FROM HIGHER EDUCATION TO WORKPLACE: DEVELOPMENT OF GENERIC SKILLS
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Abstract

Employers are more inclined to hire graduates with well-honed set of generic skills over qualifications and technical skills. However, many graduates are found to be deficient of these generic skills which make them unproductive and unsuccessful in their work place. Many graduates are deficient of these skills because higher education institutions focus mainly on hard and technical skills, whereas less attention is given to generic skills. Therefore, this study investigates the development of generic skills in higher education institutions in order to improve graduate employability and productiveness at workplace. This study employed action research method based on quantitative research approach. Data were collected from 117 primary education college students. The action research method is implemented in two different academic semesters in 2014/2015 academic sessions on the study respondents by introducing problem-based learning (PBL). PBL creates critical thinking and efforts from students in the process to solve problems. Findings show that the implementation of PBL improves respondents' problem-solving skill, self-motivation skill, presentation skill and teamwork skill. This implies that PBL is an effective strategy

to develop students' generic skills for employability and productiveness at their workplaces. In addition, the study pointed out that there is no disparity between students' gender (female and male) and academic background (science and non-science) on their generic skills development.

Keywords: *Generic skills, problem based learning, action research, workplace skills, teaching and learning strategy.*

Introduction

Employees' productivity is a vital concern that no employer can ignore due to its essence on business success. This concern has made employers to seek for competent and suitable employees in their workplaces. This is because right skills employers have potentials to be more competent and enhance business successes. Thus, employees are seeking to hire employers that possess generic skills such as communication, problem solving, honesty creativity, and integrity, team working, being punctual, taking responsibility, having a good work attitude and being self-motivated. However, many employees are found to be deficient in generic skills which make them unattractive for hire by employers. This has created widespread imbalance between demand and supply of generic skills whereas higher education institutions has been identified as the root cause in this imbalance. This is because many higher education institutions mainly focus on hard, specialized and technical skills whereas little attention is given to generic skills. Even, the few higher education institutions teaching generic skills are using traditional methods of teaching students which is based on teacher-centred teaching approach. This teaching and learning approach allows students to solely focus on their teachers for transfer of knowledge. Thus, the approach does not allow students to critically think and process learning in their own terms. It does not enhance the development of generic skills among students.

This has made employers to point out the existence of weak employability skills among higher education graduates, most especially in their able to work flexibly, commercial awareness, interpersonal skills,client management skills, willingness to learn and work readiness. According to Detsimas Coffey, Sadiqi and Li

(2016), presentation, self-motivated and team working skills are the most deficient among higher education graduates. Thus, many recent studies, such as Sarkar, Overton, Thompson and Rayner (2016), Detsimas, Coffey, Sadiqi and Li (2016), Jackson (2016; 2015) and Tynjala, et al (2016), have being advocating for new approach in higher education teaching and learning strategy in order to develop a mixed transfer of both generic and technical skills to students. These authors pointed out the need for higher education institutions to integrate development of generic skillfully into their curricula to enhance graduates' employability skills and productivity. Thus, this study examines the development of generic skills among higher education students in order to ensure a significant improvement in their employability and productivity skills. In this study, generic skill is scoped to only include presentation, problem-solving, self-motivated and team working skills. The study introduces PBL which is a form of learning that allows students to team up and experience solutions to problems with little guidance of their teachers. This type of teaching and learning strategy creates critical thinking and efforts from students in the process to solve problems.

Method
Action research method, based on Avison et al (1999) was implemented in this study. The rationale for the implementation of this methodology is due to it suitability as pointed out by Biggs (2001). This study made use of six-step-phases which includes set objective, articulate theory, introduce action, collect data, reflection and plan future action. The first phase focuses on setting of the core objectives of the study, which is the development of generic skills among higher education students. The study made use of 117 primary education college students from two different academic semesters in 2014/2015 academic sessions as study respondents'. The selection of these students as study respondents' is based on purposive sample method, as inspired by Topp, Barker, and Degenhardt (2004).These set of students are a mixture of both science and management backgrounds. The selected achievable targets are based on students' assessments on their presentation, problem-solving, self-motivated and team working skills. The established assessment criterion is

based on their performance during class sessions which acted as their continuous assessment grading.

The second phase is the articulation of theories and problem-based learning is selected for this purpose. Problem-based learning is selected because it is found to improve students' learning abilities especially on the four identified generic skills. This method of learning permits interaction and enhances students' comprehension ability, which in turn, improves their generic skills. Furthermore, it affords students the abilities to relate complex theoretical cases to real life and practical cases which enhance development of useful skills and competencies.

The third phase of the study focused on implementation of the PBL intervention (action) during their class sessions. The intervention implementation was based on the utilization of the PBL intervention in an interactive session among the study respondents. Study questions are formulated in order to assess adherence of the intervention implementation in the study which are formulated in two perspectives, namely student and instructor perspectives. For the students' perspective, questions are formulated to evaluate students' understanding, comprehension and problem-solving abilities such as "Do I understand today's lesson?", "How was my performance in class today?", "Can I link the theoretical lesson to real-life scenarios?" and "Can I solve all the assigned exercises in today's lesson?". For the instructor perspective, questions are formulated to ensure that the problem-based learning intervention is implemented properly. This is very vital in order to be sure that the instructor abides by the pre-determined intervention for the study.

The fourth phase is the data collection, the study utilized both quantitative and observatory research approaches for data collection, which is based on Bryman? (2006) suggestion that observatory approach can be used to triangulate quantitative research approach for a better validation. Thus, observatory research approach is used to triangulate the study's data. Data were collected during each class sessions.Data collection for quantitative research approach is done in two different ways namely survey and documentation. Questionnaire is used for the survey with 7-Point Likert-type Scale (1-Strongly Disagree, 2-Disagree, 3-Slightly

Disagree, 4 Neutral, 5-Slightly Agree, 6-Agree and 7-Strongly Agree). For the observatory research approach, video recordings are done during each class session where data on students' body languages, involvement in class and oral presentation skill are taken. The study data analysis is done based on each of the data collection approaches. SPSS is used to analyze the quantitative data while content analysis is used to analyze the observatory research approach. The fifth and sixth phases focus on reflection and plan future action which are both based on the result obtained. Reflection implies interpretation of the result, based on the data analyzed while plan future action means making recommendations based on the study interpretation. Summary of the study methodology is presented in Table 1.

Table 1: Summarized Study Methodology Implemented (Mills, 2000)

Phase	Activity	Implementation
Set Objective	Identify a focus	Generic skills in term of presentation, problem-solving, self-motivated and team working are identified.
	Select achievable target	
	Establish assessment criteria	
Articulate Theory	Develop a theory of action	Problem-based learning concept is conceptualized
	Implementation plan	
Introduce Action	Determine research questions	Implementation of Problem-based learning intervention during class sessions
	Perform action	
Collect Data	Observe action	Observation and questionnaire research methods are used
	Take data	
Reflection	Analyse data	Data analyzed with SPSS and interpretation related to the study objective
	Revise theory of action	
Plan Future Action	Make recommendation	The study result interpretation is used to give profound recommendations
	Implement recommendation	

Findings

The study data depict that out of the 117 students, 73 have non-science backgrounds while 44 have science backgrounds. This implies that most of the study respondents are not science-based students. Nonscience-based students are those without previous

knowledge of both science courses during their secondary school days and did not offer any science subjects such as Physics and Chemistry in their secondary school final examination. Similarly, the data reflect that out of the 117 students, 93are female while 24 are male. This implies that most of the study's respondents are mainly females, with 79 percent compared with their male respondents, with 21 percent. The computation of the mean for each of the items measuring the four variables (presentation skill, problem-solving skill, self-motivated skill and teamwork skill) is summarized in Table 2.

Table 2: Mean Composite Factor

Variable	Mean	Standard Deviation
Presentation Skill	6.27	1.83
Problem-solving Skill	5.06	1.61
Self-motivated Skill	6.06	1.31
Teamwork Skill	6.60	1.63

The mean computation reflects that the majority of study's respondent agreed that the implemented intervention has a positive impact on their generic skills (the four skills adopted in this study). In addition, based on Gu, Mai and Luo (2013), Kret, Pichon, Grèzes and de Gelder(2011), Rane (2010) and Kurien, (2010) using observation method the respondents' facial expression are analyzed. The result reflects that the majority of the respondents displayed curiosity during the implementation of the intervention. Likewise, their body languages show that they are happy during the study activity. A summary of the respondents' facial expression is presented in Table 3.

Table 3: Facial Expression Result

Expression	Description	Frequency	Implication
Smiling	This is when there is an elevation of the cheeks and a pleasant facial expression by respondent.	117	Happy
Slightly gazing away	This is when respondents are seen slightly gazing away or slightly looking away from the applications, such as looking or playing with other things.	106	Happy
Movement of the mouth	This is when the respondents are seen mouth gesturing or speaking to themselves.	101	Curious
Frowning	This is when the eyes are mopped together and an intense focality is given by the respondents.	90	Curious
Compressing of the lip	This is when respondents mopped their lips or lip and jaw together.	108	Curious
Using hand to touch the face	This is when respondents elevate one of their hands that were used to hold the application and used it to touch any part on their face.	117	Curious
Brow raising	This is when the arch of the short hairs is lifted above the eye.	108	Curious
Vocal expression	This takes place in form of sighing, moaning, gasping, groaning, coughing and exhaling.	117	Curious

Discussion

Based on Table 2 and 3, it can be depicted that problem-based learning activities improve students' presentation skill, problem-solving skill, self-motivation skill and teamwork skill. This outcome can be attributed to the implemented intervention which is based on action research methodology on teaching and learning strategy. This finding can be interpreted in two ways: namely respondents' academic background and their gender. Firstly, the study's respondents' academic background shows that the majority of the respondents are made up of non-science academic backgrounds, with 62 percent out of the total respondents. This study's finding disagree with Craig, Gordon, Clark and Langendyk (2004) that students with non-science academic backgrounds usually cannot

perform better in problem-based learning than students with science background. Thus, this study argues that with suitable and efficient teaching and learning strategy, both science and non-science academic backgrounds can perform excellently and can develop the needed generic skills for employability purpose. Secondly, based on the study respondents' gender, it is seen that the study's respondents are mainly female students with 79 percent. The finding of this study supports Geist and King (2008) argument that there is no gender disparity in the issue of generic skills. Thus, it is maintained in this study that although there are differences in learning styles between female and male students, however, there is no disparity between female and male students in their development of generic skills.

Conclusion

This paper has investigated the development of generic skills by problem-based learning (PBL). The study made use of respondents with poor generic skills. The implementation of the PBL intervention shows that students are able to engage freely with the learning sessions which have positive influence on their presentation skill, problem-solving skill, self-motivation skill and teamwork skills. This study points out that PBL is an appropriate and suitable teaching and learning strategy to promote and develop generic skills among higher institutions' students. Hence, this study suggests the need for higher institutions to replace teacher-centred and student-centred learning approaches with problem-based learning in order to promote a development of generic skills among students. In addition, this study also concludes that there is no disparity in both gender (female and male) and academic background (science and non-science) of students, in term of generic skills development. This implies that either science or non-science background students can develop generic skills effectively. Likewise, the study argues that both females and males can develop generic skills if they are well tutored and guided.

Refernces

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