

# The Relationship Between Essential Skills and Perceived Employability: A Case Study of Malaysian Technical University Network Undergraduates

Ereen Syafiqah Won Mohd Taufik Won<sup>1</sup>, Norasmiha Mohd Nor<sup>1\*</sup>

<sup>1</sup> Faculty of Technology Management and Business,

Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, 86400, MALAYSIA

\*Corresponding Author: [asmiha@uthm.edu.my](mailto:asmiha@uthm.edu.my)

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## Abstract

In today's competitive job market, academic qualifications alone are no longer sufficient to guarantee graduate employability, highlighting the growing importance of essential skills among university graduates. Therefore, this study aims to examine the influence of technical skills, soft skills and social mobility skills on the perceived employability of final-year students from Malaysian Technical University Network (MTUN) universities. A quantitative research approach was employed, whereby data were collected through an online questionnaire using quota sampling to ensure representation across the selected universities. The collected data were analysed using the Statistical Package for the Social Sciences (SPSS), involving descriptive statistics, reliability analysis, normality testing and correlation analysis. The findings reveal that technical skills, soft skills and social mobility skills are significantly related to perceived employability among final-year students. Students who demonstrated stronger technical competencies, effective communication skills, adaptability and social awareness reported higher confidence in their readiness to enter the workforce. These findings indicate that graduate employability is shaped not only by academic achievement but also by the development of practical and transferable skills relevant to real-world work environments.

## 1. Introduction

Perceived employability is now a more important variable in the current competitive job market that seeks to expand graduates who are seeking employment opportunities. No more is it a question of getting one a job, but rather the capacity to keep one and to adapt to the fluctuating needs in working. A good mixture of technical skills, soft skills and social mobility skills is important in the bargaining process of the complex contemporary job market. Nevertheless, perceived employability does not refer to the first job offer alone, but it is also relevant to long-term career development and achievement (Mwita *et al.*, 2024). Most graduates who believe in their employability are more forward in pursuit of career growth and are in a position to better deal with unanticipated changes in the job market.

Job performance is based on technical skills, particularly in the industry where specialised skills are required. Soft skills such as communication, teamwork and adaptability have been identified as the partially significant part of success in the workplace. In a Malaysian study, it was discovered that soft skills as well as emotional intelligence, play a major role in influencing the perception of employability of students at universities (Wong and Saraih,

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2024). Another point that is made by Hume *et al.* (2024) is that the graduates who have high communication skills have a higher chance of passing the interviews.

Contrarily, the skills to move within various social environments and networks are particularly important nowadays in competitive labour markets. Still, in most cases, the gap between what they believed and what the job market requires is wide. A lot of students believe that it is enough to have a good academic performance to get a good job, and employers stress that soft skills and work experience are the same (Cheang & Yamashita, 2023).

For a significant proportion of students in the Malaysian Technical University Network (MTUN), it is an actual challenge to feel prepared for the job market. Although they might have done their studies, many students do not even trust that they can get and maintain the jobs, which can be seen as low perceived employability. This means that there is much difference in the way they are trained, particularly in the aspect of acquiring the skills that employers are desperately seeking. Technical skills are one of the key issues, as most universities do not manage to incorporate sufficient practical training despite providing a solid theoretical base. Such a mismatch certainly results in graduates not being ready to take up jobs that require practical knowledge and critical thinking (Rodzalan *et al.*, 2022; Saleh and Wahab, 2024).

Meanwhile, such soft skills as communication, teamwork and leadership are sometimes not a priority of technical courses. These skills, though recognised to be significant in the workplace, are not normally considered in programmes. Consequently, a significant proportion of graduates are not confident and ready to act in a team environment and express ideas in a clear manner (Ong *et al.*, 2022).

There is also a gap in social mobility skills due to limited platforms for career networking, exposure to work environments and mentorship (Krishnappan, 2024). These skill gaps highlight the importance of understanding how essential skills affect perceived employability and students' preparedness to enter the job market.

## 2. Literature Review

This section reviews existing literature on the relationship between essential skills and perceived employability among undergraduate students in Malaysian Technical University Network (MTUN) universities. It examines perceived employability as the dependent variable, considers technical skills, soft skills and social mobility skills as independent variables and concludes with a conceptual framework illustrating the proposed relationships between these variables.

### 2.1 Definition and Concept

Graduate employability will not only be a process of landing a job but also one that facilitates the retention of that job, advancement in the job and also adjustment to the workplace requirements (Abdullah *et al.*, 2019). It is not only about possessing the right technical skills but also acquiring soft skills, personal attributes and social mobility skills that will make graduates succeed in the competitive job markets (Mohamad *et al.*, 2025).

### 2.2 Employability in the Malaysian Context

The process of graduate employability is predetermined by both personal and external factors. It involves personal factors such as technical capabilities, soft capabilities and what one understands and is able to perform (Abdullah *et al.*, 2019). Other factors such as the quality of education, industries seeking graduates and government policies also influence the preparedness of graduates to join the workforce (Moo & Wan, 2023).

### 2.3 Challenges Faced by Graduates

Many students feel there is a disparity in relation to skills gained in the university to those expectations of the job market. The available courses are often technically orientated, but not all the attention is usually paid to the soft skills such as communication and problem-solving (Usain *et al.*, 2013). Practical experience is also limited, not all students have an opportunity to have internships or industrial training opportunities (Hamdan *et al.*, 2024). Furthermore, students tend to overrate their readiness due to the lack of guidance and exposure to workplace expectations (Wong & Saraih, 2024; Ali *et al.*, 2023).

### 2.4 Perceived Employability

Perceived employability has everything to do with the level to which the students feel confident about their prospects of employment in the job market, retaining the job and developing with the dynamic requirements of the job market. The perceptions of employability play a crucial role in final-year students and their attitude levels of readiness and willingness to join the labour market (Wong and Saraih, 2024). The ability to communicate, work, solve problems and have emotional intelligence is the focus of skills that can be important to work with the people and deal with different issues every day at the workplace (Razalli *et al.*, 2025). Besides that, the capability to adjust, remain resilient and cope with change helps a lot in remaining employable in the long term (Veeriah *et al.*, 2024).

There is a belief that you can be more employable when you get good grades. Good academic achievements are not necessarily a path to success in the employment market (Razalli *et al.*, 2025). Among the best-known qualities are soft skills, which include problem-solving, teamwork and communication. These are the competencies that aid individuals in how to work along with other people and be able to cope with difficulties within the work-related context. Most employers indicate that they appreciate these soft skills more than technical skills (Abdullah *et al.*, 2019).

The role of employability and readiness of the employable students is also contributed to by the use of internships and practical training. Having a practical experience in a working environment is also known to promote confidence in students and allow them to have a better understanding of what awaits them upon graduation (Yusof *et al.*, 2024). Such personality characteristics as how adaptable one is and how much resilience they have matter (Wong and Saraih, 2024). The business world is dynamic and one is always advantageous in terms of being able to adapt to newer positions, circumstances or problems. The students who consider themselves employable will be adaptable and willing to change, and it will make them excel in the long term. For final-year students, perceived employability is also significant in motivating students, encouraging levels of confidence and job market preparation. Students tend to face the employment opportunities with passion when they believe they can be employed (Wong and Saraih, 2024). This optimistic self-image is also associated with positive career achievements since it promotes job-seeking behaviour (Veeriah *et al.*, 2024).

## 2.5 Essential Skills

Essential skills include technical expertise, soft skills and social mobility skills, which are crucial for success in the workplace (Arif & Mir, 2023; Joie-La Marle *et al.*, 2021). The three categories that the necessary skills are placed in following the requirements of this study are technical skills, soft skills and social mobility skills. This division depends on current literature as well as changing requirements of the employment market. Even though soft skills revolve around teamwork and communication, technical skills involve specialised knowledge of tasks as well as social mobility skills, which help the students adapt to various circumstances and people. By examining these three areas, the study attempts to develop a further insight into the impact of different sets of skills on the perceived employability among students.

According to the student perspective, most undergraduates in the modern world know that soft skills such as communication, teamwork and problem-solving may serve as a key factor in securing employment (Mainga *et al.*, 2022). These areas are mostly areas of confidence and the way they deal with others and how they communicate. However, this confidence is not always corresponding with what the employers are seeking (Ong *et al.*, 2022). In some instances, students have a tendency of focusing on school performance or the technical ability of doing something, believing that the ability alone will ensure them a job. Mentorships, internships and other practical courses help to bridge the knowledge gap between university education and the requirements of the actual world of jobs (Sanichar, 2022). Employers value soft skills, emotional intelligence, leadership, and teamwork highly (Yilmaz & Urhan, 2024; Mahmood *et al.*, 2023).

### 2.5.1 Relationship Between Technical Skills and Perceived Employability

Technical skills mean translate to the practical skills and knowledge that students require to execute certain tasks in both academic and working and real-life contexts (Buckley *et al.*, 2024). Such talent is commonly associated with the majority of students, and it is also important assets of a student not only in his university but also in his future work life. Research states that technical skills are quite broad, as they encompass various skills such as the application of scientific knowledge, special tools, technologies and solving complex problems (Tagg, 2015). These technical skills are slowly accumulated by the student as they undergo their university life, even oblivious to the fact that they are acquiring such skills.

Significantly, a computer science or engineering student learning a programming language such as Python or Java can have a fresh perspective of life by studying the programming language. It enables them to create applications and implement imaginative concepts (Oran *et al.*, 2023). This ability is also concerned with the capability of explicating technical concepts in a clear manner, be it in a written report, class presentation, team discussion or not. The same can be said about the technical work since the ability to convey complex information is equally important (Buckley *et al.*, 2024). Simultaneously, studies indicate that although students tend to be aware of the importance of technical skills, most of them do not believe that they receive sufficient real experience (Cherkashyn *et al.*, 2024).

H1: There is a significant relationship between technical skills and perceived employability among final-year students.

### 2.5.2 Relationship Between Soft Skills and Perceived Employability

The term 'soft skills' indicate the non-technical, interpersonal and intrapersonal skills that assist individuals to deal with others and cope with both their personal and professional lives (Sipii *et al.*, 2024). These are communication, emotional intelligence, leadership, creativity, teamwork and critical thinking. Soft skills are being exercised in our daily lives. To students, making presentations or reports is an opportunity to train clear, confident communication skills that subsequently serve as conflict resolution skills in the workplace (Mulia & Krisanti, 2014). It is equally important to work as a team. Working on group projects or assignments, students are able to learn to share the responsibility and organise work.

Soft skills have been labelled 21st-century skills and are crucial in the contemporary jobs market, which is dynamic and tech-driven (Yilmaz & Urhan, 2024). Strong soft skills, including emotional intelligence, leadership, and effective communication, lead to more job opportunities and career success (Johnson, 2022). Nevertheless, there is still a disconnect between students and employers in terms of what they learn versus what employers desire, especially in communication, teamwork and problem-solving (Villegas, 2024). Contemporary research shows that 74% of employers now prioritise soft skills, highlighting the importance of integrating them into the university curriculum (Yilmaz & Urhan, 2024).

H2: There is a significant relationship between soft skills and perceived employability among final-year students.

### 2.5.3 Relationship Between Social Mobility Skills and Perceived Employability

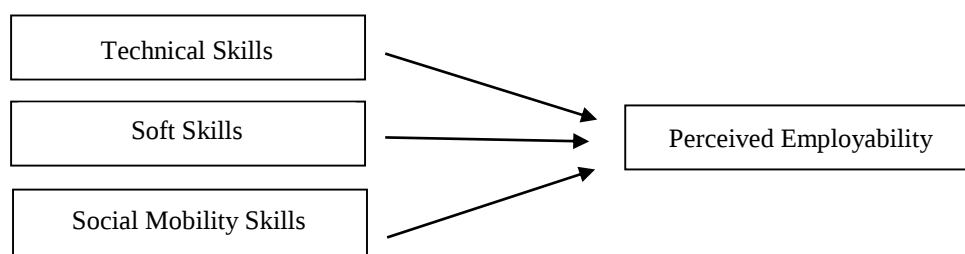
Social mobility skills are the skills that would assist an individual to adjust and move along various social contexts, a process that is of great importance to the students upon entry into a work environment (Mohamad *et al.*, 2024). Basic skills include active listening, conversation and expression, while advanced skills include empathy, conflict resolution, and knowledge about how to act in particular situations (Lopes *et al.*, 2021). Most learners report that participating in clubs, group projects, or co-curricular activities can enhance teamwork and communication skills (Jackson & Bridgstock, 2021).

Experience in part-time employment, internships, or practical training further develops social mobility skills (De Prada Creo *et al.*, 2021). These skills provide employment and career development opportunities and influence students' confidence in securing a job upon graduation. In Malaysia, students with high levels of social mobility skills see themselves as more employable (Mohamad *et al.*, 2024).

H3: There is a significant relationship between social mobility skills and perceived employability among final-year students.

## 2.6 Conceptual Research Framework

The conceptual framework for this study is adopted from previous research study conducted by Mohamad *et al.* (2024). The research study conducted by Mohamad *et al.* (2024) focused on undergraduates in energy-focused universities while this research study, the researcher focused on undergraduates in Malaysian Technical University Network (MTUN) universities. Details are provided in Appendix A.



**Fig. 1** Conceptual Research Framework

## 3. Research Methodology

This section outlines the procedures to achieve the research objectives, covering research design, research process, unit of analysis, population and sampling, research instrument, pilot study, data collection and data analysis techniques.

### 3.1 Research Design

The researcher adopts a quantitative research design to explore the relationship between essential skills and perceived employability among final-year undergraduate students under the Malaysian Technical University Network (MTUN). This study used quota sampling to make sure the representation of students from different universities. Data is collected using a structured questionnaire, with all items measured on a 5-point Likert scale.

### 3.2 Unit of Analysis

This study focuses on individual Malaysian undergraduate students from universities under the Malaysian Technical University Network (MTUN) as the unit of analysis. Each final-year students are seen as an individual whose perceived employability is explored in relation to their technical skills, soft skills and social mobility skills. This study is intended to understand how their skills influence their confidence and readiness to enter the job market. The researcher can capture the different experiences and perspectives of students from different universities and academic backgrounds.

### 3.3 Population and Sampling

#### 3.3.1 Population

The target population is final-year students under the Malaysian Technical University Network (MTUN) where it involves four universities, namely Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Malaysia Pahang (UMPSA) and Universiti Malaysia Perlis (UniMAP).

#### 3.3.2 Sampling and Technique and Size

In this study, a non-probability sampling method, quota sampling is used. This technique is chosen to make sure that the sample includes representatives of final-year students from four Malaysian Technical University Network (MTUN) universities. To ensure the reliability of the data, the researcher aims to conduct a pilot test involving 30 final-year students within the Malaysian Technical University Network (MTUN) universities. For the actual study, the researcher targets a total of 400 final-year students from these universities.

### 3.4 Pilot Study

#### 3.4.1 Pilot Sample and Procedure

A pilot test is conducted with 30 final-year undergraduate students from universities under the Malaysian Technical University Network (MTUN). The questionnaire is distributed online through Google Forms, enabling the respondents to access it.

#### 3.4.2 Feedback and Improvements

The pilot test reveals several issues that need to be improved. Some respondents give incorrect information of their current Cumulative Grade Point Average (CGPA). The item on the year of study is also unclear and not clearly specified, which makes many respondents unsure of how to answer it. So, the researcher changes the current CGPA format and specified the details on year of study to make it clearer for respondents. Additionally, many respondents also express confusion over the term "Nepotism" which suggest that the term is confusing to understand. Because of this issue, the term of "Nepotism" is removed to avoid more confusion.

#### 3.4.3 Reliability Results

Tables 1 and 2 present the results for perceived employability, with a Cronbach's alpha of 0.870, indicating good reliability. Tables 3 and 4 show the results for technical skills, with a Cronbach's alpha of 0.848, also indicating good reliability. Tables 5 and 6 summarize the results for soft skills, with a Cronbach's alpha of 0.816, suggesting good reliability. Finally, Tables 7 and 8 present the results for social mobility skills, with a Cronbach's alpha of 0.857, indicating good reliability.

**Table 1** Reliability Statistics for Perceived Employability

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.870            | 8          |

**Table 2** Item-Total Statistics for Perceived Employability

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| PE1                   | 29.00                      | 22.483                         | 0.274                            | 0.884                            |
| PE2                   | 28.63                      | 23.206                         | 0.204                            | 0.887                            |
| PE3                   | 29.13                      | 20.120                         | 0.485                            | 0.869                            |
| PE4                   | 29.03                      | 16.999                         | 0.861                            | 0.825                            |
| PE5                   | 29.03                      | 18.654                         | 0.736                            | 0.842                            |
| PE6                   | 29.07                      | 17.582                         | 0.787                            | 0.835                            |
| PE7                   | 29.20                      | 16.510                         | 0.824                            | 0.829                            |
| PE8                   | 29.30                      | 18.217                         | 0.748                            | 0.840                            |

**Table 3** Reliability Statistics for Technical Skills

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.848            | 5          |

**Table 4** Item-Total Statistics for Technical Skills

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| TS1                   | 17.37                      | 4.033                          | 0.585                            | 0.837                            |
| TS2                   | 17.27                      | 3.720                          | 0.615                            | 0.828                            |
| TS3                   | 17.23                      | 3.426                          | 0.774                            | 0.786                            |
| TS4                   | 17.47                      | 3.361                          | 0.713                            | 0.802                            |
| TS5                   | 17.47                      | 3.361                          | 0.630                            | 0.829                            |

**Table 5** Reliability Statistics for Soft Skills

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.816            | 5          |

**Table 6** Item-Total Statistics for Soft Skills

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| SS1                   | 17.53                      | 4.740                          | 0.819                            | 0.731                            |
| SS2                   | 17.40                      | 5.559                          | 0.462                            | 0.818                            |
| SS3                   | 17.37                      | 5.068                          | 0.690                            | 0.766                            |
| SS4                   | 17.60                      | 4.248                          | 0.781                            | 0.724                            |
| SS5                   | 18.10                      | 4.162                          | 0.481                            | 0.860                            |

**Table 7** Reliability Statistics for Social Mobility Skills

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.860            | 4          |

**Table 8** Item-Total Statistics for Social Mobility Skills

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| SMS1                  | 11.33                      | 9.747                          | 0.558                            | 0.883                            |
| SMS2                  | 10.80                      | 10.924                         | 0.728                            | 0.836                            |
| SMS3                  | 11.20                      | 8.717                          | 0.760                            | 0.799                            |
| SMS4                  | 11.67                      | 6.989                          | 0.880                            | 0.743                            |

### 3.5 Data Collection Procedure

A structured questionnaire is used to assess the technical skills, soft skills, social mobility skills and perceived employability with each item rated on a 5-point Likert scale. To reach the students, the questionnaire is shared through multiple online platforms that are Instagram, WhatsApp and Telegram.

### 3.6 Data Analysis Techniques

Once all questionnaire responses have been collected, the researcher reviews and organizes the data, which is then analysed using Statistical Package for the Social Sciences (SPSS) which are descriptive analysis, reliability analysis, normality test and correlation analysis.

## 4. Results and Discussion

This section presents the data collected from respondents and was analysed by using the Statistical Package for the Social Sciences (SPSS).

### 4.1 Response Rate

The questionnaire was distributed online using Google Forms and through various online platforms to reach the target respondents. The survey link was shared randomly among the respondents, and a total of 240 responses were collected but only 235 responses were valid. This corresponds to 58.75% of the targeted sample size of 400 respondents.

### 4.2 Demographic of Respondents

#### 4.2.1 Descriptive Statistics for Demographic Profile

The demographic profile of the respondents includes gender, age, ethnic background, Current Grade Point Average (CGPA), year of study as well as universities and faculties from each university are shown in Table 9.

**Table 9** Demographic Information of Respondents

| Demographic Profile                           | Details            | Frequency | Percentage (%) |
|-----------------------------------------------|--------------------|-----------|----------------|
| Gender                                        | Male               | 106       | 45.1           |
|                                               | Female             | 129       | 54.9           |
| Age                                           | 19 – 21 years      | 5         | 2.1            |
|                                               | 22 – 24 years      | 229       | 97.4           |
|                                               | 25 years and above | 6         | 2.6            |
| Ethnic                                        | Malay              | 206       | 87.7           |
|                                               | Chinese            | 19        | 8.1            |
|                                               | Indian             | 9         | 3.8            |
|                                               | Other              | 1         | 0.4            |
| Current Cumulative Grade Point Average (CGPA) | 3.70 – 4.00        | 8         | 3.4            |
|                                               | 3.00 – 3.70        | 216       | 91.9           |
|                                               | 2.30 – 3.00        | 11        | 4.7            |
| Year of Study                                 | Year 3             | 30        | 12.8           |
|                                               | Year 4             | 205       | 87.2           |

#### 4.2.2 Descriptive Statistics for Construct

Based on the Table 10, the highest mean score was recorded for PE2 (Mean = 4.50, Standard Deviation = 0.609), indicating that students strongly prioritised their academic work. On the other hand, PE3 (Mean = 3.87, Standard Deviation = 0.731) recorded the lowest mean score, suggesting relatively lower confidence regarding employers' eagerness to hire graduates from their university. Overall, the total mean score for perceived employability was 4.1340 which falls within the high-level range.

**Table 10** Descriptive Analysis for Perceived Employability

|     | Mean | Standard Deviation |
|-----|------|--------------------|
| PE1 | 4.03 | 0.565              |
| PE2 | 4.50 | 0.609              |
| PE3 | 3.87 | 0.731              |
| PE4 | 4.13 | 0.593              |

|               |        |       |
|---------------|--------|-------|
| PE5           | 4.29   | 0.650 |
| PE6           | 4.21   | 0.690 |
| PE7           | 4.11   | 0.666 |
| PE8           | 3.92   | 0.736 |
| Average Score | 4.1340 |       |

Based on Table 11, the highest mean score was recorded for TS2 (Mean = 4.58, Standard Deviation = 0.589), suggesting that students felt confident in completing technical tasks efficiently. The lowest mean score was recorded for TS4 (Mean = 4.26, Standard Deviation = 0.565), indicating slightly lower confidence in delivering technical presentations using computer software. Overall, the total mean score for technical skills was 4.4094 which is categorised as high-level.

**Table 11** *Descriptive Analysis for Technical Skills*

|               | Mean   | Standard Deviation |
|---------------|--------|--------------------|
| TS1           | 4.38   | 0.651              |
| TS2           | 4.58   | 0.589              |
| TS3           | 4.38   | 0.583              |
| TS4           | 4.26   | 0.565              |
| TS5           | 4.45   | 0.654              |
| Average Score | 4.4094 |                    |

Based on Table 12, the highest mean score was recorded for SS2 (Mean = 4.53, Standard Deviation = 0.615), suggesting that students perceived themselves as capable of working effectively in different environments. The lowest mean score was recorded for SS5 (Mean = 3.86, Standard Deviation = 0.794), indicating comparatively lower confidence in assuming leadership roles. Overall, the total mean score for soft skills was 4.3217 which falls within the high-level range.

**Table 12** *Descriptive Analysis for Soft Skills*

|               | Mean   | Standard Deviation |
|---------------|--------|--------------------|
| SS1           | 4.42   | 0.574              |
| SS2           | 4.53   | 0.615              |
| SS3           | 4.41   | 0.643              |
| SS4           | 4.39   | 0.612              |
| SS5           | 3.86   | 0.794              |
| Average Score | 4.3217 |                    |

Based on Table 13, the highest mean score was recorded for SMS2 (Mean = 4.03, Standard Deviation = 0.751), suggesting that institutional reputation was perceived as an important factor influencing employment opportunities. The lowest mean score was recorded for SMS1 (Mean = 3.34, Standard Deviation = 0.731), indicating a more moderate perception regarding the influence of family background. Overall, the total mean score for social mobility skills was 3.7564 which falls within the high-level range.

**Table 13** *Descriptive Analysis for Social Mobility Skills*

|               | Mean   | Standard Deviation |
|---------------|--------|--------------------|
| SMS1          | 3.34   | 0.731              |
| SMS2          | 4.03   | 0.751              |
| SMS3          | 3.66   | 0.791              |
| SMS4          | 3.99   | 1.008              |
| Average Score | 3.7564 |                    |

### 4.3 Reliability Analysis

Tables 14 and 15 present the results for perceived employability, with a Cronbach's alpha of 0.838, indicating good reliability. Tables 16 and 17 show the results for technical skills, with a Cronbach's alpha of 0.805, also indicating good reliability. Tables 18 and 19 present the results for soft skills, with a Cronbach's alpha of 0.768, indicating acceptable reliability. Finally, Tables 20 and 21 present the results for social mobility skills, with a Cronbach's alpha of 0.646, indicating questionable reliability.

**Table 14** *Reliability Statistics for Perceived Employability*

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.838            | 8          |

**Table 15** *Item-Total Statistics for Perceived Employability*

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| PE1                   | 29.04                      | 10.827                         | 0.489                            | 0.828                            |
| PE2                   | 28.57                      | 10.810                         | 0.446                            | 0.833                            |
| PE3                   | 29.20                      | 9.317                          | 0.698                            | 0.800                            |
| PE4                   | 28.94                      | 10.292                         | 0.611                            | 0.814                            |
| PE5                   | 28.78                      | 9.994                          | 0.621                            | 0.812                            |
| PE6                   | 28.86                      | 9.908                          | 0.594                            | 0.815                            |
| PE7                   | 28.96                      | 9.785                          | 0.656                            | 0.807                            |
| PE8                   | 29.15                      | 10.315                         | 0.446                            | 0.837                            |

**Table 16** *Reliability Statistics for Technical Skills*

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.805            | 5          |

**Table 17** *Item-Total Statistics for Technical Skills*

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| TS1                   | 17.67                      | 3.701                          | 0.435                            | 0.817                            |
| TS2                   | 17.46                      | 3.421                          | 0.665                            | 0.744                            |
| TS3                   | 17.66                      | 3.472                          | 0.646                            | 0.750                            |
| TS4                   | 17.79                      | 3.619                          | 0.595                            | 0.766                            |
| TS5                   | 17.60                      | 3.292                          | 0.630                            | 0.754                            |

**Table 18** *Reliability Statistics for Soft Skills*

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.768            | 5          |

**Table 19** *Item-Total Statistics for Soft Skills*

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| SS1                   | 17.19                      | 3.967                          | 0.532                            | 0.729                            |
| SS2                   | 17.08                      | 3.644                          | 0.635                            | 0.693                            |
| SS3                   | 17.20                      | 3.853                          | 0.494                            | 0.740                            |
| SS4                   | 17.22                      | 3.831                          | 0.545                            | 0.723                            |
| SS5                   | 17.74                      | 3.370                          | 0.518                            | 0.741                            |

**Table 20** *Reliability Statistics for Social Mobility Skills*

| Cronbach's Alpha | N of Items |
|------------------|------------|
| 0.646            | 4          |

**Table 21** Item-Total Statistics for Social Mobility Skills

| Item-Total Statistics |                            |                                |                                  |                                  |
|-----------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
|                       | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| SMS1                  | 11.68                      | 3.620                          | 0.417                            | 0.586                            |
| SMS2                  | 11.00                      | 3.222                          | 0.568                            | 0.486                            |
| SMS3                  | 11.36                      | 3.719                          | 0.318                            | 0.647                            |
| SMS4                  | 11.03                      | 2.811                          | 0.440                            | 0.580                            |

#### 4.4 Normality Test

Table 22 shows that both dependent variable and independent variables are not normally distributed. This because the value in both tests is 0.001, which less than 0.05. Based on this, the research will proceed with the Spearman correlation.

**Table 22** Tests of Normality

|                         | Kolmogorov-Smirnov |     |       | Shapiro-Wilk |     |       |
|-------------------------|--------------------|-----|-------|--------------|-----|-------|
|                         | Statistic          | df  | Sig.  | Statistic    | df  | Sig.  |
| Perceived Employability | 0.087              | 235 | <.001 | 0.911        | 235 | <.001 |
| Technical Skills        | 0.113              | 235 | <.001 | 0.933        | 235 | <.001 |
| Soft Skills             | 0.089              | 235 | <.001 | 0.964        | 235 | <.001 |
| Social Mobility Skills  | 0.134              | 235 | <.001 | 0.978        | 235 | .001  |

#### 4.5 Spearman Correlation Analysis

Table 23 shows correlation between independent variables and dependent variable. The correlation between technical skills and perceived employability is 0.522 and p-value < 0.001. So, there is a moderate correlation and significant. Then, the correlation between soft skills and perceived employability is 0.559 and p-value < 0.001. So, there is a moderate correlation and significant. Besides that, the correlation between social mobility skills and perceived employability is 0.595 and p-value < 0.001. So, there is a moderate to high correlation and significant.

**Table 23** Results of Spearman Correlation

|                         |                         | Correlations |                         |                  |             |                        |
|-------------------------|-------------------------|--------------|-------------------------|------------------|-------------|------------------------|
| Spearman's rho          |                         |              | Perceived Employability | Technical Skills | Soft Skills | Social Mobility Skills |
| Perceived Employability | Correlation Coefficient |              | 1.000                   | 0.522**          | 0.559**     | 0.595**                |
|                         | Sig. (2-tailed)         |              | .                       | <.001            | <.001       | <.001                  |
|                         | N                       |              | 235                     | 235              | 235         | 235                    |
| Technical Skills        | Correlation Coefficient |              | 0.522**                 | 1.000            | 0.653**     | 0.255**                |
|                         | Sig. (2-tailed)         |              | <.001                   | .                | <.001       | <.001                  |
|                         | N                       |              | 235                     | 235              | 235         | 235                    |
| Soft Skills             | Correlation Coefficient |              | 0.559**                 | 0.653**          | 1.000       | 0.287**                |
|                         | Sig. (2-tailed)         |              | <.001                   | <.001            | .           | <.001                  |
|                         | N                       |              | 235                     | 235              | 235         | 235                    |
| Social Mobility Skills  | Correlation Coefficient |              | 0.595**                 | 0.255**          | 0.287**     | 1.000                  |
|                         | Sig. (2-tailed)         |              | <.001                   | <.001            | <.001       | .                      |
|                         | N                       |              | 235                     | 235              | 235         | 235                    |

## 5. Conclusion

The findings of this study indicate that final-year students from Malaysian Technical University Network (MTUN) universities generally feel reasonably prepared to enter the job market. Most students express confidence in their academic background and believe they possess the skills needed for employment after graduation, reflecting a positive self-assessment of their employability. This confidence is likely influenced by MTUN's strong emphasis on technical knowledge and practical learning, which can enhance students' belief in their own capabilities. However, perceived employability represents how students feel about their readiness rather than their actual position in the labour market. As noted by Osman *et al.* (2025), it is closely linked to self-confidence and understanding of personal abilities rather than objective employment conditions. Despite this positive perception, some students may still be uncertain about real workplace expectations, such as performing in interviews, adapting to work cultures, or competing in the job market. This highlights the importance for MTUN universities to complement academic training with initiatives like career readiness programs, industry exposure, mentoring and reflection activities to better prepare students for employment.

The findings indicate that technical skills, soft skills and social mobility skills all have a positive relationship with how final-year MTUN students perceive their employability. In general, students who feel capable in these areas tend to be more confident and prepared for their future careers. Among the three, technical skills appear to play the most significant role, reflecting MTUN's strong focus on applied knowledge and industry-related competencies. Students tend to assess their employability based on their ability to perform job-related tasks and apply technical knowledge in practical settings. Soft skills also contribute positively to perceived employability. Students generally feel competent in communication, teamwork and problem-solving, which support their confidence and readiness for employment, even if these skills are not emphasized as strongly as technical abilities. Meanwhile, social mobility skills are comparatively less developed, indicating that many students have limited exposure to professional networks, industry connections, and diverse workplace environments. Jackson (2012) highlights that graduates lacking career-related networks often feel less prepared for the labour market despite strong technical skills, supporting this study's findings. These results emphasize the need for MTUN universities to enhance students' social mobility skill alongside technical training. Initiatives such as industry mentoring programs, structured networking opportunities and workplace exposure activities could help students build professional connections, strengthen confidence, and better navigate the employment landscape. By balancing technical skills, soft skills and social mobility skills, students' overall employability can be improved.

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## Conflict of Interest

Authors declare that there is no conflict of interests regarding the publication of the paper.

## Author Contribution

The authors confirm contribution to the paper as follows: **study conception and design:** Ereen Syafiqah Won Mohd Taufik Won; **data collection:** Ereen Syafiqah Won Mohd Taufik Won; **analysis and interpretation of results:** Ereen Syafiqah Won Mohd Taufik Won; **draft manuscript preparation:** Ereen Syafiqah Won Mohd Taufik Won and Norasmiha Mohd Nor. All authors reviewed the results and approved the final version of the manuscript.

## Appendix A: Research Instrument

| Constructs            | Items | Source                                                                                |
|-----------------------|-------|---------------------------------------------------------------------------------------|
| Technical skills (TS) | TS1   | Andrews and Higson (2008), Hossain <i>et al.</i> (2020), Mohamad <i>et al.</i> (2024) |
|                       | TS2   |                                                                                       |
|                       | TS3   |                                                                                       |
|                       | TS4   |                                                                                       |
|                       | TS5   |                                                                                       |
| Soft skills (SS)      | SS1   | Andrews and Higson (2008), Hossain <i>et al.</i> (2020), Mohamad <i>et al.</i> (2024) |
|                       | SS2   |                                                                                       |
|                       | SS3   |                                                                                       |
|                       | SS4   |                                                                                       |
|                       | SS5   |                                                                                       |

|                              |      |                                                                                                                                                               |
|------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social mobility skills (SMS) | SMS1 | Francis (2015), Hossain <i>et al.</i> (2020), Macmillan <i>et al.</i> (2015), Mok and Jiang (2018), Mohamad <i>et al.</i> (2024)                              |
|                              | SMS2 |                                                                                                                                                               |
|                              | SMS3 |                                                                                                                                                               |
|                              | SMS4 |                                                                                                                                                               |
| Perceived employability (PE) | PE1  | Ayala Calvo and Manzano Garcia (2021), Cuyper <i>et al.</i> (2008), Hossain <i>et al.</i> (2020), Rothwell <i>et al.</i> (2008), Mohamad <i>et al.</i> (2024) |
|                              | PE2  |                                                                                                                                                               |
|                              | PE3  |                                                                                                                                                               |
|                              | PE4  |                                                                                                                                                               |
|                              | PE5  |                                                                                                                                                               |
|                              | PE6  |                                                                                                                                                               |
|                              | PE7  |                                                                                                                                                               |
|                              | PE8  |                                                                                                                                                               |

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