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## Future Employability of Information Management Professionals in Malaysia

Noryana Ahmad Khusaini<sup>1</sup>, Nurul Fadly Habidin<sup>2\*</sup>

\*Corresponding Author

<sup>1</sup> UiTM, Faculty of Information Management, Sungai Petani, Malaysia

<sup>2</sup> UPSI, Faculty of Management and Economics, Tanjung Malim, Malaysia

noryana@uitm.edu.my, fadly@fpe.upsi.edu.my  
Tel: 6012-6568884

### Abstract

This paper discusses the employability issues of Information Management Professionals in Malaysia. This issue may arise due to a potential lack of recognition among the Ministries in Malaysia regarding the significant importance of this profession as one of the world's leading professions. This issue should be solved attentively to ensure that the image of the profession is uplifted. Qualitative methodology was used in this research. The solution to this issue can be found through the round table discussion among the stakeholders and marketing programs. All related skills in the information management position must be highlighted and vacancies should be advertised based on qualifications.

Keywords: Employability skills; Information Management Professional; Information management graduates; Undergraduates.

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### 1.0 Introduction

Employability issues are not new issues anymore. It's a global issue that has been researched for more than a decade. Employability research become a major concern issue of many people around the world including the Information Management Sector in Malaysia. This issue is critical due to the inadequacy of Information Management Professionals working in the government and private sector. Thus, it will affect the future employment of generations of the country and the issue arise and affect the next 20 years .

On the other hand, the issues are also influenced by the situation in which the position was taken by other professionals from different disciplines. It's not only that, but the main reason is due to the image of the information professional itself is not elevated by the government of Malaysia. There may be a lack of recognition among the Ministries about the importance of information management graduates being absorbed in the government and private sector as data analytics, data governance officers, data mining officers, document controllers, information system analysts, information system developers, information system designers, content creator, competitive intelligence, business intelligence, virtual reality, experimental learning, human learning, R&D development, data mining, data forecasting, etc.

Therefore, the aim of the study is to elevate the image of the Information Professional in Malaysia by creating more job positions associated with the Information Professional to be endorsed by the government of Malaysia, especially Jabatan Perkhidmatan Awam (JPA). The objectives of the study are to identify the latest job positions that are relevant and suitable for Information Professionals and to rebrand the job positions to suit Information Professionals.

It would be greatly appreciated if we could focus on enhancing the image of Information Professionals in light of the recent updates from the Department of Statistics Malaysia for the second quarter of 2022. According to the statistics, it appears that information and communication services are classified as semi-skilled workers in the services sector. However, it appears that only a small percentage, specifically 0.6 percent, of jobs were created in this particular sector. Therefore, it would be greatly appreciated if this sector could be transcended in the near future. All sectors are currently utilizing information technology and managing information. Therefore, it may not be of great significance that this sector only contributed 0.6 percent of the jobs created in the first two quarters of this year.

In addition, this issue also arises because the graduates from local universities lack soft skills (Talencorp, 2014) and there is a mismatch between the demand and supply of the workforce since the graduates produced by the local universities are not competitive and cannot meet the needs of the firms (Talencorp, 2014).

Therefore, academicians from the information management field with the corporation of information management industries especially librarians, records management officers, archivists, and curators need to be bold to tell the Ministry about the importance of the Information Profession as one of the world's leading professions.

In summary, the major issue here is the sector itself is not recognized by the government of Malaysia, despite a lack of soft skills and it will lead to a mismatch of the demand and supply of the undergraduate of information management.

**2.0 Literature Review**

Studies on employability skills need to be conducted continuously as the skills keep on changing throughout time according to the current needs of the industry. The generic skills needed by the country are different depending on the needs of the country. Different countries have different needs, visions, missions, languages, industries, economic conditions, technology (Curtis & McKenzie, 2002), and political stability.

The four main countries have been selected to compare the development of overseas employability studies. It includes Australia, the United States, the United Kingdom, Canada, and Europe. The comparison is shown in the table. The table below shows the differences and similarities of the generic employability skills developed by four countries in 1995. The table refers to the development of employability skills throughout the year.

Table 2.1: Comparative table of generic employability skills by country Source: adapted from Werner (1995)

Australian Mayer Key Competencies	United Kingdom (NCVQ) core skills	Canada Employability Skills Profile (1992)	United States (SCANS) workplace know-how
Collecting, analyzing, and organizing information	Communication	Thinking Skills	Information Foundation skills: basic skills
Communicating ideas and information	Communication Personal skills: improving own performance and learning	Communication skills	Information Foundation skills: basic skills
Planning and organizing activities	Personal skills: improving own performance and learning	Responsibility skills, Thinking skills	Resources Foundation skills: personal qualities
Working with others and in teams	Personal skills: working with others	Positive attitudes and behavior work with others Adaptivity	Interpersonal skills
Using mathematical ideas and techniques	Numeracy: application of number	Understand and solve problems using mathematics	Foundation skills: basic skills
Solving problem	Problem-solving	Problem-solving and decision-making skills Learning skills	Foundation skills: thinking
Using technology	Information technology	Use technology Communication skills	Technology Systems
Post Mayer additions: Cultural understandings	Modern Foreign language	(2000) Manage information Use numbers, work safely, participate in projects and tasks	

Although the study of employability skills was carried out in 1990 by four countries it continues to be researched until today. It is still relevant according to the country's development due to rapid changes in technology, politics, and volatility. Generic employability skills developed by countries are somehow similar and different depending on the needs of the countries. It includes demands and supply of the labor force by industries in the countries.

In 2019, the most desired skills needed with the dawn of the Industrial Revolution 4.0 is digital skills, 43% of employers are increasing their headcount due to the implementation of digital technologies. The top five digital skills sought after by employers are digital marketing, software application development, e-commerce, big data analytics, and database management. On the other hand, the top 5 traits valued by employers are problem-solving skills, communication skills, ability to work independently, willingness to learn, and ability to work under pressure. Digital skills were considered employability skills elements for Information Management graduates in the future.

Thus, with the introduction of the new desired skills in digital environments, it is suggested that the employers and government investigate the current need for the skills to cope with the changing technology. Most digital skills are related to Information Technology

which is at the heart of Information Professionals. Technical skills like digital skills are relevant to Information Professionals to help them accomplish their task successfully. Meanwhile, soft skills like problem-solving, teamwork, and communication skills make them more successful as they have a personal touch to complete the task with pride and dignity.

Hazlina (2018) highlighted across the globe the three most desirable employability skills that are sought after by employers are problem-solving, teamwork, and communication skills. Meanwhile according to several scholar employability skills required by students includes adaptability to changing work environments; cross-cultural competence; accountability (self-management); and business management skills (Gow and McDonald, 2000). Meanwhile, Chi-Kim and Lewis (1998) identify the general skills required such as communication, organizational effectiveness, and personal management.

It is important for Information Professionals to possess both skills (core skills / technical skills and soft skills) and knowledge to become holistic Information Professionals.

Rapid technological advancement has changed the landscape of employability skills in many countries. The utilization of computers and automation was making computer skills, digitalization skills, data mining, data governance, big data, and artificial intelligence become the most desired skills needed by employers. These skills are relevant to the curriculum provided by the School of Information Management. Therefore, graduate students of information management can grasp this opportunity to work with industry with the latest technology skills.

### 2.1 Employability skills

Seemingly, employability skills are basic skills and generic, but incredibly valuable in assisting every person entering the workforce (Zinser, 2003). Other keywords that are used interchangeably with employability skills are core skills, key skills, transferable skills, general skills, non-technical skills, and/or soft skills (Hofstrand, 1996).

### 2.2 Information Professional

An Information Professional is a person who is well-versed in collecting, recording, storing, organizing, preserving, retrieving, and disseminating information in various formats (IGI Global, 2023).

### 2.3 Roles of Information Professional

According to Krishnan, Sabanayagam, & Surianarayanan (2009), the role of information professionals in the digital era is as follows:

- To provide intellectual access to information in any format.
- To evaluate available sources of information.
- To organize and structure information.
- To ensure the preservation of information.
- To provide specialized staff to offer instruction and assistance in interpreting resources and access to resources.

## 3.0 Methodology

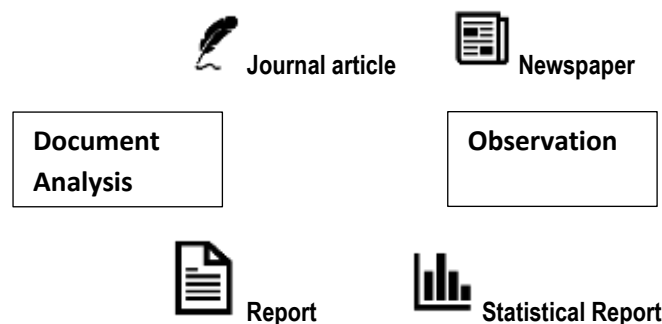


Figure 1: Data Collection Methodology

A qualitative research methodology was conducted in this study. Content analysis is conducted and limited to news, literature reviews, statistical reports, and reports to complete this research. Apart from that, observations on the latest environment of Information Professionals were also carried out to get detailed evidence of the latest developments in the profession.

For the first phase (June 2022 to March 2023), the literature review was conducted to grasp the idea and understand the issue related to the study. Documents like newspaper articles, journal articles, statistical reports, and reports were referred to as sources of information to meet the objectives of the study.

Observation is steered during the second phase (June 2022 to March 2023); The observation criteria are on the nature of related information management work and tasks through direct observation of the job advertisements. Several job advertisements were analyzed and scrutinized to identify the related job positions for Information Professionals.

In the third phase (April 2023), based on the thorough reading of the documents as well as the content analysis carried out and the observation, several solutions to elevate the image of information professionals were identified and Information Professionals' job positions were created, charted, and suggested to be used in the government organization.

#### **4.0 Findings**

Findings found there are a number of issues that have been identified through literature review and observation related to Information Professionals in Malaysia. It includes issues on Recognition or Image, lack of awareness of Information Professionals' job scope, Graduate's Soft Skills, and mismatched employment demand and supply. These issues affect information professionals' image and set boundaries for the information professional to be recognized as a world-leading profession.

In order to solve issues related to the recognition and image of Information Professionals in Malaysia, Academicians of Information Management and Employers of Information Management industries as well as related stakeholders need to meet up with the Minister to discuss this issue through round table discussion. They need to propose the information management professional as the main sector of this industry. The goal of the proposal needs to be highlighted to the Minister based on current statistics and data mining as well as competitive intelligence and data governance approaches used to carry out and convince them, that this sector covers all sectors in Malaysia.

On the other hand, to deal with the lack of awareness of Information Professionals' job scope, the reality of Information Management Professional as a world-leading sector needs to be delivered from top to down by the Ministry of Malaysia to the citizens. This can be done by promoting this profession through mass media (radio and television) and social media.

Solution for the Graduates' soft skills by sending them to be training, camping, 10 minutes reading habits, writing, speaking, problem-based learning, personal development, etc. Soft Skills research also needs to be carried out from time to time to ensure the right soft skills are applied to the students to enable work-ready graduates for industry.

To match the employment demand and supply, several actions need to be taken by employers, academicians, industries, graduates, and alumni to solve this issue.

##### *Employers*

For the employer, the employer needs to send the work-ready workers to the Faculty of Information Management, UiTM, and Information Management Sectors to strengthen the core skills, soft skills, HETVET, and charisma of the personnel.

It can be done by allowing their employer to further a diploma or degree at the Faculty of Information Management through a scholarship program or self-funded program with approval from the employer. It is done to enhance the core skills of the workers in the information management field.

##### *Academician*

On the other hand, academics should work the extra mile ahead by inviting industries and other international as guest lecturers or giving international lectures in return.

In addition, other faculty need to take information management subject as an elective subject to strengthen their knowledge of information management.

##### *Librarian*

The academic Library needs to strengthen information management skills among students on the UiTM campus. It can be done by providing appropriate webinar sessions, library orientation, advocacy on literacy services, research services, reference services, and so on.

##### *Graduates*

Graduates need to take advantage provided by academicians and librarians to absorb core knowledge, soft skills, and HETVET to develop their charisma as resilient information management graduates.

##### *Alumni*

Alumni need to work together and provide the latest updates from the industry to academicians to ensure the core knowledge, soft skills, and HETVET needed are in line with the latest technology in the industry.

Interdisciplinary and core disciplines need to cooperate to enhance the image of information management professionals as well as the rules and regulations of Malaysia.

To ensure all the new rule orders (action taken) are taken effectively, marketing programs need to be boosted up and delivered through mass media and social media. The available position in the industry needs to be revamped by assigning new information management professional positions by looking back at the function and responsibilities of that sector as per its vision and mission.

To avoid mismatched employment demand and supply, the researcher suggests a standard position to ensure employees are accepted and working to their qualifications.

Positions suggested to all sectors by the researcher are included:

The document, Information Records Management, and Artefact

1. Email management (Personal Assistant)
2. Records management (Records Manager)
3. Document controller (Records Manager) (Auditor)
4. Librarian
5. Archive Administration (Archivist)
6. Curators
7. Information Hunter Officer
8. Information Provider Officer
9. Information Gatekeeper Officer
10. Chief Information Officer
11. Chief Knowledge Officer Data Management
12. Big Data (Data Analyst, Data Analytic, Data Designer)
13. Data Mining (Data Analyst)
14. Data Governance (Data Scientist)  
(Data Quality, Data Integrity, Data Security, Interoperability)

Information System

15. Information analyst
16. Programmer
17. Information System Designer
18. Software Developer
19. System Auditor
20. System Analyst
21. System Developer
22. Vendor and Support System
23. Customer Service Advisor
24. Information System Manager
25. Information Manager
26. Content Developer
27. Multimedia and Animation System Creator
28. Photographer

Technical Support and Networking

29. IT Administrator
30. IT Officer
31. IT Advisor
32. Network Administrator
33. Network Advisor
34. IT Technician
35. Networking Technician

Communications Technology and Marketing

36. Virtual reality (inline, synchronized online virtual meeting with face-to-face meeting) (IT officer)
37. Webinar and Teleconferencing (IT officer)
38. Human experiential learning (expert system) (Knowledge Officer)
39. 3D learning (prototype of product or ideas) (Marketing Officer)
40. Emails (Records Officer)
41. Social Media Administrator
42. Social Media Officer

Research and Development

43. Researcher
44. Research Assistant
45. Research Management Unit Officer
46. Research's Panellists
47. Research Administrator
48. Research Budgeting Officer

49. Research Strategic Planner Coordinator
50. Research Support Service
51. Lab Administrator
52. Lab Assistant
53. Innovation Invention and Design Officer
54. Intellectual Property Coordinator
55. Research Marketer
56. Research Analyst
57. Research Information System
58. Information Repository Officer
59. Information Depository Officer
60. Auditor

The solutions found for the findings to elevate the image of Information Professionals in Malaysia through round table discussion, marketing programs, and measurement of business competitive intelligence. These solutions are among the action plans that should be taken by the government of Malaysia in resolving information professionals' issues in this country.

#### 4.1 Round table discussion or meeting

To elevate the Information Professional Profession in Malaysia, round table discussions among the regulators in Malaysia need to be carried out. Mutual understanding between the stakeholders and regulators is a must to ensure that standard job positions are applied to all public and private sectors. When all sectors regardless of public and private use the standard position, the image of the information professionals is elevated when everybody recognizes the position.

#### 4.2 Marketing program through mass media and social media

Once the standard position has been validated in the meeting, the position should be blasted through mass media and social media as a job vacancy with proper job scope and responsibility. Through this effort, it will enhance the image of information professionals in Malaysia. Information management graduates should be aware of these vacancies as they relate to their field of study.

#### 4.3 Measurement of Business and Competitive Intelligence

From time to time, organizations should make measurements of business activities and competitive intelligence between other organizations. They should identify the latest position that should be available in their organization as the organization adapts to changes in technology. If there is any position that should be introduced to the organization, it is supposed related to an information professional position. The organization should check with the ministry about the related position that is appropriate for their organization. This procedure needs to be scrutinized by the stakeholders and involves ensuring the rules and regulations abide by.

## 5.0 Discussion

Four issues are being addressed above, such as recognition or image of information professionals, awareness, graduates' soft skills, and mismatched employment demand and supply. Solutions have been recognized and recommended to the government of Malaysia to tackle these issues. Among the solutions to ensure the image of the information professional is uplifted are round table discussions or meetings, marketing programs through mass media and social media, measurement of business and competitive intelligence, and 60 job positions were introduced to be used in the organization. By implementing these new job positions in all organizations in Malaysia it is hoped that the image and name of information professionals uplifted. Not only that people are aware of this profession and make the profession become popular and a world-leading professional.

It is expected that the solutions for the issues above can solve the information professionals' issues in Malaysia. Although the four issues above highlight the employment issue among graduates in Malaysia, the information professionals also need to consider another issue that would affect them in the future. It is called VUCA.

Thus, information professionals need to be ready for any challenges that come to them. They need to adapt to the changes, especially VUCA challenges.

#### 5.1 Adapting Changes to VUCA Challenges

VUCA is a situation where our world is affected by Volatility, Uncertainty, Complexity, and Ambiguity (Glaeser, 2022). If this situation happens, as Information Management Professionals, we should ensure that all information that we keep with us is safe from disaster. Data and information should be backed up and a disaster plan should be made viable for everyone in the organization. All staff should be aware of these policies and acts related to the disaster plan. This needs to be delivered and reminded to the staff at least once per quarter. This can be done through knowledge café sessions or round table discussions occasionally. This plan also needs to be made available on the e-bulletin board in the organization. It should be placed in the right location in the organization.

Disaster management plans need to be visible to all staff in the organization to ensure that all organization assets like implicit and explicit information and knowledge are safe from disaster. All staff should be aware of current conditions and situations to ensure the information and knowledge are also safe from disaster. They need to follow the disaster management plan provided to ensure they are

handling the information according to the disaster risk management plan. When they follow the right disaster plan, the information and knowledge are safe.

Proper handling of information and knowledge is done by the right Information Professional in an organization. Therefore, they need to be aware of the proper care of records and documents as information starts from creation until disposition of records. Core knowledge of managing information is important to be possessed by an Information Professional to ensure proper care of records is accomplished.

## 6.0 Conclusion and Recommendations

In conclusion, cooperation from all parties is much appreciated especially from the Prime Minister of Malaysia, the Labor Force Minister, Employers, Subordinates, and Information Workers. The close collaboration between all stakeholders stated is important to ensure the image of information professionals should be elevated and the standard position of information professionals in Malaysia can be embarked upon and applied soon. The position applied should be followed by the organizational functions and activities related to the organization. It is recommended that future research be carried out on the VUCA challenges and their effects on the employability of Information Professionals in Malaysia.

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## Paper Contribution to Related Field of Study

This paper is significant and contributes to the development of the information professional profession in Malaysia. The 60 job positions recommended by the researcher can be implemented by the government of Malaysia in each organization. Apart from that, the policy formulation on information professional job positions able to be developed and utilized by many organizations in Malaysia.

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