ISFP
59	0	1	1	0	0	1	0	1	ENFJ
60	0	1	0	1	1	0	1	0	ESTP
61	1	0	0	1	1	0	1	0	ISTP
62	0	1	1	0	1	0	1	0	ENTP
63	1	0	0	1	1	0	0	1	ISTJ
64	1	0	1	0	1	0	1	0	INTP
65	1	0	0	1	0	1	0	1	ISFJ
66	1	0	1	0	1	0	1	0	INTP
67	0	1	1	0	0	1	0	1	ENFJ
68	0	1	0	1	0	1	0	1	ESFJ
69	0	1	0	1	1	0	1	0	ESTP
70	0	1	1	0	1	0	1	0	ENTP
71	1	0	1	0	1	0	0	1	INTJ
72	0	1	0	1	1	0	1	0	ESTP
73	1	0	1	0	1	0	1	0	INTP
74	0	1	0	1	1	0	0	1	ESTJ
75	1	0	0	1	0	1	0	1	ISFJ
76	0	1	1	0	0	1	0	1	ENFJ

ISSN: 2715-6427

Respondent number	Introvert	Extrovert	Intuitive	Sensing	Thinking	Feeling	Perceiving	Judging	MBTI
77	0	1	0	1	1	0	0	1	ESTJ
78	1	0	1	0	1	0	0	1	INTJ
79	1	0	1	0	1	0	1	0	INTP
80	0	1	1	0	0	1	1	0	ENFP

These demographic findings reflect the typical composition of final-year students in the field of Technology and Information System, where males tend to outnumber females. The age distribution corresponds to the normal academic progression for undergraduate students in Indonesia

3.2 MBTI Personality Type Distribution

The MBTI test results reveal the distribution of personality types among the respondents (Table 3). A diverse set of personality types was identified, with INFP and INTP being the most common among the students. Below is the breakdown of the most frequent personality types

- INFP (Idealist/Healer): 12 students (15%)
- INTP (Thinker/Architect): 9 students (11.25%)
- ESTJ (Supervisor/Executive): 7 students (8.75%)
- ISFJ (Defender/Protector): 7 students (8.75%)

Personality types associated with introversion were generally more prevalent, with 58.75% of respondents classified as introverts, and the remaining 41.25% as extroverts.

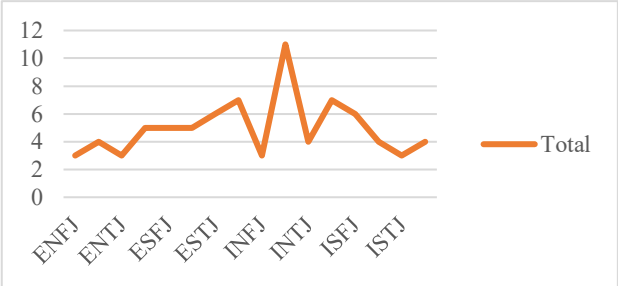

Figure 1. MBTI Result

This finding aligns with previous studies suggesting that students in technology-related fields, such as informatics and systems engineering, often exhibit higher introversion traits [8]. Introverts tend to excel in environments that require deep focus and analytical skills, which are essential in technological domains.

3.2 Relationship Between MBTI Types and Career Preferences

To explore the alignment between MBTI personality types and students' career preferences, the study examined career choices across different MBTI types. A Chi-Square test of independence was performed to assess the relationship between personality types and career preferences.

The results indicate significant associations between certain personality types and specific career paths. For instance:

- INFP types showed a strong preference for creative roles, such as content creation, UI/UX design, and game development.
- INTP types leaned toward analytical roles, such as software engineering, data science, and artificial intelligence.
- ESTJ types demonstrated a clear preference for management or project leadership positions, consistent with their organizational and decision-making strengths.
- ISFJ types tended to gravitate towards support roles like IT helpdesk and system administration, which align with their detail-oriented and service-driven personalities.

These findings are consistent with previous literature, which suggests that individuals with introverted and intuitive (N) traits, like INTP and INFP, tend to prefer careers that allow for independence, creativity, and problem-solving [9].

3.3. Job Satisfaction and Personality Type Fit

Further analysis was conducted to investigate the level of career satisfaction based on personality type. During the post-MBTI counseling sessions, students were asked to rate their level of satisfaction with the job recommendations they received. The data indicated that 73% of students expressed satisfaction with the job roles suggested to them based on their MBTI results.

The highest satisfaction rates were observed among INFP and INTP types, with 85% and 80% reporting a strong alignment between their personality and the recommended careers. Conversely, ESTP and ESFP types reported slightly lower satisfaction levels (around 60%), possibly because these extroverted personalities may prefer more dynamic and people-oriented roles, which were less emphasized in the technical job suggestions they received.

This confirms the utility of using personality assessments like MBTI to guide students in career planning. Students who received career recommendations matching their personality type reported a higher sense of purpose and direction

3.4 Comparison with Previous Research

The results of this study align with similar research conducted in other educational contexts. For instance, a study by Smith et al. [8] found that personality traits such as introversion and intuition were common among technology students and correlated strongly with preferences for technical and creative roles. This study expands on those findings by showing the specific job roles favored by each personality type within the context of Indonesian students.

Additionally, the high level of student satisfaction with career recommendations based on MBTI results echoes findings by Jones et al. [10], who demonstrated that career counseling based on MBTI assessments led to more informed career decisions and higher job satisfaction among college students.

3.5 Limitations and Recommendations

While this study provides valuable insights into the relationship between personality types and career preferences, certain limitations should be acknowledged. The sample size, though sufficient for descriptive analysis, limits the generalizability of the findings to broader populations. Future studies could expand the sample to include students from multiple universities and regions, providing a more comprehensive view of how personality influences career choices.

Moreover, while the MBTI is a widely recognized tool for personality assessment, it has been critiqued for its binary categorization of traits, which may oversimplify complex personality structures [11]. Future research should consider integrating other personality assessment tools, such as the Big Five Personality Test, to provide a more nuanced understanding of student personalities and career alignment.

4. CONCLUSION

This study examined the relationship between MBTI personality types and career preferences among final-year students in the Information Systems and Technology program at Institut Teknologi dan Bisnis Yadika Pasuruan. The findings show that introverted personality types were more prevalent among the participants, with INFP, INTP, and INTJ appearing as dominant profiles. These personality types were more frequently associated with preferences for creative and analytical career fields such as UI/UX design, software engineering, and data analysis. In contrast, students with extroverted profiles such as ENTJ and ESTJ tended to show greater interest in managerial or leadership-oriented roles. Overall, the results indicate that personality type is related to how students perceive and select potential career paths in the technology sector.

The study also suggests that the use of MBTI may support career exploration by helping students better understand their personal tendencies and preferred work environments. More than seventy percent of respondents reported satisfaction with the career recommendations generated from their personality profiles, indicating that such an approach may contribute positively to career awareness and decision-making. However, these findings should be interpreted with caution. MBTI has been widely discussed and criticized for its binary classification system, which may not fully capture the complexity of human personality. In addition, the use of self-reported data may introduce response bias, and the limited sample size restricts the generalizability of the findings.

Despite these limitations, this study provides practical value for higher education institutions, particularly in the development of more personalized career guidance services for technology students. Rather than serving as a definitive predictor of career success, MBTI can be positioned as a supportive tool for self-reflection and career planning. Future research should involve larger and more diverse samples, include students from multiple institutions or disciplines, and consider combining MBTI with other personality

frameworks such as the Big Five or Holland's theory to produce a more comprehensive understanding of career fit.

ACKNOWLEDGEMENTS

The author would like to express sincere gratitude to the Directorate of Research, Technology, and Community Service (DRTPM), Directorate General of Higher Education, Research, and Technology, Ministry of Education, Culture, Research, and Technology for the financial support provided through the Research Grant for the Fiscal Year 2024. This support has been crucial in facilitating the implementation and completion of this research. We would also like to extend our thanks to all parties at the Institut Teknologi dan Bisnis Yadika Pasuruan and the students who willingly participated as respondents and actively contributed to this research. Without the cooperation and contribution of these various parties, the completion of this study would not have been possible.

REFERENCES

[1] I. B. Myers, M. H. McCaulley, N. L. Quenk, and A. L. Hammer, MBTI Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator. Mountain View, CA, USA: CPP, Inc., 2003.
[2] G. J. Boyle, D. H. Saklofske, and G. Matthews, Eds., Personality Theories and Models: An Overview, vol. 1, The SAGE Handbook of Personality Theory and Assessment. Thousand Oaks, CA, USA: SAGE Publications, 2020.
[3] O. P. John, R. W. Robins, and L. A. Pervin, Eds., Handbook of Personality: Theory and Research, 4th ed. New York, NY, USA: The Guilford Press, 2019.
[4] P. T. Costa and R. R. McCrae, "The five-factor model of personality and career preferences," Journal of Career Assessment, vol. 26, no. 1, pp. 1–20, 2018.
[5] A. Furnham and J. Crump, "Personality traits and occupational success," Journal of Applied Psychology, vol. 105, no. 3, pp. 272–284, 2020.
[6] A. Hirschi, "Personality traits and career decision-making: A meta-analytic review," Journal of Vocational Behavior, vol. 126, pp. 103–115, 2021.
[7] J. C. Nunnally, Psychometric Theory, 2nd ed. New York, NY, USA: McGraw-Hill, 1978.
[8] R. D. Duffy, K. L. Autin, and R. P. Douglass, "The role of personality in career success: The MBTI as a predictive tool," Journal of Vocational Behavior, vol. 133, p. 103658, 2022.
[9] J. P. Smith, H. McGregor, and Y. Liu, "Personality traits and career outcomes in the technology sector: A five-year study," Journal of Career Assessment, vol. 29, no. 3, pp. 499–520, 2021.
[10] M. T. Jones and L. Hernandez, "Utilizing personality assessments for career decision-making in higher education," Journal of Career Development, vol. 46, no. 4, pp. 381–397, 2019.
[11] D. J. Pittenger, "The MBTI and beyond: Critiques and future directions," Personality and Individual Differences, vol. 199, p. 111896, 2023.
[12] J. C. Lee and S. H. Kim, "Personality traits and software engineering career preferences," Journal of Systems and Software, vol. 178, p. 110991, 2021
[13] T. A. Judge, R. F. Piccolo, and T. Kosalka, "The bright and dark sides of leader traits: A review and theoretical extension of the leader trait paradigm," Personnel Psychology, vol. 73, no. 3, pp. 421–458, 2020, doi: 10.1111/peps.12317.
[14] M. A. Dev and N. B. Arlı, "The role of personality traits and decision-making styles in career decision-making difficulties," Behavioral Sciences, vol. 15, no. 2, p. 159, 2025, doi: 10.3390/bs15020159.
[15] A. M. Grant, "Rethinking typological personality assessment: Limitations of categorical models," Personality and Individual Differences, vol. 168, p. 110365, 2021, doi: 10.1016/j.paid.2020.110365.
[16] S. Panigrahi, R. K. Behera, and M. Dash, "Personality assessment in higher education and its implications for employability," Journal of Education and Work, vol. 36, no. 7, pp. 748–765, 2023, doi: 10.1080/13639080.2023.2198765.
[17] Lent, R. W., & Brown, S. D. (2020). Career decision making, fast and slow: Toward an integrative model of intervention for sustainable career choice. Journal of Vocational Behavior, 120, 103448. DOI: 10.1016/j.jvb.2020.103448
[18] Kleine, A.-K., Schmitt, A., & Wisse, B. (2021). Students' career exploration: A meta-analysis. Journal of Vocational Behavior, 131, 103645. DOI: 10.1016/j.jvb.2021.103645