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# Employees' Perception of Employability Skills Needed in Today's Workforce among Physiotherapy Graduates

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## Abstract

The purpose of this research is to investigate the employers' perceptions of *employability skills* and competency levels of 45 physiotherapy graduate employees. The *Survey of the Employability Skills Needed in the Workforce* were adapted and distributed to all graduates employees. Findings demonstrated that employers perceived only the following 7 items that needed enhancement in the physiotherapy education : critical thinking ability, generating hypotheses and linking ideas, applying theory into practice, sharp analytical skills ,prioritizing problems, keeping up-to-date on latest information regarding the professionalism, giving clear explanation about problems and treatments and recognizing the effects of decisions to be made.

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*Keywords:* Stakeholders; Graduates; Employability skills; Curriculum; Psychotherapy

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## 1. Introduction

In today's workforce, characterized by change and increasing competition for jobs, it is important for educational programs, to be aware of the qualities that are valued by employers in the industry. It is the role of universities to design and implement programs that are appropriate to the missions and goals to supply the workforce relevant to the needs of stakeholders or employers. Universities have the responsibility to provide graduates with knowledge in the professional field with intellectual skills and ability to apply theory to practical situations. Other generic university skills as identified by the Malaysian qualification frameworks such as the ability to communicate, possession of attitudes and values of responsible citizen are other areas that is expected to be developed during the course of study (2008). They are expected to provide graduates who are relevant to meet the needs of the society and the nation at a cost that is effective and that quality is assured<sup>1</sup>.

In Malaysia, physiotherapy education has undergone significant changes over the past decades; transition of programs from colleges and hospitals, where they were predominantly vocationally or clinically-focused, to a larger aspect of institutional centers and universities, with the focus of applying sciences and expansion to research base development. The first degree program in Physiotherapy was offered by the Faculty of Allied Health Science, UKM in 2003 and the first graduate was produce in 2007. The physiotherapy graduates are expected to possess not only the knowledge required, but also skills such as thinking ability, communication ability, problem-solving ability,

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learning techniques and also leadership quality<sup>2</sup>. As a result of rapid changes presenting in the healthcare service, they are expected to be equipped with discipline-specific skills, to demonstrate the economic value of their services and also to evaluate outcome of their treatments<sup>3</sup>. Being a university graduate, research skills are essential, not only as a part of the goal to strive for academic excellence, but to ensure that physiotherapy services are based on relevant research<sup>4</sup>.

Perceptions of the employers on graduates are significant mechanism to provide a baseline for improvement on the education received during university days. University must first understand the employers' needs so that the graduates presents with the required qualities<sup>5</sup>. Parents, prospective students, employers, schools and educational institutions, the government and others want to be assured that qualifications bearing similar titles represent similar levels of achievement and that there is international comparability of standards to facilitate student and graduate mobility. Therefore, employers' perceptions are not only about graduates' presentation, but played a role as an alternative guideline for the university regarding the relevant academic content and syllabus. The information provided by employers can act as a reference for the university to understand the future needs or trend of a specific profession, so that the university will be able to make appropriate changes in their academic programs.

This study is carried out to explore and investigate whether the physiotherapy education in FSKB, UKM meet the needs of the employers and competency level of graduate employees at performing the employability skills in today's workforce. Outcome of the study can provide information for future curriculum development in physiotherapy education. This would enhance public confidence in academic standards and recognition of qualifications require for public understanding of the achievements represented by in education and training consistent with the use of the qualification titles.

## 2. Methodology

The design of this study was survey research. A need existed to determine the employability skills desired in industry on the standard of physiotherapy education in the country. About 45 randomly selected graduates from 2007 to 2008 were contacted to solicit the name and contact information of their immediate employees. Upon contacting the graduates, forty willingly provided the information needed to serve as the frame for the employers, which comprised 34 of them.

### 2.1 Study Subjects

The study comprised of 20 physiotherapy graduates from FSKB, UKM in 2007 and another 25 students in 2008 and their current employers comprising of 40 of them. Inclusion criteria included only employed physiotherapy graduates either in government or private sector and their employers; whilst exclusion criteria include those graduates who are unemployed or have no permanent job without an employee.

### 2.2 Instrument

This survey was a descriptive, cross sectional study on the attitudes, attributes and professionalism presentation of physiotherapy graduates in the workforce. The questionnaire method was chosen because it was the most practical way to assess the information perceived by graduates and employers. The instrument used in this study is a questionnaire adapted from *Survey of the Employability Skills Needed in the Workforce*, originally designed by J. Shane Robinson (2006). The questionnaire was identified through the literature by Evers, Rush and Bedrow (1998). Included in the questionnaire was a column on demographic data that was used to collect information on the employers.

Employers would respond to their perception of how important the *employability skills* of the graduates in his or her employment and how competent they perceived the graduate to be at performing the skills. The 50 skills were measured on a 4 point response scale consisting of :0- no importance( or competence 1), 1- minor competence (competence), 2- moderate importance (competence) and 3- major importance ( or competence). The importance and competence skills were further analysed using the Borich needs assessment model<sup>6</sup>. The nature of the model is to determine if and where discrepancies exists. Borich (1980) noted the importance of calculating a discrepancy score, weighted discrepancy score, and a mean weighted discrepancy score in an effort to emphasize areas in need of curriculum enhancement and modification. The employability skills listed were categorized according to the MWDS. Category I consisted of skills with MWDS above 2.00 which was considered to have the highest

discrepancy with skills that needed the most enhancement; category II consisted of skills with MWDS from 1.50 to 1.90 and considered as with moderate discrepancy; category III consisted of skills with MWDS from 1.00 to 1.49 with low discrepancy, and lastly category IV consisted of skills with MWDS below 1.00 and considered a negligible discrepancy.

A panel of experts consisting of staff of the faculty established face and content validity on the instrument. To account for the reliability, a pilot study was performed on the faculty graduates not randomly selected to the study and resulted in a Cronbach's alpha of 0.96. Two hypothesis were identified in the study: the employers perceived that the graduates presents with the employability skills necessary in the work force and secondly, the graduates presents with competent level of employability skills necessary in the work force.

### 3. Results

There were 34 graduates (13 students from 2007 and 21 students from 2008) and 29 employers who returned the questionnaire. Employability skills items that possess a mean importance of 2.85 or higher were considered the most relevant employability skills by employers. The employers demonstrated applying theory into practice (M=2.93) as the most important employability skills ( Table 1). Other employability skills items included keeping up-to-date on latest information regarding the professionalism (M=2.90), willingness to gain new knowledge (M=2.90), honest and know their own limitations (M=2.90), establishing good rapport with patients ( M= 2.90), being responsible and reliable (M=2.86) and ability to work as a team member (M=2.86).

Table 1. Employers' Perceptions of the Importance of the Employability Skills Among the physiotherapy graduates.

	Mean	SD
<i>Problem Solving and Analytic</i>	2.76	0.511
1. Identifying problems		
2. Prioritizing problems	2.83	0.384
3. Solving problems	2.72	0.592
4. Confident about tackling unfamiliar problems	2.34	0.553
5. Sharp analytical skills	2.69	0.471
<i>Decision Making</i>	2.83	0.384
6. Able to make decisions independently		
7. Making decisions on the basis of through analysis of the situation	2.52	0.509
8. Recognizing the effects of decisions to be made	2.79	0.412
<i>Organization and Time Management</i>	2.72	0.528
9. Setting priorities		
10. Allocating time efficiently	2.72	0.455
11. Monitoring progress against the plan	2.48	0.509
12. Revising plans to include new information	2.55	0.506
13. Managing several tasks at once	2.41	0.501
14. Meeting deadlines	2.69	0.471
15. Responsible and reliable	2.86	±0.351
16. Punctual <sup>25</sup>	2.79	0.412
<i>Communication Ability (Oral, Written and Listening)</i>		
17. Conveying information one-to-one <sup>24</sup>	2.79	0.491
18. Gives clear explanation about problems and treatments <sup>23</sup>	2.83	0.384
19. Making effective presentation	2.59	0.501
20. Relevant skills in written communication (emails, reports, letters to clients, etc.)	2.66	0.553
21. Listening Attentively	2.59	0.568
22. Respond to others' comments ideally	2.62	0.494
<i>Interpersonal Skills</i>		
23. Ability to work as a team member	2.86	0.351
24. Relating will with supervisors	2.62	0.494

25. demonstrate empathy with fellow employees and patients	2.62	0.494
26. Establish good rapport with patients	2.90	0.310
27. Understanding the needs of others	2.83	0.384
28. Good manner – respect, caring, friendly, enjoy the job, inspire confidence	2.90	0.310
<i>Leadership and Influence</i>	2.21	0.559
29. Supervising the work of others		
30. Giving direction and guidance to others	2.17	0.658
31. Delegating work to peers	2.41	0.568
32. Delegating work to subordinates	2.28	0.591
<i>Creativity, Innovation, Flexibility and Ability to Conceptualize</i>	2.38	0.561
33. Providing novel solutions to problems		
34. Adapting to situations of change	2.55	0.506
35. Initiating change to enhance productivity	2.24	0.511
36. Demonstrate critical thinking ability, generating hypotheses and linking ideas	2.90	0.310
37. Applying theory into practice	2.93	0.258
<i>Lifelong Learning</i>		
38. Keeping up-to-date on latest information regarding the professionalism	2.90	0.310
39. Willingness to gain new knowledge	2.90	0.310
<i>Professional Behavior</i>	2.83	0.384
40. Has Appropriate skills and knowledge		
41. Honest and know his/her own limitations	2.90	0.310
42. Seeks further knowledge as required to help patients	2.83	0.384
43. works safely <sup>7</sup>	2.83	0.384
<i>Motivation-Personal Strength</i>	2.76	0.435
44. Maintaining a high energy level		
45. Functioning at an optimal level of performance	2.79	0.412
46. Responding positively to criticism	2.76	0.435
47. Seizes opportunities and act proactively	2.76	0.435
48. Maintaining positive attitude	2.72	0.455
49. Functioning well in stressful situations	2.55	0.506
50. Ability to work independently	2.79	0.412

Note: Scale 0= No importance, 1= Important, 2= Moderate Importance, 3= Major Importance

Table 2. Employers' Perceptions of the Employees Graduates Level of Competence at Performing the Employability Skills.

	Mean	SD
<i>Problem Solving and Analytic</i>	2.24	0.435
1. Identifying problems		
2. Prioritizing problems	2.03	0.566
3. Solving problems	2.07	0.530
4. Confident about tackling unfamiliar problems	1.79	0.491
5. sharp analytical skills	1.83	0.602
<i>Decision Making</i>	2.17	0.468
6. Able to make decisions independently		
7. Making decisions on the basis of through analysis of the situation	1.86	0.516
8. Recognizing the effects of decisions to be made	2.07	0.371
<i>Organization and Time Management</i>	2.28	0.591
9. Setting priorities		

10. Allocating time efficiently	2.07	0.651
11. Monitoring progress against the plan	2.00	0.378
12. Revising plans to include new information	1.93	0.458
13. Managing several tasks at once	1.59	0.628
14. Meeting deadlines	2.10	0.489
15. Responsible and reliable	2.55	0.632
16. Punctual	2.48	0.688
<i>Communication Ability (Oral, Written and Listening)</i>	2.45	0.506
17. Conveying information one-to-one		
18. Gives clear explanation about problems and treatments	2.10	0.409
19. Making effective presentation	1.90	0.557
20. Relevant skills in written communication (emails, reports, letters to clients, etc.)	2.31	0.604
21. Listening Attentively	2.21	0.620
22. Respond to others' comments ideally	2.10	0.557
<i>Interpersonal Skills</i>	2.72	0.455
23. Ability to work as a team member		
24. Relating well with supervisors	2.17	0.384
25. demonstrate empathy with fellow employees and patients	2.31	0.541
26. Establish good rapport with patients	2.72	0.528
27. Understanding the needs of others	2.66	0.553
28. Good manner – respect, caring, friendly, enjoy the job, inspire confidence	2.66	0.484
<i>Leadership and Influence</i>	1.59	0.501
29. Supervising the work of others		
30. Giving direction and guidance to others	1.79	0.491
31. Delegating work to peers	1.79	0.559
32. Delegating work to subordinates	1.90	0.489
<i>Creativity, Innovation, Flexibility and Ability to Conceptualize</i>	1.66	0.553
33. Providing novel solutions to problems		
34. Adapting to situations of change	2.00	0.535
35. Initiating change to enhance productivity	1.72	0.649
36. Demonstrate critical thinking ability, generating hypotheses and linking ideas	2.00	0.707
37. Applying theory into practice	2.14	0.516
<i>Lifelong Learning</i>	2.17	0.384
38. Keeping up-to-date on latest information regarding the professionalism		
39. Willingness to gain new knowledge	2.72	0.455
<i>Professional Behavior</i>	2.55	0.506
40. Has Appropriate skills and knowledge		
41. Honest and know his/her own limitations	2.62	0.561
42. Seeks further knowledge as required to help patients	2.45	0.506
43. works safely	2.55	0.572
<i>Motivation-Personal Strength</i>	2.34	0.484
44. Maintaining a high energy level		
45. Functioning at an optimal level of performance	2.21	0.559
46. Responding positively to criticism	2.38	0.561
47. Seizes opportunities and act proactively	2.10	0.409
48. Maintaining positive attitude	2.48	0.574
49. Functioning well in stressful situations	2.14	0.516
50. Ability to work independently	2.24	0.511

Note: Scale 0= No importance, 1= Important, 2= Moderate Importance, 3= Major Importance

Table 3. Employers' Perceptions of the Graduates Level of Competence at Performing the Employability Skills Using Mean Weighted Discrepancies

Number of Respondent (n=29)		
Category	Employability Skill	MWDS
I	Demonstrate critical thinking ability, generating hypotheses and linking ideas	2.59
	Applying theory into practice	2.32
	Sharp analytical skills	2.32
	Prioritizing problems	2.24
	Keeping up-to-date on latest information regarding the professionalism	2.10
	Gives clear explanation about problems and treatments	2.05
	Recognizing the effects of decisions to be made	2.02
II	Managing several tasks at once	1.99
	Able to make decisions independently	1.85
	Seizes opportunities and act proactively	1.80
	Making effective presentation	1.79
	Solving problems	1.78
	Allocating time efficiently	1.78
	Providing novel solutions to problems	1.72
	Making decisions on the basis of through analysis of the situation	1.65
	Functioning at an optimal level of performance	1.64
	Revising plans to include new information	1.58
	Meeting datelines	1.58
	Ability to work independently	1.54
	Delegating work to peers	1.50
III	Identifying problems	1.43
	Adapting to situations of change	1.41
	Supervising the work of others	1.37
	Respond to others' comments ideally	1.36
	Confident about tackling unfamiliar problems	1.29
	Setting priorities	1.22
	Monitoring progress against the plan	1.20
	Relating with supervisors	1.17
	Initiating change to enhance productivity	1.16
	<i>Maintaining a high energy level</i>	1.14
	Seeks further knowledge as required to help patients	1.07
	Functioning well in stressful situations	1.06
	<i>Respond to others' comments ideally</i>	1.05
IV	Listening Attentively	0.98
	Conveying information one-to-one	0.96
	Relevant skills in written communication (emails, reports, letters to clients, etc.)	0.92
	Responsible and reliable	0.89
	Punctual	0.87
	Delegating work to subordinates	0.86
	Giving direction and guidance to others	0.82
	Demonstrate empathy with fellow employees and patients	0.81
	Honest and know how his/her own limitation	0.80
	Has appropriate knowledge and skills	0.78

Works safely	0.78
Good manner – respect, caring, friendly, enjoy the job, inspire confidence	0.70
Maintaining positive attitude	0.66
<i>Potential to learn new things</i>	0.50
Establish good rapport with patients	0.50
Understanding the needs of others	0.49
Ability to work as a team member	0.39

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This section in Table 2 determines the employers' perceptions of graduates' level of competence in the workforce (Table 2). There were 8 items identified : ability to work as a team member (2.72 ), establish good rapport with patients (2.72 ), willingness to gain new knowledge (2.72), understanding the needs of others (2.66 ), good manner – respect, caring, friendly, enjoy the job, inspire confidence (2.66 ), have appropriate skills and knowledge ( 2.55), work safety (2.55 ), to be responsible and reliable (2.55 ).

To further determine the employability skills prioritize by the employers for curriculum enhancement, the Borich needs assessment model was used. A weighted discrepancy score was obtained (Table 3) with the skills for curriculum enhancement prioritized into four categories. The items in category 1 were considered the most important for enhancement of curriculum development. Employers' perceptions on employability skills according to mean weighted discrepancy score (MWDS) demonstrated that there were 7 skills that fall under category I. In MWDS, above 2.00 indicated the skills that needed most the improvement in the university education. The following areas identified in mean weighted discrepancy score are demonstration of critical thinking ability generating hypotheses and linking ideas (2.52), applying theory into practice (2.32), sharp analytical skills (2.32), prioritizing problems (2.24 ), keeping up-to-date on latest information regarding the professionalism (2.10 ), giving clear explanation about problems and treatments ( 2.05) and lastly recognizing the effects of decisions to be made (2.02 ).

#### 4. Discussion

Education should reflect and cater to the society's needs. While preparing an academic program, surveys carried out on employers can provide the university some information regarding the quality of teaching and learning process that they have undergone during their education. From the employers' perceptions, they viewed that "applying theory into practice" is the most important skill that a graduate should have. The ability to apply what they have learned during university study will lead them to have a higher level of performance.

This ability to prioritize problem is related to the ability to communicate, analyze and to recognize and identify the problem<sup>7</sup>. They should know how to apply, where to apply and when to apply those knowledge to gain a more effective result. The students' ability to integrate and demonstrate generic skills have been demonstrated to linked to the development of their confidence in the application of new and different contexts of environment, that included their workplace<sup>8,9</sup>. The physiotherapy graduates should be more creative and innovative in order to connect their knowledge to clinical situations they faced so that modification can be done wisely when they were trying to apply their knowledge in solving problems, otherwise, graduates would be just like a technician without any rationale of clinical reasoning when handling patients or clients although they are equipped with the knowledge. This skill needed enhancement in the university education as perceived by employers especially when working in emergency units. Though, the study environment might not have prepared graduates with sufficient scenarios where can learn to practice the skill, this can be learned, developed and improved throughout their working experiences and time.

A number of studies found that the expectations of employer on graduates in relation to university education appear to be strongly influenced by highly context-bound interpretations of desirable graduate capabilities, competencies and the professional attributes of a profession<sup>10-12</sup>. This, is however unrealistic for universities to guarantee that their students will graduate in possession of all the desirable generic skills and attributes spelt out in their institutional documentation. Findings was consistent with the findings of Scott and Yates (2002) where the employers perceived that the physiotherapy graduates need to be more competent in "working as a team member". This suggests that students need to be given more opportunities for structured group and teamwork while at university, by way of preparation for the workplace. This would provide opportunity for the development of the skill

to exchange ideas and opinions, and to make decisions on behalf of every group members. They realized that co-operation within team members is the most important skill that will lead to success. This would improve not only the interaction between different races and cultures in the Malaysian population, but also to create a better working environment where different people from different professions are able to exchange opinions and guide each other for the benefit of all parties'. A shift of the curriculum involves major changes in the curriculum design and teaching practices to promote discussions and problem solving.

"Willingness to gain new knowledge" is another skill which employers perceived that UKM graduates need to perform. Graduates of UKM Physiotherapy program showed the initiative to strive for a better learning and a higher level of performance. They are willing to learn new things, update their own knowledge and reflect from his or her own experience in order to produce a better result. The commitment to practice this value is essential to reach the goals and to achieve continuous improvement<sup>13</sup>. The concept of continuous professional development, which was introduced in university education, has contributed to the development of this value within the graduates and through the learning process in the university, graduates realized about the importance of gaining new knowledge and keeping up-to-date with latest information regarding their professionalism.

## 5. Conclusion

This study provided areas where employers' perceived the areas that needed to be improved. The feedbacks can improve and increase the standard of education to create a better curriculum to fulfill the needs of students, employers, society and nation. Suggestions from employers from time to time can be used to overcome the weakness of preparing students in their workforce so that the educational system is meeting the needs of the current market and professional needs.

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