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Employability skills constructs as job performance predictors for Malaysian polytechnic graduates: A qualitative study

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Abstract

The acquisition of employability skills that match and fit the employers' requirement would enhance employees' job performance. This study explored and factorized the constructs and dimensions of employability skills which can predict the job performance of Malaysian electric and electronic polytechnic graduates in the electrical and electronics industry. A qualitative approach was used in the development of the research Employability Skills Work Performance Prediction (ESWPP) constructs and dimensions starting from relevant document analysis and expert interviews. The ESWPP constructs and dimensions were then validated by content experts from academic institutions. Finally, the findings were analyzed using the Fleiss Kappa reliability analysis to determine the overall approval index for each of the ESWPP constructs and dimensions. Results of the analysis revealed an overall Kappa coefficient value of 0.989 which indicated a very good level of agreement . The ESWPP constructs and dimensions which were found to be job performance predictors were communication skills, personal qualities, teamwork skills, critical thinking and problem solving skills, technology skills, organizational skills, and continuously learning skills.

Keywords: Electric and Electronic Polytechnic graduates, employability skills, ESWPP constructs, Fleiss Kappa Reliability, job roles, qualitative approach

Introduction

Markets today are increasingly concerned about globalization, rapid changes in technologies and highly intense and competitive industry. As a result, employers nowadays are more concernedabout findingsuitable employeesnot onlywith technicalskillsbut also equippedwithhigh level of employability skillsandability to adjust with rapid changes in the industry (Stiwne & Jungert, 2010; Howieson, Mckechnie & Semple, 2012; Mohd Sahandri GB et al., 2012; Mohamad Sattar et al., 2012; Yahya et al., 2013; Fong et al., 2014).

There are specific employability skills that employers would like to see in an engineering graduate and these can vary according to type of role to cope with the job market scenario (Raybould & Sheedy, 2005) and has significant effects on the job performance (Rosenberg, Heimler & Morote, 2012). Employability skill refers to work readiness withthe possession of the attributes, skills and knowledge of the technical asrequired for a job; also to ensure they have the capabilityto be effective in the workplace; could also assist to adjust themselves towards various changes suit with the working environmental needs and could eventually enhance careers through the acquisition of those skills (Normala et al., 2014a).

Sustained concerted effort on the employabilitystudy is requiredso thattheacademic institutionwill be able to capturethe employability skills variation mapped to the job requirements apart from strengthening

theefforts toprovidequality engineering graduates.   Many researcher have proven that there are contradiction in the importance of employability' skills for employees (Archer & Davison, 2008; Mustafa et al., 2008; Lowden, 2009; Shukla, 2012).   However, through the ample evidence, there are certain limitations in previous employability studies. Most employability studies used adapted constructs and dimensions Employability Skills from Secretary's Commission on Achieving Necessary Skills (SCANs, 1991) and Model Employability Skills 2000+ by The Conference Board of Canada's Employability Skills Forum Board of Canada (The Conference Board of Canada, 2000). Therefore, due to the differences in research scope, purpose and situation, the main objective of this study was to identify and validate the constructs and dimensions of Employability Skills Work Performance Prediction (ESWPP) that will be used to forecast the work performance of Electronic Polytechnic graduates in Electrical and Electronics Industry.

Problem statement

Since half century ago, employers and industry stressed that graduates were lacking in certain employability skills as required by the employers. Employers were in opinion that graduates are not ready to enter and confront the complexities and challenges of the world of work (Freudenberg B, Brimble M & Cameron, 2011; Tymon, 2011; Marais & Perkins, 2012) and the resulting unwillingness of graduates who are not proficient in the implementation of work task (Tetreault PA, 1997).

Employers believe that the educational institutions are the most responsible to equip graduates with the employability skills.However, the skills, behaviors and attitudes required by the prospective employees are different from what is taught during the study and what was dominated by graduates (Jackson & Chapman, 2012; Rohaizat, Shahrin & Zubaidah, 2012) resulting in increase of the unemployment rate. Tracer Study Report 2011 issued by the Ministry of Higher Education shows that the percentage of Polytechnic engineering graduates who are still unemployed in 2011 was 63.8% (Ministry of Higher Education, 2012b). The issue of unemployment in Malaysia and also throughout the world is not because of lack of employment opportunities, but is mainly due to poor quality of graduates (Howieson, Mckechnie & Semple, 2012; Zaliza & Mohd Safarin, 2014; Normala et al., 2014). Yahya (2004) viewed that graduates good technical skills, without having employability skills are considered not to be of quality.

This has happened because there has been no consensus on the exact inventory of employability skills needed by graduates for the industry electric and electronics because even though various companies are in the same industry sector,they have their own specific employability skills needs (Pillai et al., 2012). Industrial demand will not be satisfied as long as the clear specification of graduate properties is not established or the characteristics of workers is not specified (Ministry of Higher Education, 2012a). Shweta Tiwari (2012) mentioned that the gap in terms of ensuring the quality workers need of the industry will be met by the continued development of the skills of the workforce andshould be implemented contextually (Jackson, Sibson & Riebe, 2013).

Therefore, this study aims to explore and to factorizethe constructs and dimensions of Employability Skills that can predict the job performance (ESWPP) of the Electric and Electronic Polytechnic graduate in Electrical and Electronics Industry in addition to provide exact inventory of employability skills needed by graduates for the electric and electronicsindustry. The findings will be used to further empowering the Polytechnic Collaboration, Industrial Services and Employment Centre (CISEC) functions by providing training on the employability skills to polytechnic engineering graduates that are actually required by the potential employersin addition to the most significant effect of the job performance to reduce the unemployment rate among the engineering graduates of the Polytechnic.

Research question

The research questions are as follows:
a) What are the constructs and dimensions of Employability Skills required by the employers in electrical and electronics industry in Malaysia based on the analysis document.
b) What are the constructs and dimensions of Employability Skills which can predict the job performance of an employee in the electrical and electronics industry in Malaysia from the employers perspective.
c) What are the constructs and dimensions of Employability Skills which can predict the job performance of an employee in the electrical and electronics industry in Malaysiaas validated by content expertsfrom the academic institutions.

Methodology

A qualitative approach was used in the development of research constructs and dimensions for ESWPP starting from the document analysis and expert interview protocol from the electrical and electronics industry. In this research, experts are the individuals who have the expertise to be appointed to give opinions and advice in their respective fields of expertise and has extensive experiences in the relevant field (Policy and Regulatory Section, Human Capital Management Division, Office of the Registrar & Universiti Teknologi Malaysia, 2010). Document analysis and data interview theme was then analyzed by using the frequency matrices tables. Then the construct and dimension ESWPP was validated by the contents expert from the academic institution. Finally it was analyzed by using Fleiss Kappa reliability. Fleiss Kappa reliability analysis is used to determine the overall dimensions of the approval index for each ESWPP construct. The finding of the overall Kappa coefficient value at 0.989, which indicates the level of agreement, is considered as very good. The results showed that the constructs and dimensions ESWPP were found to be communication skills, personal qualities, teamwork skills, critical thinking skills and problem solving, technology skills, organizational skills and continuously learning skills. Scale for Fleiss Kappa agreement are as shown in Table 1 (a).

Table 1 (a). Scale for Fleiss Kappa Agreement

κ	Interpretation
< 0	Poor agreement
0.01 – 0.20	Slight agreement
0.21 – 0.40	Fair agreement
0.41 – 0.60	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	Almost perfect agreement

Source: Landis and Kosh (1977)

Result and discussions

Document analysis and expert interviews construct of employability skills based work performance prediction development

Based on the comments and literature citations as shown in Table 1(b), the researcher has a list of the main constructs that are frequently mentioned among the famous model of employability skills throughout the country as constructs of ESWPP are Communication Skills, Personal Qualities, Teamwork

Skills, Critical Thinking and Problem Solving Skills, Technology Skills, Organizational Skills and Continuously Learning Skills (Normala Rahmat, Yahya Buntat & Abdul Rahman Ayub, 2015).

Table 1 (b). Document analysis comparison for constructs of employability skills based work performance prediction development

EMPLOYABILITY SKILLS CONSTRUCT SUMMARY	THE CONFERENCE BOARD OF CANADA (2000) *Employability Skills 2000+*	SCAN (2001)	EUROPEAN UNION (EU) (DEST 2002)	AUSTRALIAN GOVERNMENT DEPARTMENT OF EDUCATION EMPLOYMENT AND WORKPLACE RELATIONS (2008)	STEMNET (2013)	TOTAL SCORE
COMMUNICATION SKILLS	√	√	√	√	√	5/5
PERSONAL QUALITIES	√	√	√	√	√	5/5
TEAMWORK SKILLS	√	√	√	√	√	5/5
CRITICAL THINKING AND PROBLEM SOLVING SKILLS	√	√	√	√	√	5/5
TECHNOLOGY SKILLS	√	√	√	√	-	4/5
ORGANIZATIONAL SKILLS	√	√	√	√	√	5/5
CONTINUOUSLY LEARNING SKILLS	√	-	√	√	√	4/5

Table 1(c) shows a result from the interview sessions with five Electric and Electronic Human Resources Officer in Malaysia regarding their opinion about which construct of employability skills that they were concerned of and really need to be acquired by graduate especially the Polytechnic graduate in electric and electronic.

Based on the findings of the analysis of documents and expert interview protocol, it can be stated that the constructs Employability Skills Based Work Performance Prediction (ESWPP) include Communication Skills, Personal Qualities, Teamwork Skills, Critical Thinking and Problem Solving Skills, Technology Skills, Organizational Skills and Continuously Learning Skills. Therefore, the development of these elements may be continued to establish the dimensions of theESWPP constructs (Normala Rahmat et al., 2015).

Table 1 (c). Comparison of constructsof employability skills based work performance prediction development from the employer expert perspective

EMPLOYABILITY SKILLS CONSTRUCT SUMMARY	COMPANY (1)	COMPANY (2)	COMPANY (3)	COMPANY (4)	COMPANY (5)	TOTAL SCORE
COMMUNICATION SKILLS	√	√	√	√	√	5/5
PERSONAL QUALITIES	√	√	√	√	√	5/5
TEAMWORK SKILLS	√	√	√	√	√	5/5
CRITICAL THINKING AND PROBLEM SOLVING SKILLS	√	√	√	√	√	5/5
TECHNOLOGY SKILLS	√	√	√	√	√	5/5
ORGANIZATIONAL SKILLS	√	√	√	√	√	5/5
CONTINUOUSLY LEARNING SKILLS	√	√	√	√	√	5/5

Document analysis and expert interviews for construct and dimensions of employability skills based work performance prediction development

From a documents analysis in Table 1 (d) it is shown that the   list of the 27 main dimensions that are frequently discussed in famous model of employability skills throughout country and used as formation dimensions for development of the constructs for ESWPP.

Suitable dimensions for Communication Skills construct are *effective reading strategies, effective writing strategies, using numeracy effectively, effective listening skills, effective speaking skills and share information using a range of information and communications technology*. Dimensions for Personal Qualities construct are *responsibility, self-esteem and self-management*. Meanwhile the dimensions for Teamwork Skills are *work independently* and *as part of a team*, coaching and mentoring skills, serves clients or customers, exhibits leadership, flexibility and *works with cultural diversity*.

Applies creative, innovative and practical solutions, applies decision-making strategies and recognises and solves problem are formation for Crictical Thinking and Problem Solving Skills. Technology Skills contruct consists of select technology and applies technology to task. Dimensions for Organisational Skills construct are *utilizing resources such as manages time, manages money, manages materials facilities, manage human resources. Planning process, adapt to changing requirements and information and continuously monitor the success of project or task and identify ways to improve* are also dimensions included in Organisational Skills construct. Lastly dimensions for Continuosly Learning Skills construct are *having enthusiasm for ongoing learning, managing own learning and assess personal strengths and areas for development.*

Table 1(e) have shown a result from interview sessions with five Electrical and Electronic Human Resources Officer in Malaysia regarding their opinion about the dimensions construct of employability skills that Polytechnic graduate should acquire in order to make sure they can do the work. Majority of them agreed with 27 dimensions of contruct for ESWPP and suggested the dimension sociability, honesty and high integrity for Personal Qualities construct. They also suggested maintain and troubleshoot technology, having information technology skills for Technology Skills construct. This skills are also listedin Employability Skills from Secretary's Commission on Achieving Necessary Skills (SCANs, 1991) and finding research by Rasul, Rauf, Mansor, Yasin & Mahamod (2013).

Table 1 (d). Table comparison of document analysis construct and dimensions of employability skills based work performance prediction development

| EMPLOYABILITY SKLLS CONSTRUCT | EMPLOYABILITY SKILLS DIMENSION | COMPARATIVE EMPLOYABILITY SKILLS MODEL BY COUNTRY THAT NEEDED BY EMPLOYERS OF INDUSTRY | | | | | |
		THE CONFERENCE BOARD OF CANADA (2000) *Employability Skills 2000+*	SCAN (2001)	EUROPEAN UNION (EU) (DEST 2002)	AUSTRALIAN GOVERNMENT DEPARTMENT OF EDUCATION EMPLOYMENT AND WORKPLACE RELATIONS (2008)	STEMNET (2013)	TOTAL SCORE
1) COMMUNICATION SKILLS	• Effective Reading Strategies	√	√		√		3/5
	• Effective Writing Strategies	√	√	√	√	√	5/5
	• Using numeracy effectively	√	√		√		3/5
	• Effective Listening Skills	√	√		√	√	4/5
	• Effective Speaking Skills		√		√	√	3/5
	• Share information using a range of information and communications technologies	√	√		√		3/5
2) PERSONAL QUALITIES	• Responsibility		√	√	√		3/5
	• Self-Esteem	√	√		√	√	4/5
	• Self-Management	√	√		√	√	4/5
3) TEAMWORK SKILLS	• Work independently or as part of a team	√	√	√	√		4/5
	• Coaching and mentoring skills	√	√		√		3/5
	• Serves Clients @ Customers	√	√	√		√	4/5
	• Exhibits Leadership	√	√		√		3/5
	• Flexibility	√	√		√		3/5
	• Works with Cultural Diversity	√	√		√	√	4/5
4) CRITICAL THINKING AND PROBLEM SOLVING SKILLS	• Applies creative, innovative and practical solutions	√	√		√		3/5
	• Applies Decision-making Strategies	√	√	√	√	√	5/5
	• Recognizes and Solves Problems	√	√	√	√	√	5/5
5) TECHNOLOGY SKILLS	• Selects Technology	√	√	√	√		4/5
	• Applies Technology to Task	√	√		√		3/5
6) ORGANIZATIONAL SKILLS	*Utilizing Resources* • Manages Time • Manages Money • Manages Materials/Facilities • Manages Human Resources		√		√	√	3/5
	• Planning process	√			√	√	3/5
	• Adapt to changing requirements and information	√		√	√		3/5
	• Continuously monitor the success of a project or task and identify ways to improve	√			√	√	3/5
7) CONTINUOUSLY LEARNING SKILLS	• Having enthusiasm for ongoing learning	√			√	√	3/5
	• Managing own learning	√		√	√		3/5
	• Assess personal strengths and areas for development	√		√	√		3/5

Theme: Personal qualities

HR1
'... We need employees that can be trusted ... in fact it's the most important thing above everything else…… it's very important for every employee should keep company secrets'.
'….We needs new workers who quickly adapt to the workplace ....'

HR2
'... .Honesty was expected of an employee because they are responsible for ensuring that the keeping company secret ...'

HR3
'... .Graduate has properties of high integrity that is acutely needed by industry... ..'
'... The employees were friendly and courteous ensure harmony sense at work ....'

HR4
'... The competition between companies is very high ... .employee can't bring out any documents and equipment out of the company ... they must have a sincere and loyal to the company.'

HR5
'... .Industry urgently needs a faithful worker, honest and trustworthy in carrying out their duties ...'
'... They must be polite to colleagues and mutually help each other ....

Theme: Technology skills

HR1
'…we seek for employees with at least an understanding to procedures how to operate the machines, especially how to program the machine code…'

HR2
'…they should know how to setting and program the computer in the line…according the task or project'

HR3
'…It's crucial to understand and maintain the system. Technician should know how to repair and maintaining the system '

HR4
'Every process of electric and electronic industry uses technology. It is always changing and employees have to seek for skills very fast…..they responsible to set up the machines and checking what is the problem when the machine get stuck'

HR5
' They must have a basic skills how to used computer…mostly machine in the line production using programming code…'

Table 1 (e). Summary of expert insight interviews for construct dimensions based work performance prediction development from the industry perspective

EMPLOYABILITY SKILLS CONSTRUCT	EMPLOYABILITY SKILLS DIMENSION	COMPARATIVE EMPLOYABILITY SKILLS THAT NEEDED BY EMPLOYERS OF ELECTRICAL & ELECTRONIC INDUSTRY IN MALAYSIA (HUMAN RESOURCE OFFICER PERSPECTIVE)					
		COMPANY (1)	COMPANY (2)	COMPANY (3)	COMPANY (4)	COMPANY (5)	TOTAL SCORE
1) COMMUNICATION SKILLS	• Effective reading strategies		√	√	√	√	4/5
	• Effective writing strategies	√	√	√	√	√	5/5
	• Using numeracy effectively		√	√	√	√	4/5
	• Effective listening skills	√	√	√	√	√	5/5
	• Effective speaking skills	√	√	√	√	√	5/5
	• Share information using a range of information and communications technologies	√	√	√	√	√	5/5
2) PERSONAL QUALITIES	• Responsibility	√	√	√	√	√	5/5
	• Self-Esteem	√	√	√	√	√	5/5
	• Self-Management		√	√	√	√	4/5
	• Sociability	√	√			√	3/5
	• **Honesty and high integrity**	√	√	√	√	√	5/5
3) TEAMWORK SKILLS	• Work independently or as part of a team	√	√	√	√	√	5/5
	• Coaching and mentoring skills		√	√	√	√	4/5
	• Serves clients @ customers		√	√	√	√	4/5
	• Exhibits leadership		√	√	√	√	4/5
	• Flexibility	√	√	√	√	√	5/5
	• Works with cultural diversity	√	√	√	√	√	5/5
4) CRITICAL THINKING AND PROBLEM SOLVING SKILLS	• Applies creative, innovative and practical solutions	√	√	√	√	√	5/5
	• Applies decision-making strategies	√	√	√	√	√	5/5
	• Recognizes and solves problems	√	√	√	√	√	5/5
5) TECHNOLOGY SKILLS	• Selects technology	√	√		√	√	4/5
	• Applies technology to task	√	√	√	√	√	4/5
	• **Maintain and troubleshoot technology**	√	√		√	√	4/5
	• **Having information technology skill**	√	√	√	√	√	5/5
6) ORGANIZATIONAL SKILLS	*Utilizing Resources* • Manages Time • Manages Money • Manages Materials/Facilities • Manages Human Resources	√	√	√	√	√	5/5
	• Planning process		√	√	√	√	4/5
	• Adapt to changing requirements and information		√	√	√	√	4/5
	• Continuously monitor the success of a project or task and identify ways to improve		√	√	√	√	4/5
7) CONTINUOUSLY LEARNING SKILLS	• Having enthusiasm for ongoing learning		√	√	√	√	4/5
	• Managing own learning		√	√	√	√	4/5
	• Assess personal strengths and areas for development		√	√	√	√	4/5

Based on the analysis and opinion from the experts that were conducted as described above, researchers have identified a finding that led to the formation of 31 dimensions contained in the seven constructs .

Through the process of analyzing these data, the constructs and dimensions of the Employability Skills Based Work Performance Prediction required by the electrical and electronics industry in Malaysia which can improve the graduate job performance can be recognized and confirmed.

Content expert validation for construct and dimensions of employability skills based work performance prediction development

Table 1(f) shows a result from interview sessions with five content experts from university,polytechnic division, and polytechnicinstitutes regarding which construct and dimensions of employability skills the graduate especially the Polytechnic graduate in electric and electronic should possess for a job.

The elements and dimensions have been reviewed by five experts whereby validation has been granted as shown in Table 1 (g). It is also based on the Fleiss qualitative research whereby the five people involved are specialized in the qualitative research methods and the content of the study. In this study, the equation obtained is

$$K = (Pa\text{-}Pc) / (1\text{-}Pc)$$

> K = *Kappa Value*
> Pa = *Observed Agreement*
> Pc = *Chance Agreement*

Table 1 (f). Summary of the constructs and dimensions of employability skills based work performance prediction development validation by the academic experts

EMPLOYABILITY SKILLS CONSTRUCT	EMPLOYABILITY SKILLS DIMENSION	COMPARATIVE EMPLOYABILITY SKILLS THAT NEEDED BY EMPLOYERS OF ELECTRICAL & ELECTRONICS INDUSTRY IN MALAYSIA (ACADEMICIAN EXPERT PERSPECTIVE)					
		CONTENT EXPERT (1)	CONTENT EXPERT (2)	CONTENT EXPERT (3)	CONTENT EXPERT (4)	CONTENT EXPERT (5)	TOTAL SCORE
1) COMMUNICATION SKILLS	• Effective reading strategies	√	√	√	√	√	5/5
	• Effective writing strategies	√	√	√	√	√	5/5
	• Using numeracy effectively	√	√	√	√	√	5/5
	• Effective listening skills	√	√	√	√	√	5/5
	• Effective speaking skills	√	√	√	√	√	5/5
	• Share information using a range of information and communications technologies	√	√		√	√	4/5
2) PERSONAL QUALITIES	• Responsibility	√	√	√	√	√	5/5
	• Self-Esteem	√	√	√	√	√	5/5
	• Self-Management	√	√	√	√	√	5/5
	• Sociability	√	√	√		√	3/5
	• Honesty and high integrity	√	√	√	√	√	5/5
3) TEAMWORK SKILLS	• Work independently or as part of a team	√	√	√	√	√	5/5
	• Coaching and mentoring skills	√	√	√	√	√	5/5
	• Serves clients @ customers	√	√		√	√	4/5
	• Exhibits leadership	√	√	√	√	√	5/5
	• Flexibility	√	√	√	√	√	5/5
	• Works with cultural diversity	√	√	√	√	√	5/5
4) CRITICAL THINKING AND PROBLEM SOLVING SKILLS	• Applies creative, innovative and practical solutions	√	√	√	√	√	5/5
	• Applies decision-making strategies	√	√	√	√	√	5/5
	• Recognizes and solves problems	√	√	√	√	√	5/5
5) TECHNOLOGY SKILLS	• Selects technology	√	√	√	√	√	5/5
	• Applies technology to task	√	√	√	√	√	5/5
	• Maintain and troubleshoot technology	√	√	√	√	√	5/5
	• Having information technology skill	√	√	√	√	√	5/5
6) ORGANIZATIONAL SKILLS	*Utilizing Resources* • Manages Time • Manages Money • Manages Materials/Facilities • Manages Human Resources	√	√	√	√	√	5/5
	• Planning process	√	√	√	√	√	5/5
	• Adapt to changing requirements and information	√	√	√	√	√	5/5
	• Continuously monitor the success of a project or task and identify ways to improve	√	√	√	√	√	5/5
7) CONTINUOUSLY LEARNING SKILLS	• Having enthusiasm for ongoing learning	√	√	√	√	√	5/5
	• Managing own learning	√	√	√	√	√	5/5
	• Assess personal strengths and areas for development	√	√	√	√	√	5/5

Table 1 (g). Academician expert opinian Fleiss Kappa result

ACADEMICIAN EXPERT OPINION FLEISS KAPPA RESULT

Bil	Var#	Raters					% Aggreement
		P1	P2	P3	P4	P5	
1	Effective Reading Strategies	1	1	1	1	1	1.00
2	Effective Writing Strategies	1	1	1	1	1	1.00
3	Using Numeracy Effectively	1	1	1	1	1	1.00
4	Effective Listening Skills	1	1	1	1	1	1.00
5	Effective Speaking Skills	1	1	1	1	1	1.00
6	Share information	1	1	0	1	1	0.80
7	Responsibility	1	1	1	1	1	1.00
8	Self-Esteem	1	1	1	1	1	1.00
9	Self-Management	1	1	1	1	1	1.00
10	Sociability	1	1	1	1	1	1.00
11	Honesty and High Integrity	1	1	1	1	1	1.00
12	Work independently or as part of a team	1	1	1	1	1	1.00
13	Coaching and mentoring skills	1	1	1	1	1	1.00
14	Serves Clients @ Customers	1	1	0	1	1	0.80
15	Exhibits Leadership	1	1	1	1	1	1.00
16	Flexibility	1	1	1	1	1	1.00
17	Works with Cultural Diversity	1	1	1	1	1	1.00
18	Applies creative, innovative and practical solutions	1	1	1	1	1	1.00
19	Applies Decision-making Strategies	1	1	1	1	1	1.00
20	Recognizes and Solves Problems	1	1	1	1	1	1.00
21	Selects Technology	1	1	1	1	1	1.00
22	Applies Technology to Task	1	1	1	1	1	1.00
23	Maintain and Troubleshoot Technology	1	1	1	1	1	1.00
24	Having Information Technology Skills	1	1	1	1	1	1.00
25	Utilizing Resources	1	1	1	1	1	1.00
26	Planning process	1	1	1	1	1	1.00
27	Adapt to changing requirements and information	1	1	1	1	1	1.00
28	Continuously monitor the success of a project or task and identify ways to improve	1	1	1	1	1	1.00
29	Having enthusiasm for ongoing learning	1	1	1	1	1	1.00
30	Managing own learning	1	1	1	1	1	1.00
31	Assess personal strengths and areas for development	1	1	1	1	1	1.00

Interraters Reliability	98.71
Value of Kappa	0.989

κ	Interpretation
< 0	Poor agreement
0.01 – 0.20	Slight agreement
0.21 – 0.40	Fair agreement
0.41 – 0.60	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	Almost perfect agreement

The finding of the overall Kappa coefficient value is at **0.989**, which indicates that the level of agreementis considered to be very good.

Conclusion

It was shown in this study that the analysis and opinion from the experts led to the formation of 31dimensions consisted in seven constructs. It was also further shown that through the process of analyzing those data, the constructs of the Employability Skills Based Work Performance Prediction required by the electrical and electronics industry in Malaysia which can potentially improve the job performance can be recognized and confirmed as constructs for the ESWPP. The equation obtained in this study also showed that the equation obtained with the Fleiss Kappa coefficient values as a whole at0.989 indicating a very good level of agreement. In overall, the findings from the tringular approach which involved the analysis of documents and the expert perspective garthered form the industry and validated by the content experts from the academic institutions demonstrated that the construct protocols for the Employability Skills Based Work Performance Prediction are *Communication Skills, Personal Qualities, Teamwork Skills, Critical Thinking and Problem Solving Skills, Technology Skills, Organizational Skills, and Continuously Learning Skills.*

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