

## Development of Generic Employability Skills Through Peer Interaction and Contextual Teaching and Learning in Community Colleges

<sup>1</sup>Ruhizan M. Yasin, <sup>1</sup>Saemah Rahman, <sup>2</sup>Ramlee Mustapha and <sup>3</sup>Kamarudin Tahir

<sup>1</sup>Faculty of Education, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia

<sup>2</sup>Faculty of Technical and Vocational Education, Universiti Pendidikan Sultan Idris,  
43400 Tanjung Malim, Perak, Malaysia

<sup>3</sup>Community College Division, Ministry of Higher Education, Malaysia

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**Abstract:** The aim of this paper is to analyse the level of generic skills of community-college students in a learning environment of social interaction, teaching and learning processes and learning facilities that enhance the development of generic employability skills. The survey presented was conducted using questionnaires given to 495 students of community colleges in Malaysia. Descriptive analysis, ANOVA and regression analysis were run and it was revealed that contextual teaching and learning and peer interaction respectively contributed 19% and 22% to the development of generic skills. The rest of skill development was accounted for by student-teacher interaction, learning facilities and co-curricular activities. This study also explained the very small contribution of teacher-student interaction. It appears that communication plays an important role, since contextual teaching and learning as well as peer interaction involve effective communication. This effective communication can be promoted in this setting through the deployment of advanced information and communication technologies (ICT).

**Key words:** Employability skills · Generic-skills · Community-Colleges · Life-long Learning · Contextual Teaching and Learning

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### INTRODUCTION

The world situation with regard to higher learning as well as vocational education and training has seen active discussion of the need for graduates to have *generic (employment) skills* or *core competencies* in areas that most employers require. The Malaysian Ministry of Higher Education has shown its commitment to supporting a national effort to become a fully developed country by increasing the number of higher-learning institutions and producing more knowledge workers for the future. In the period of the 9th Malaysian Plan (2006-2010), there were seventeen universities and twenty polytechnics and producing skilled workers as well as promoting a culture of lifelong learning among Malaysians [1]. Malaysian higher-learning institutions are now facing challenges in fulfilling the demand to produce globally competitive graduates who can perform work in complex situations. Flexibility and ability to adapt and transfer knowledge are critical in this knowledge-economy or *k-economy* world. In addition, critical thinking skills,

effective communication skills and problem-solving skills have also been identified as lifelong-learning skills required of Malaysian graduates to find success in the world of work [2]. Traditional approaches in postsecondary teaching in Malaysia, where lecturers just give lectures and have students memorise concepts and theories, are no longer relevant. A more flexible and constructive approach which enables students to transfer knowledge innovatively and creatively into real-world situations are more appropriate in today's higher-learning environment.

The Ministry of Higher Education has produced a *Malaysian Qualification Framework* (MQF) as a guide to curriculum development. In this framework, there are eight learning outcomes which every institution of higher learning should consider when developing a curriculum, which should include a focus on generic skills. These eight competencies are (i) *content knowledge*, (ii) *psychomotor/practical/technical skills*, (iii) *professionalism/values/attitudes/ethics*, (iv) *social skills and social responsibility*, (v) *lifelong learning and*

information management, (vi) communication and team skills, (vii) critical thinking and a scientific approach and (viii) managerial and entrepreneurial skills [3]. In order to obtain accreditation, all higher-learning institutions have to comply with all of these elements in the MQF.

Community colleges in Malaysia were developed with the aim of producing semi-skilled workers through the concept of lifelong learning. However, an ironic rise has emerged in both the increasing number of higher-learning institutions and the increasing number of unemployed graduates. Data from a 2006 report of the Labour Department of the Malaysian Ministry of Human Resources reflect a situation where there were still quite a big number of positions to be filled in certain professional, technical and clerical sectors. For example, in 2003 there were 36,104 people registered with the department, of whom 12,663 had post-secondary training, but only 1,198 managed to find employment in the relevant sectors, despite the figure of 6,374 spaces needing to be occupied in workplaces [4]. A report from the Malaysian Employers' Federation [5-7, 2] explains that most of the employers agreed that the graduates of today lack generic skills. These are important skills besides job-specific knowledge and skills.

Since community colleges are categorised as higher-learning institutions, it is timely to gauge the level of their students' generic skills. In addition, the processes of teaching and learning the student have experienced are also important to study, as this might help in explaining the contribution of these institutions to the development of the students' generic skills. Therefore, the aim of this paper is to discuss the level of generic skills of community-college students and the determinant factors in the variability of these skills.

**Generic Skills:** The term generic skill refers to skills that an employee should have beside the knowledge and skills directly related to their job. It is also used in the scholarly literature to refer to employability skills and soft skills [3, 7]. In this study, the definition given by the Malaysian Ministry of Higher Education is used [3]. In this definition, the skills include i) effective communication in Malay and English, ii) critical- and creative-thinking and problem-solving skills, iii) teamwork and multicultural skills, iv) lifelong-learning skills including self-reliance and information management, v) entrepreneurial skills including the ability to explore opportunity and risk management, vi) ethics and professional morals and vii) leadership skills. They are referred to as 'generic' skills

because of their broad nature, which makes them applicable in all disciplines and areas of work. In terms of teaching and learning, they are taught in an integrated fashion across the curriculum. In Australia and the UK, they are more often referred to as core competencies [8-13]. Different terms are used in different contexts; the skills set out above were compiled by Allen Consulting Group [14]. The importance of generic skills for industrial workers is emphasised by [15-16]. Research on development of generic skills has revealed several approaches to developing them. Among those are the usages of information and communication technology (ICT) [17-18] using an 'adult-learning' approach which is more student-centred, interactive and flexible than traditional approaches [18]. In addition, discussion and problem-solving with a focus on specific subject matter are more frequently used in scientific and technical or engineering subjects than in other courses [19-20]. The integration of generic skills to the existing curriculum to be learned incidentally is seemed as a more effective approach by several researchers [21-22].

**Peer Interaction:** Peer interaction is a part of social interaction, normally experienced by children and adolescents at school as well as by adults in learning institutions. This form of interaction is one of the elements in the Pascarella and Terenzini model of change [23]. In this model, social interaction is influenced by the organizational environment and background of the students. Students from mixed cultural backgrounds will enrich each other's experience and developmental processes [24]. Many studies have said that adolescents spent more of their time with their peers because they are more open to each other in sharing common interests [25-26].

**Contextual Teaching and Learning:** This is a student-centred teaching and learning approach that has *constructivist* learning theory as its foundation. It provides meaningful learning through 'hands-on' and 'minds-on' approaches that apply five learning principles: 1) *relating*, 2) *experiencing*, 3) *applying*, 4) *cooperating* and 5) *transferring*, known together as REACT [27-29]. In this approach, everyday and work contexts are used in helping students better understand the concepts learned in the subject matter. Cooperative learning and problem-solving methods are embedded in this contextual teaching and learning, which give students more opportunity to interact while solving the given problems. The teacher acts more as a facilitator than an information provider or

knowledge imparter as in traditional teaching and learning situations. Contextual teaching and learning is able to enhance students' problem-solving skills, increase student participation in class discussion and increase communication and critical-thinking skills [33]. Students are motivated when using a contextual teaching and learning approach [30].

**MATERIALS AND METHODS**

A cross-sectional survey method was employed with a total of 495 community-college students and 172 lecturers. These numbers were selected using stratified random sampling from the thirteen colleges on the west coast of Malaysia (in the states of Selangor, Negeri Sembilan, Melaka and Johor). In total, there were 277 male and 199 female students from 14 fields of study and two types of campuses (regular campus and shop-lot campus) and 117 male and 183 female lecturers. The Shop-lot campus is a campus which is located at commercial building which is not meant for teaching and learning purposes. In addition it also does not have proper extra-curricular facilities such as field and student's centre.

Data was collected using a questionnaire. The questionnaire was used in order to get a high number of responses from the sample [31]. A closed-ended questionnaire was used to avoid boredom or fatigue [32]. The questionnaire consisted of demographic items and items on elements of the college environment (infrastructure, peer interaction and student-lecturer interaction), contextual teaching and co-curriculum management. The generic skills component was measured

using six sub-components: 1) communication, 2) critical thinking and problem-solving, 3) team work, 4) lifelong learning and information management, 5) entrepreneurship and 6) ethics and professional morals. A five-point Likert-type scale of 1 (lowest) to 5 (highest) was used. Content and face validity were checked by experts in the area of generic skills development and subjects involved. Reliability of the sub-component of the questionnaire was measured using Cronbach's alpha, obtaining values of 0.75 to 0.95. Finally, the data was analysed using descriptive and inferential statistics (mean, standard deviation, analysis of variance [ANOVA] and regression analysis).

**RESULTS AND DISCUSSION**

**Level of Generic Skills:** Table 1 shows means and standard deviations of students' generic skills as perceived by themselves and the lecturers. The analysis shows that generic skills are at a moderate level ( $3.00 < M \leq 4.00$ ). Lecturers rated students' skills lower than students did, a finding which is consistent throughout small city, rural and big city colleges. Further analysis (Table 2) reveals that different locations (big city, small city and rural) had no significant influence on generic skills.

**Factors Contributing to Variability of Students' Generic Skills:** Five predictor variables for students' perceived generic skills were included at  $p < 0.05$ : 1) infrastructure, 2) peer interaction, 3) lecturer interaction, 4) contextual teaching and 5) co-curriculum. It appears that all

Table 1: Means of Students' Generic Skills as Perceived by Students and Lecturers

Location	Respondent	n	Mean	SD
Big City	Student	69	3.89	0.588
	Lecturer	53	3.36	0.432
Small City	Student	55	3.92	0.515
	Lecturer	24	3.43	0.709
Rural	Student	352	3.88	0.503
	Lecturer	210	3.42	0.486
Total	Student	476	3.88	0.517
	Lecturer	287	3.41	0.497

Table 2: ANOVA for Students' Generic Skills Between Locations of Colleges as Perceived by Students and Lecturers

	Respondent	SST	Df	MS	F	Sig.
Within Group	Student	0.082	2	0.041	0.153	0.858
	Lecturer	0.157	2	0.078		
Between Groups	Student	126.704	473	0.268	0.316	0.729
	Lecturer	70.544	284	0.078		
Total	Student	126.786	475			
	Lecturer	70.701	286			

Table 3: Multiple-Regression Analysis of Contributing Factors to Students' Perceived Generic Skills

Independent Variables	B	$\beta$	t	Sig-t	r	r <sup>2</sup>
Infrastructure	0.135	0.170	5.173	0.000	0.39	0.152
Peer Interaction	0.258	0.332	10.500	0.000	0.47	0.221
Lecturer Interaction	0.027	0.029	0.815	0.004	0.30	0.090
Contextual Teaching	0.299	0.280	7.330	0.000	0.44	0.190
Co-curriculum	0.015	0.180	-0.493	0.006	0.31	0.096

Dependent variable: Students' perceived generic skills

Multiple R = 0.593

R<sup>2</sup> = 0.352

Adjusted R<sup>2</sup> = 0.348

Standard Error of Estimate = 0.448

Significance at: p < 0.05

Table 4: Analysis of Variance

Source	SST	Df	MS	F	Sig. (p)
Regression	84.049	5	16.810	83.615	0.000
Residual	154.799	770	0.201		
Total	Student	476	3.88		
	Lecturer	287	3.41		

suggested predictors are statistically significant contributors (See Table 3). The main predictor is peer interaction ( $\beta = 0.33, t = 10.50, p = 0.000$ ) followed in order by contextual teaching ( $\beta = 0.280, t = 7.33, p = 0.000$ ), co-curriculum ( $\beta = 0.18, t = 0.50, p = 0.006$ ), infrastructure ( $\beta = 0.170, t = 5.17, p = 0.000$ ) and interaction with lecturer ( $\beta = 0.029, t = 0.815, p = 0.004$ ). The analysis also shows that contextual teaching and learning and peer interaction respectively contributed 19% and 22% to the development of generic skills.

The result shows an R<sup>2</sup> of 0.352. This means that 35.2% of the change in students' generic skills is due to changes in the linear combination of the five predictors. The model is significant at  $p < 0.05$  as shown in Table 4.

The model can be explained by the following equation:

$$Y = 1.055 + 0.135X_1 + 0.258X_2 + 0.027X_3 + 0.299X_4 + 0.015X_5$$

Where:

- Y = Students generic skills
- X<sub>1</sub> = Infrastructure facilities
- X<sub>2</sub> = Peer Interaction
- X<sub>3</sub> = Student-Lecturer Interaction
- X<sub>4</sub> = Contextual Teaching
- X<sub>5</sub> = Co-curriculum

**Peer Interaction:** According to [22], student interaction with their surroundings especially peers, has a direct contribution to their learning and development. This study confirms this finding and extends it to the development of students' generic skills. Students, especially at the college level, spend most of their time with peers [33]. Communication skills are a paramount skill to survive in the work world. Peers are the closest individuals in the lives of young adults. They like to interact with peers more than with their family or older people. Therefore, the process of developing generic skills among community-college students is best designed around teaching and learning activities that involve students interacting with their peers. Courses should be designed with group work in mind and imitate a work environment - for example, in role play. The interactions, however, should be closely monitored by the instructors to make sure the learning outcomes (acquiring generic skills) are achieved. In this interaction, the context of the discussion must be relevant to students. In addition, the provision of these situations should not be confined to the classroom, because students learn and develop more through their experiences outside the classroom [34]. Generic skills-acquisition opportunities should be provided multimodally, wherever possible, to provide more meaningful learning situations to students. Peers in this context could be friends in the classroom or new friends or colleagues whom students encounter during

learning activities, especially outside the classroom and home. These individuals can easily be found through the employment of new web-based technologies such as blogs and Facebook, which are popular among adolescents.

**Facilities:** This is the third contributing factor to the development of students' generic skills in community colleges. It can be seen as an input to the whole system of learning and above all to both factors mentioned earlier (peer interaction and contextual teaching and learning). To allow more effective peer interaction and contextual teaching and learning, in terms of quality as well as quantity of information, up-to-date ICT facilities should be provided [35, 36]. A good infrastructure will allow students to be more mobile and flexible and access more information related to real life. In their research process, students need to engage in self-regulated learning and practice learning how to learn. Remote-resource centres such as libraries are still relevant to facilitate the development of students' generic skills, specifically communication skills that depend on access to information. Students also need other facilities to enhance their generic skills, such as good places for discussion. Some higher-learning institutions provide 'speaker's corners' for students to mingle and express their ideas publicly and gain confidence to speak in public.

**Student-Lecturer Interaction:** This is part of social interaction in the college setting; unfortunately, it only plays a small role in advancing students' generic skills. This situation can be explained by the Malaysian cultural context: Malaysians are a little bit reserved when it comes to interaction with a superior, in this case their lecturers. This is done out of respect. Normally, students only interact with lecturers in a formal setting like the classroom. Students rarely come to lecturer to discuss their problems, but go to their peers first. Since this element does not make a significant contribution to the development of students' generic skills, more monitoring or student-lecturer discussion as part of contextual teaching and learning activities should be practiced. This will help to break the culture of not consulting the lecturer when students face a problem. But of course, lecturers need to provide more space and time for interaction with students. Only in this way will students come to see lecturers as role models and resources.

**Extra-Curriculum Management and Activities:** The least significant contributor to the development of students' generic skills, extra-curriculum management and activities

are still part of the experience of students in community colleges. The small contribution can be explained by the fact that it is not compulsory for community-college students to engage in extra-curriculum activities. In the future, co-curriculum activities should be integrated into the formal curriculum. Management of extra-curriculum activities should be systematically planned and monitored. It is also desirable to have service-learning experiences as part of extra-curriculum activities thus not to limit them to sport and recreation only, as in the current situation.

## CONCLUSION

The study has revealed that in the existing programme at Malaysian community colleges there is still more work to be done to improve students' generic skills. The moderate level of achievement in these skills perceived by both students and lecturers shows that the learning environment and facilities need to be kept in pace with the current requirements of the Ministry of Higher Education as well as global demands and the competitiveness of the current and future job market, in part by producing graduates with stronger generic skills. Worker flexibility is embedded in the generic skills of the individual. The model developed in this study shows the importance of social interactions, directly or indirectly accessed through teaching and learning. Infrastructure or facilities that can enhance opportunities to communicate with a wider population should be also improved. Alongside these new facilities and approaches, teachers should also be trained in realizing the vision of graduates with employable skills—generic, flexible skills to help them excel in their careers. Hence, a systematic approach to designing the learning environment is essential, with thorough study on student needs [35]. In order to attain alignment between teaching and learning activities and assessment methods, in future, alternatives to traditional assessment should be employed [37]. More student-centred approaches other than contextual teaching and learning, such as problem-based-learning (PBL) or problem-oriented project-based learning (POPBL) [38-40] should also be introduced and implemented.

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