

Assessing the Adequacy of Assimilation of Real Estate Graduate's Generic Competency

W. R. Anthony Jiram, A. A. Bujang, H. Abu Zarin, and A. Abdul Latib

Abstract—Today's challenging economic environment means that it is no longer enough for graduates to have knowledge of academic courses. It is necessary for students to acquire generic competencies that will enhance their employment prospects and make them more competitive in the job market. Previous studies examine that real estate formal curriculum in public universities lacks emphasis on assimilation of generic competencies in the curriculum. Therefore, the purpose of this study was to evaluate the assimilation of generic competencies of graduates of this property. This study was carried out on the real estate graduates of public universities. A total of 200 questionnaires were collected. Descriptive and inferential Exploratory Factor Analysis was used to analyze the data. The finding was verified through focus group discussions with various stakeholders in the education estate. The pr cis of the analyses signified that generic competencies infused in the real estate program have not met the needs of the graduates.

Index Terms—Generic competency, graduate, real estate, skill.

I. INTRODUCTION

It is necessary for students to acquire relevance competencies that will improve their job prospects and make them more competitive in the job market. Subsequently, the formal curriculum of public universities lacks emphasis on the assimilation of generic competencies in the curriculum. The most-recent initiative or skill bridging measure taken by the Malaysian public universities is to build into the formal curriculum generic competencies to produce graduates with a right balance of diverse abilities.

The transition from the world of higher education into the world of work is not always easy. The competition to get a job which directly utilizes the academic content of their higher-education curriculum is intense. It is also recognized that the curriculum is essentially a medium through which other attributes are transferred [1].

II. DEFICIENCIES IN PAST RESEARCH

In 2001, Institute of Surveyors Malaysia has conducted a survey on graduates in real estate management and found that the performance of real estate graduates was contrary expectation of private organizations and public's perspective.

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W. R. Anthony Jiram, A. A. Bujang, H. Abu Zarin, and A. Abdul Latib are with Universiti Teknologi Malaysia, Malaysia, 81310 Johor Bahru, Malaysia (e-mail: wilson.rangga@live.com.my, ahamdariffian@utm.my, hasmah@utm.my, p-azlan@utm.my).

In order to close the gap between the curriculum and the real estate industry, the expectations from the academics and practitioners should be adjusted. Real estate communities have to work collectively in developing the profession from the real estate graduates to the scope of the real estate profession [2].

Weinstein and Worzala [3] identified that real estate programs should be designed to produce graduates with the following key skills: decision-making, risk analysis, social and ethical responsibility, negotiation, critical thinking and problem solving, oral and written communication skills, leadership, use of technology and life-long learning.

Poon, Hoxley, and Fuchs [4] conducted an extensive literature review of research on real estate graduate competencies. They identified that there has been some research looking at required real estate skills and knowledge as well as the status of current courses, but conclude that the research is limited.

There is no attempt to date to comprehensively assess the assimilation of generic competencies in the formal real estate program in public universities. As such, their effectiveness remains to be determined [5]. Second, information on the adequacy and the type of competencies acquired by students at the end of their undergraduate program would be invaluable input to improving the curriculum design and delivery. Thus, the study attempts to assess the assimilation of the generic competencies in the real estate program from the graduates' perspective.

The purpose of this two-phase, sequential mixed methods study is to use a qualitative strand to explain quantitative result. The first phase will be a quantitative evaluation of a generic competency by questionnaire survey from a sample of real estate graduate. The first phase followed by the subsequent collection and analysis of qualitative data to explain on quantitative results. This research place a greater emphasis on quantitative methods.

III. METHODOLOGY

To answer the research questions, the researchers used a mixed methods approach, which is a procedure for collecting, analyzing, and mixing or integrating both quantitative and qualitative data within single study. When used in combination, quantitative and qualitative methods complement each other or provide a more complete picture of the research problem [6].

A. Research Framework

The study concentrates primarily on the acquisition of generic competencies in the process of teaching and learning

provided the initial evidence of the ‘Embedded Model’ that the best competencies are transferred through integrated competency's inter-disciplinary courses rather than stand-alone subject to university students [7]-[9].

The study adopts seven competencies as designated by the MOHE and the expected competencies of each skill in the questionnaire design. In the Malaysian context, the generic competencies specifically designated by the MOHE, to be included in all degree programmes, comprise seven competencies; communication in English, critical thinking and problem-solving, team working, lifelong learning and information management, entrepreneurial, moral and professional ethics, and leadership competencies [10].

B. Instrument

The questionnaire is designed to gather information on graduates’ perspectives on the adequate assimilation of the designated ‘generic competencies’ in the teaching– learning process. The scales of interest are the seven categories of competencies designated in the Malaysian model.

C. Sampling

The achieved sample size for the research was 200. The accredited real estate program in Malaysia represents a more appropriate choice for examining the adequacy of the assimilation of generic competencies in the curriculum as they have largely been engaged in conventional methods of teaching and learning. As such, the integration of generic competencies in the curriculum of these institutions has been a more recent initiative relative to the newer public universities. Graduates’ perceptions are significant as they are regarded as accurate credible reporters of their activities, and how much they have benefited from higher-education experience [11].

D. Data Analysis

Survey data were analyzed using the descriptive statistic to ensure the distributions of data related to the perception of real estate graduates on the seven generic competencies. Furthermore, the inference statistic of variance analysis of Exploratory Factor Analysis was used to assess the assimilation of generic competencies in the real estate program.

IV. FINDINGS AND INTERPRETATION

A. Descriptive Statistic Analysis

Respondents consisted of those from various ethnic groups. Based on Fig. 1, from the descriptive statistic generated, the bigger proportions of the respondents are Malays that formed 69 percent of total respondents. It is followed by Chinese with 21 percent, and Indian covers at least a proportion with 7 percent.

The proportion for Malays was significantly larger than the other ethnic groups while the proportion for Indian was significantly smaller compared to the other ethnic groups. This corresponds to the general ethnic distribution in the Malaysian population. The proportion of Malays, Chinese and Indian undergraduates in the sample also reflects that of the race composition of public universities.

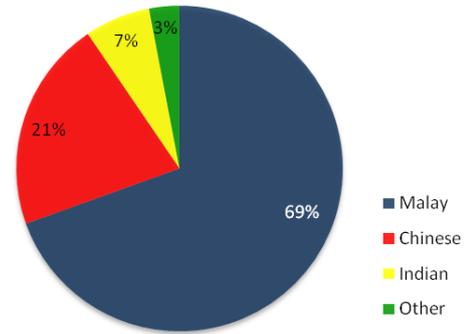


Fig. 1. Ethnicity proportions of the respondent.

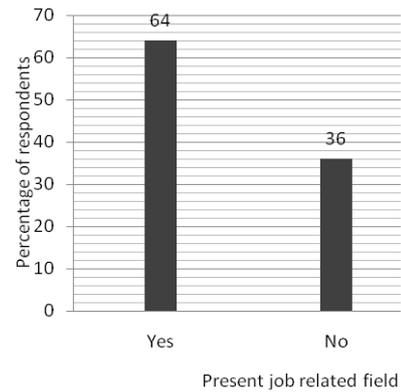


Fig. 2. Job related field.

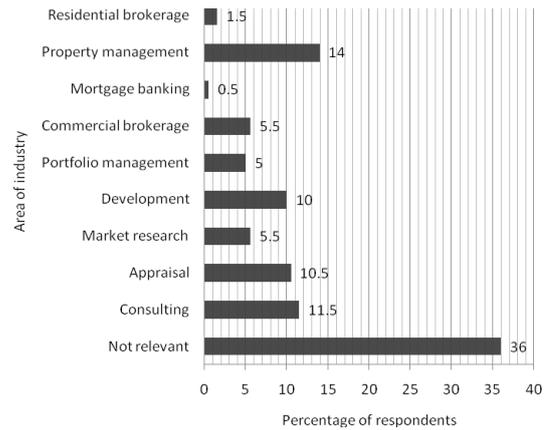


Fig. 3. Area of industry.

From the descriptive statistic generated, the bigger proportions of the respondents are gained employment related to real estate that forms 64 percent of total respondents. The proportion for graduates who gained employment related to real estate which significant to the fact that the competition for the positions in professions is intense, as consequence, the range and variety of jobs becoming progressively diverse. The results show, 36 per cent of graduates are not able to gain employment, which directly utilizes the academic content of their higher education.

According to Fig. 3, there are 15.33 percent of the respondents are categorised in property management, and 10.67 percent of the respondents are categorised in consulting. The breakdown of respondents according to their areas is; 10 percent of respondents are categorised in appraisal; 8.67 percent of the respondent are categorised in development, followed by commercial brokerage with 6 percent, market research and portfolio management, 5.33 percent respectively, and the chart indicated that, they are only 1.33 percent of respondents categorised in residential brokerage.

TABLE I: MEAN SCORE OF THE GENERIC COMPETENCIES

Items for generic competency	Mean Score
I. Communication skill Sample item: English was widely used in lectures/tutorials	3.02
II. Critical thinking and problem solving Sample item: The instructors provided /recommended critical course-related readings	2.82
III. Team working skills Sample item: The size of teams/groups was reasonable	2.94
IV. Lifelong learning and information management skills Sample item: I was given adequate exposure to computer skills (e.g.: programmes and softwares)	2.48
V. Entrepreneurial skills Sample item: Some courses provided knowledge of basic entrepreneurial skills	2.77
VI. Moral and professional ethic skills Sample item: The instructors ensured strict adherence to datelines and submission of assignments	3.17
VII. Leadership skills Sample item: Some courses provided leadership via fieldwork	2.91

Most competency measures have a mean score ranging between 2 and 3, implying that graduates, to some extent, do not agree that there is an adequate competency incorporated in the real estate formal curriculum.

B. Inference Statistic Analysis

The Kolmogorov–Smirnov test is performed to validate the assumption of normality in the data. As the test proves the absence of normality in the dataset, the non parametric test is a preferred choice. Exploratory factor analysis is conducted to remove items that have low factor loadings. Hair, Anderson, Tatham and Black [12] suggested that, with new factor loadings, a Cronbach’s alpha of at least 0.60 is fulfilled by all factors.

Subsequently, to measure the sampling adequacy, the Kaiser-Meyer-Olkin [13], [14] and the Bartlett’s test of sphericity [15] to assess the factorability of the data are employed. The factor analysis is considered appropriate given that the Bartlett’s test of sphericity is significant at 1% for dataset. Further, the KMO indices' ranges from 0.6 to 0.7 for all dataset, surpassing the minimum of 0.5, indicate that the sampling is adequate and good enough.

The principal components analysis with varimax rotation is used for the extraction of the factor dimensions from the dataset. According to Hair, Anderson, Tatham, and Black [12], items were removed if factor loadings were less than 0.4. The non-standardized Cronbach’s [16] alpha determined the scale for reliabilities that is widely used [17] and preferred [18]. Values of between 0.5 and 0.9 for the seven factors for the dataset are considered sufficient [19] for exploratory

research since they exceed the 0.5 threshold.

TABLE II: FACTOR ANALYSIS OF GRADUATE PERCEPTIONS ON GENERIC COMPETENCY’S ASSIMILATION THROUGH REAL ESTATE PROGRAM

Factor dimensions	Factor loads	Eigen values	% Variance explained	Cumulative %
	<i>Range between</i>			
<i>Critical thinking and problem solving</i> Sample item: The instructors provided /recommended critical course-related readings	0.839-0.885	4.139	17.994	17.994
<i>Moral and professional ethic</i> Sample item: The instructors ensured strict adherence to datelines and submission of assignments	0.864-0.903	3.074	13.365	31.36
<i>Entrepreneurial</i> Sample item: Some courses provided knowledge of basic entrepreneurial skills	0.525-0.905	2.305	10.022	41.382
<i>Team working</i> Sample item: The size of teams/groups was reasonable	0.937-0.94	2.018	8.774	50.156
<i>Lifelong learning and information management</i> Sample item: I was given adequate exposure to computer skills (e.g.: programmes and softwares)	0.717-0.827	1.781	7.742	57.897
<i>Communication in English</i> Sample item: English was widely used in lectures/tutorials	0.55-0.761	1.473	6.405	64.302
<i>Leadership</i> Sample item: Some courses provided leadership via fieldwork	0.613-0.796	1.324	5.755	70.057

Notes: 5 measures with factor loading less than 0.4 were re-moved. KMO Measure of sampling adequacy = 0.62; Bartlett test of sphericity = 2479; p<0.000

The naming of the factor loading matrix in this study is relatively straightforward since the items clustered to reflect closely the seven generic competencies. The seven-factor dimensions are thus communication, critical thinking and problem solving, team-working, lifelong learning and

information management, entrepreneurship, moral and professional ethics and leadership competency. Table I-Table II show that, all seven factors explain 70.057 per cent of the total variance of the assimilation of generic competencies by real estate program.

TABLE III: FACTOR ANALYSIS ON SKILL EMBEDMENT IN REAL ESTATE PROGRAM BASED ON WHO HAD JOB RELATED TO THE FIELD

Factor dimensions	Factor loads	Eigen values	% Variance explained	Cumulative %
<i>Moral and professional ethic</i> Sample item: The instructors ensured strict adherence to datelines and submission of assignments	Range between 0.844-0.895	4.63	20.13	20.13
<i>Critical thinking and problem solving</i> Sample item: The instructors provided /recommended critical course-related readings	0.831-0.855	3.12	13.563	33.693
<i>Team working</i> Sample item: The size of teams/groups was reasonable	0.741-0.842	2.328	10.122	43.815
<i>Entrepreneurial</i> Sample item: Some courses provided knowledge of basic entrepreneurial skills	0.889-0.922	2.036	8.854	52.669
<i>Lifelong learning and information management</i> Sample item: I was given adequate exposure to computer skills (e.g.: programmes and softwares)	0.574-0.9	1.75	7.608	60.277
<i>Communication in English</i> Sample item: English was widely used in lectures/tutorials	0.554-0.775	1.439	6.255	66.532
<i>Leadership</i> Sample item: Some courses provided leadership via fieldwork	0.535-0.652	1.268	5.514	72.046

Notes: KMO Measure of sampling adequacy = 0.6; Bartlett test of sphericity = 1757; $p < 0.000$

From the result, the critical thinking and problem solving competencies, explain 17.994 per cent of total variance. The second most significant factor that explains 13.365 percent of

the total variance is moral and professional competencies. The remaining five factors each explained only a small or modest pro-portion of the total variance.

Further analysis using factor analysis was used to determine whether there was any significant relationship based on the 'job related' variable.

Factor one of Table III, appeared to measure moral and professional ethics skills with a total variance explained of 20.13 per cent. Factor two in Table III appeared to measure critical thinking and problem solving skill, i.e. the learning process of most courses involved active reading or self-regulated learning, appeared to have a total of variance 13.563 per cent.

The leadership was the items loaded into seventh factor represented only 5.514 per cent of the total variance explained. The sum of eigenvalue associated with each of the seven factors was 72.046 per cent.

C. Verification and Validation

Focus group discussion has been conducted to verify and validate the factor dimension and findings of this study. Nine participants consisting of industry representatives, real estate professional's bodies, and academia were involved to verify the findings. Two property consultants expressed the view that there was too much mass teaching, with a mismatch where the learning outcome does not map to the industry requirement and also felt that some lecturers need to update their knowledge so that the graduates were appraised of the latest techniques.

One property consultant felt that some courses do not deliver what employers want and one academic stated "students are going out without the necessary skills to undertake their basic job and that is where employees feel that the universities are letting the system down". This being said, the general view was that it is not easy to generalise and some courses are better than others.

All the participants indicated the need to up skill the real estate knowledge base in use of ICT and its impact on the profession. They also agreed that collaboration and team working would be a more important skill to develop. Four participants noted that there were areas that were not given enough attention or that the students had poor knowledge of data management and team working. Three participants (2 academics, 1 industry representative) were happy with the coverage and felt that there should be no new additions to the generic competencies.

In general, the pr écis of the analyses signified that, generic competencies infused in the real estate program has not met the needs of the graduates, with the exemption for a few skills competencies such as critical thinking and problem-solving skills, entrepreneurial skills, and moral and professional skills. The lack of assimilation of lifelong learning and information management skills deserve attention. This implies a lack of enthusiasm in the real estate programs. The lack of integration of communication skills in English, leadership skills, and teamwork skills in the curriculum must be given due to attention as it is also a skill that is perceived as a critical weakness of real estate graduates. This signifies that these skills are not adequately infused or acquired either by coursework or training.

V. CONCLUSION

The findings suggest that the assimilation of skills via coursework and training are not only highly concentrated on specific skills, but that they also complement each other once the type of skill is considered. As such, practical training is an equally imperative component of degree programs to ensure that graduates are well equipped with the designated skills.

The lack of assimilation of lifelong learning and information management competencies in the real estate program deserve attention. This reveals a lack of dynamism in the existing programs of public universities. Courses should be structured to cultivate lifelong learning through active reading and research beyond textbook learning, whilst relevant courses should provide hands-on training in computer programs and software to ensure that students are IT savvy to face a dynamic and ever-changing working environment.

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Wilson Ranga Anthony Jiram received his B.Sc. of property management and M.Sc. degree of real estate at Universiti Teknologi Malaysia. Currently, he is doing Ph.D. in real estate at Universiti Teknologi Malaysia, Malaysia. His current research is focused on real estate education. He is also interested in housing and property management area and he has published several research papers on aforementioned topics.

Ahmad Ariffian Bujang is currently an associate professor at Faculty Geoinformation and Real Estate in Universiti Teknologi Malaysia (UTM). He also is a registered valuer under Board of Valuers, Appraisals and Estate Agents Malaysia. He received his Ph.D. from Universiti Malaya. His specialization is in valuation and property investment. He is also interest in statutory valuation. He has published several research papers and books on aforementioned topics.

Hasmah Abu Zarin received her BSc degree at Franklin University, Columbus Ohio, U.S.A. in real estate and her master degree in land economy at Aberdeen University, Scotland, UK. Currently, she is a senior lecturer at Universiti Teknologi Malaysia. Her current research is focused on valuation, economy and planning. She is also interested in sustainability area has published several research papers on aforementioned topics. She is a member of Institution of Surveyors Malaysia from 1999 until now.

Azlan Abdul Latib is currently a senior lecturer at the Department of Technical and Engineering, Faculty of Education, Universiti Teknologi Malaysia. He received his Ph.D. and M.Ed. in technical and vocational education at Universiti Teknologi Malaysia, Malaysia.