Performance of BS Mathematics Graduates of the College of Science, University of Eastern Philippines

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ABSTRACT

A descriptive study was conducted to determine the performance of the BS Mathematics graduates who are currently employed - particularly on the skills to their job performance. This study utilized survey questionnaire that was answered by their immediate supervisors. The questionnaire was self-administered guided by Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP) indicators for Level IV accreditation status. These were personally distributed by the researches to the appropriate correspondents, if they cannot be contacted physically, the researcher's utilized email or messaging applications to reach out. The data were tabulated, and statistical tools were used to determine the degree of competencies learned that were useful to them; and ranking were utilized to show the importance of the items used. Findings showed that most of the BS Math graduates are employed; most of them are teachers. Out of 91 graduates, 55 employers have given their feedback. The employer-respondents rated the BS Math graduates as very satisfactory in technical skills, numerical skills, analytical and logical skills, and computer literate skills; in communication skills; in leadership skills; and rated excellent in teamwork, planning, and organizing skills, and professionalism. The employability skills of the BS Math graduates showed a positive response from the employers.

KEYWORDS: *employability skills, performance, BS Math graduates*

I. INTRODUCTION

Education is the key to achieve professional goals. It provides knowledge to sustain oneself in this competitive environment. Today, higher educational institutions are facing different challenges to equip graduates with correct competencies and attitudes required by the corporate world.

Graduate employability has been increasingly the focus of higher education institutions in the Philippines. The demand for a higher level of skill includes frequent updating of skills, and excellent technical skills, thus, employers look for graduates who are flexible and willing to learn on the job, technically competent, and committed to excellence. Graduates need to be given opportunities to develop attributes besides disciplinary knowledge. This includes communication skills, problem – solving skills, computer literacy, information literacy, ability,

and willingness to learn, and teamwork. Thus, the graduates need to be skilled workers and not just knowledge is a factor that is highly demanded for any job requirement (Maratas, 2018).

While there are variations in the classification of employability, there is a broad understanding of what qualities, characteristics, skills, and knowledge constitute employability both in general, and specifically for graduates. Employers expect graduates to have technical and discipline competences from their degrees but require graduates also to demonstrate a range of broader skills and attributes that include team-working, communication, leadership, critical thinking, problem solving and managerial abilities (Lowden *etal.*, 2011).

Further, as cited by Tudy (2017), the success of any school depends on the employability and performance

of its graduates in the workplace. Students get a degree with the expectation of landing a job which would give them advancement and earning potential (Kolhede, 1994).In this global era where thousands of graduates are entering to seek jobs, employers are seeking for appropriate talents. Only those graduates who have an edge in skills and competencies would be successful.

The need to have skills and not just knowledge is an important qualification in any job description. There is a demand for higher levels of skills, frequent updating of skills and excellent 'soft skills' as well as technical skills. Numerous surveys showed that over 90 per cent of employers look for people who are flexible and adaptive, willing to learn on the job, team players, technically competent and committed to excellence (Thompson et al, 2008 cited by Sannadan, 2016).

The attributes technical skills, communication skills, teamwork, leadership skills, planning and organizing skills, and communication skills were highlighted by Knoblauch and German (1989) in one of their researches in graduate attributes based on employer's perspectives. This study determined the performance of currently employed BS Mathematics graduates of the College of Science, University of Eastern Philippines. Moreover, the study identified the skills related to the graduates' job performance and their level of performance. This study also aimed to engage with possible employment linkages for BS Mathematics program.

The purpose of this study is to determine the performance of the BS Mathematics graduates who are currently employed. Specifically, it aimed to identify the skills related to the job performance of BS Mathematics graduates; and determine the level of performance of BS Mathematics graduates.

II. METHODOLOGY

This study used the descriptive survey method aimed at determining the skills related to the job performance of BS Mathematics graduates using a survey questionnaire answered by their employers. The level of performance will be measured whether they are excellent, very satisfactory, satisfactory, fair, or poor.

Data were collected by means of a self-administered questionnaire guided by the AACCUP indicators. For each attribute, respondents were requested to give their assessment on the performance of the graduates

and their views on the importance of the attributes for the post held by the graduates. Their assessments were indicated by a score on a 5-point scale as follows:

Value	Limits	Description
5	4.21 – 5.00	Excellent
4	3.41 – 4.20	Very Satisfactory
3	2.61 – 3.40	Satisfactory
2	1.81 – 2.60	Fair
1	1.00 – 1.80	Poor

Where appropriate, the researchers personally administered the questionnaire. In cases where the graduates are employed somewhere else in the country/abroad, the questionnaire was sent through emails or Facebook messenger. The data were tabulated and statistical tools such as frequency counts, percentages and weighted mean were used in determining the degree of competencies or attributes learned that were useful to them.

III. RESULTS AND DISCUSSION

An employability performance cannot be concluded simply from the employment rates of a certain institution's graduates. The employability recognizes closely linked to the rapport between higher education institutions and the employers' perspective. It connotes further that employability is the tendency of graduates to exhibit attributes or characteristics that employers foresee as necessary for the effective functioning of their organization in the future (Harvey, 1999; UNESCO, 2012; Maratas, 2012).

The tracer study conducted by Unay et al. (2021) showed that 91 out of 119 BS Mathematics graduates are employed. Majority (43.00%) of the respondents work on a contractual basis while 35.00% are on permanent status, and 5.00%are self-employed. Majority (43.00%) of the respondents work on a contractual basis while 35.00% are on permanent status, and 5.00%are self-employed. Most of them are professional teachers. Majority (36 or 40.00%) of our respondents are all professionals, followed by being clerks. The least present occupation of the respondents is a trade or related worker wherein he is involved in selling glass supply. The demand of teachers today because of the K to 12 implementation means more opportunities for BS Math graduates to land a job as teachers.

Fifty-five (55) employers mostly from the academe have given their feedbacks to the performance of our graduates.

Table 1 Employers Perspective

Graduates	Employer							
	Academe		Call Center/Lending Institutions		Office /Clerical Work		Other Establishments	
	f	%	f	%	f	%	f	%
BS Mathematics (2001-2015)	25	46%	9	16%	15	27%	6	11%
Total	55 or 60%							

Majority of the graduates of Mathematics landed in a job to serve the academe. Clerical or office works as manifested in the table was second with 15 (27%) while only few are call center agents or lending institutions as manifested in the table with only 9 or (16%) employees. Meanwhile, some of the graduates are working in other establishments such as center mall, and some food chain establishments.

Employer's Rating of Employee to Various Attributes

Table 2 Various Attributes of Employed Graduates

Attributes	Mean	Description	Rank
Technical Skills			
Numerical Skills	4.50	Excellent	1
Analytical & logical Skills	4.20	Very Satisfactory	2
Computer Literate	3.39	Satisfactory	12
Communication Skills			
Good in Oral and Written Communications	3.33	Satisfactory	13
Possesses Good Listening Skills	3.81	Very Satisfactory	5.5
Teamwork			
Has a positive working relationship with co-workers	3.72	Very Satisfactory	7
A good team player in your company	3.81	Very Satisfactory	5.5
Able to manage and delegate to others	3.51	Very Satisfactory	9
Leadership Skills			
Have potential to motivate teams and others co-workers	3.29	Satisfactory	14
Able to assign and delegate the tasks well	3.40	Satisfactory	11
Planning and Organizing Skills			
Prioritizes the work efficiently and productively	3.44	Very Satisfactory	10
Calm in a crisis and do not become too overwhelmed or stressed	3.56	Very Satisfactory	8
Professionalism			
Demonstrates enthusiasm for commitment to the position and accept responsibility for personal actions.	4.01	Very Satisfactory	3
Commits to lifelong learning	3.98	Very Satisfactory	4

Table 2 shows the employers' feedback on employed graduates as to various attributes. Among the competencies, numerical skills were rated excellent by the employers followed by analytical and logical skills, demonstrates enthusiasm for commitment and commits to lifelong learning. These attributes are common to graduates of BS Mathematics. The attribute with a lowest rate is the potential to motivate teams and other colleagues followed by good in oral and written communications. This imply that the BS Math graduates were not good in communication skills and lack of potential to be a leader.

Table 3 Employers Feedback on Employed Graduates to Various Attributes

Competencies	Weighted Mean	Description
Technical Skills	4.03	Very Satisfactory
Communication Skills	3.74	Very Satisfactory
Team Work	3.68	Very Satisfactory
Leadership Skills	3.35	Satisfactory
Planning and Organizing Skills	3.5	Very Satisfactory
Professionalism	4.0	Very Satisfactory
Grand Mean	3.71	Very Satisfactory

The results showed that the employers involved in this survey are very satisfied with the competency or attributes of the hired employee in the workplace. This means that those are attributes where the graduates can perform as expected by the employers in the workplace are seen as the important area that need in the workplace. It is suggested that students can be encouraged to demonstrate leadership skills as this is an important attribute of an employee.

CONCLUSION

The research findings showed that BS Mathematics graduates were able to perform better in their chosen field. They were rated excellent in numerical analysis skills. The employers involved in this survey are very much satisfied of the BS Mathematics graduates attached to their company or organizations. It is recommended that the curriculum accentuates opportunities to engage more in computer skills. Communication skills should also be given more emphasis at the curriculum. The curriculum mapping could be used as a benchmark to map the learning outcomes and making sure that there is no gap in the graduates learning process. Curriculum development should involve possible employers and arranging internship programs would enhance the relevance and quality of degree programs. Training programs with companies or organization is also suggested to develop or gain work experience.

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