



Acquired Skills of Graduates of a Local Philippine University and its Relevance to Their Present Job: A Tracer Survey

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ABSTRACT

Employers need graduates who are better prepared for the workplace. In the Philippines, higher education institutions (HEIs) must generate competent graduates who can adapt to quickly changing industries, notably skills, and competencies. To assess this, HEIs regularly conduct tracer or employability surveys or studies to ensure that graduates possess the competencies and abilities that employers need and that curriculum is relevant to industry needs. For this reason, the researchers conducted this study to document the employment characteristics, transition to employment, and acquired skills while studying in a local university of graduates from the school year (SY) 2016-2017 to SY 2020-2021. The most prominent finding is that graduates of the local university see that the competencies and skills they acquired while studying in school are beneficial in their careers and help their rankings and salaries. The university's goal of being the number one choice for employable graduates is manifested in the workplace.

RESUMO

Os empregadores precisam de graduados que estejam mais bem preparados para o local de trabalho. Nas Filipinas, as instituições de ensino superior (IES) devem gerar graduados competentes que possam se adaptar às indústrias em rápida mudança, principalmente habilidades e competências. Para avaliar isso, as IES realizam regularmente pesquisas ou estudos de rastreamento ou empregabilidade para garantir que os graduados possuam as competências e habilidades de que os empregadores precisam e que o currículo seja relevante para as necessidades da indústria. Por esse motivo, os pesquisadores realizaram este estudo para documentar as características do emprego, a transição para o emprego e as habilidades adquiridas durante o estudo em uma universidade local de graduados do ano letivo (SY) 2016-2017 ao SY 2020-2021. A descoberta mais proeminente é que os graduados da universidade local veem que as competências e habilidades que adquiriram enquanto estudavam na escola são benéficas para suas carreiras e ajudam em suas classificações e salários. O objetivo da universidade de ser a escolha número um para graduados empregáveis se manifesta no local de trabalho.

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Introduction

In the Philippines, higher education institutions (HEIs) must generate competent graduates who can adapt to quickly changing industries, notably skills, and competencies. Graduates of Philippine HEIs must be able to demonstrate broad and coherent knowledge and skills in their field of study for professional work; apply their knowledge in professional/creative work or research in a specialized field of discipline and/or further study; and work independently or in teams in related fields with minimal supervision, according to the (Philippine Qualifications Framework, n.d.).

Employers need graduates who are better prepared for the workplace (Docherty, 2014). When competition is a daily breakfast in today's world, student-graduates are expected to have a sense of mastery in their chosen career and the confidence to explore other opportunities and seek out new work (Mathed, 2008). Thus, HEIs conduct tracer or employability surveys or studies to ensure that graduates possess the competencies and abilities that employers need and that curriculum is relevant to industry needs. Tracer surveys are used to evaluate the impact of education programs throughout the medium to long term, which provide quantitative structural data on employment and career, work character, and related competencies, as well as qualitative structural data on jobs and career information about their grads' professional orientation and experiences.

Furthermore, the data acquired is an essential metric for judging higher education quality. For example, it is a minimal established criterion for higher education accrediting bodies like the Association of Local Colleges and Universities Commission on Accreditation or ALCUCOA. In addition, the Philippine Commission on Higher Education (CHED) has made it mandatory for HEIs to perform tracer studies as part of the designation of a center of excellence and the establishment of degree programs.

According to Schomburg (2016), HEIs use data gathered from graduates through tracer studies to assess the relevance of higher education, obtain valuable information for the university's progress, contribute to its accreditation process, and inform its stakeholders. He identified significant conjectural challenges or the study programs' underlying significance as the indicators needed (period of job exploration, salary, the status of employment, rank, job independence, and satisfaction, etc.), methods of assessing labor market indicators; identifying pertinent aspects that elucidate the graduates' success aside from higher education (workforce, local flexibility, personal impetus, etc.); the extent to which Higher Education (HE) causes the graduates' success (workforce, local flexibility, personal impetus, etc.); the (study conditions and provisions and the like).

One of the local universities in the Philippines is the Quezon City University (QCU), formerly known as the Quezon City Polytechnic University (QCPU), a local university established in 1994 to provide skilled worker training in response to the city's industry and business organizations' need for people. Currently, the university offers five programs, namely

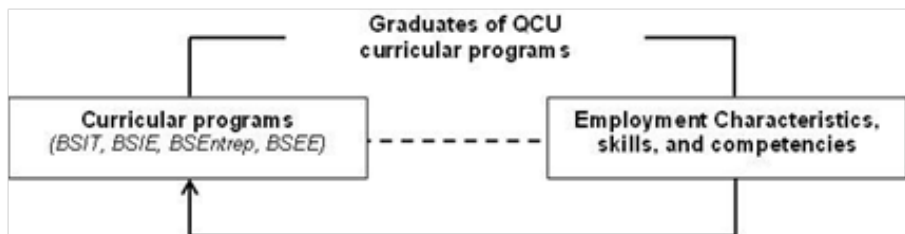
the Bachelor of Science in Entrepreneurship (BS Entrep), Bachelor of Science in Industrial Engineering (BSIE), Bachelor of Science in Electronics Engineering (BSEE), Bachelor of Science in Information Technology (BSIT), and Bachelor of Science in Accountancy (BSA).

HEIs like QCU need to monitor the achievements and career progress of their graduates to ensure that the programs they offer match the needs of the industry and ensure that these graduates can transition to meaningful and relevant career opportunities after graduating, which can be done through tracer studies or surveys (Kalaw, 2019; Cuadra et al., 2019). For this reason, this study was conceptualized to document the employment characteristics, acquired skills, and competencies of QCU graduates from the school year (SY) 2016-2017 to SY 2020-2021 while studying at the university, and the relevance of these skills and competencies to their current work. The findings of this study can be incorporated into curriculum reviews, which will serve as the foundation for the reform and improvement of the college’s various programs.

The study adopted the graphical conceptual framework used by Gines (2014) (Figure 1), which is composed of two primary variables: the curricular programs and the employment characteristics, competency, and skills development. The curricular programs refer to the pre-service training and experiences of the QCU graduates in the four undergraduate programs.

Figure 1.

Conceptual framework of the study



Source: Based from Gines (2014).

According to Gines (2014), the framework also suggests that employment characteristics, competencies, and skills acquired and their relevance to the graduates’ workplace are reflected in the assessment of employment characteristics, competencies, and skills acquired and their significance to the graduates’ workplace. This input will give the necessary data for reforming existing programs and ensuring a good fit between the needs of the labor market and the programs offered by QCU.

Materials and Methods

This study employed a quantitative approach and descriptive design through an online survey among all graduates of QCU, which used Google Forms as the primary data collection tool. An online survey was used since the data collection was done at the height of the

pandemic, when face-to-face survey interviews were discouraged. In selecting the respondents of the study, purposive sampling was used. It is a type of non-probability sampling where respondents were selected based on specified criteria. In this study, respondents should be employed by QCU alumni who graduated between 2017 to 2021. A total of 432 responses were received throughout the survey period. However, only 414 are used, thus considered valid responses, approximately 8.22% of the 5,038 graduates of QCU from 2017 to 2021.

The survey instrument was adapted from various literature, including the old QCU Tracer Study Questionnaire used in 2019 and the Polytechnic University of the Philippines (2019) Graduate Tracer Study. The 64-question instrument was divided into five parts, namely, 1) personal information, 2) educational background, 3) employment experience, 4) acquired employment skills, and 5) relevance of employment skills. Two academic experts conducted a face and content validation of the instrument, while a pilot survey was conducted among 25 respondents, with the following results of the internal consistency tests of the scale items:

1. Cronbach's Alpha (Acquired Employment Skills, 28 items): $\alpha = 0.953$
2. Cronbach's Alpha (Relevance of Employment Skills, 28 items): $\alpha = 0.975$

Overall, these results show that our scale items in the questionnaire have excellent internal consistency. After the revisions were made, the survey questionnaire was uploaded to Google Forms, and the survey link was distributed through email, Facebook, and the personal network of our academic officials and faculty members.

The online survey was conducted from September 16 to October 31, 2021 (45 days). The survey links were distributed using various social media accounts, specifically through the different institutional Facebook pages and groups. A total of 414 respondents responded to the survey. The respondents willingly submitted information and consented to the study by answering the questions, and the researchers followed strict ethical guidelines, including voluntary participation, confidentiality, and privacy. By using identity codes to replace the respondents' names during the data analysis, privacy and confidentiality rules were rigorously adhered to. IBM-SPSS v27 was used to analyze the gathered data. Frequency counts and percentages were used to analyze the collected data. Weighted means were computed to analyze the data generated from the acquired and relevant skills to current employment questions.

Results

Most of the graduates who participated in the survey are graduates of the entrepreneurship program (60.5%), while 23.9% are information technology graduates. In terms of year graduated, 34.1% of the respondents graduated in 2018 (28.81%), while 20.63% graduated in 2019. These were followed by graduates of 2017, 2021, and 2020 with 20.44%,

19,89%, and 11.23%, respectively. In terms of gross monthly salary, almost six out of ten respondents earn between Php10,000 to Php20,000 monthly, followed by graduates who earn Php20,001 to Php30,000 monthly (21.3%) (Table 1).

Table 1.
Respondents' demographic profile (n=414)

		f	%
Course / Program	BS Electronics Engineering	24	5.8
	BS Entrepreneurship	250	60.4
	BS Entrepreneurial Management	2	0.5
	BS Industrial Engineering	39	9.4
	BS Information Technology	99	23.9
Year Graduated	2017	96	23.2
	2018	141	34.1
	2019	95	22.9
	2020	38	9.2
	2021	144	10.6
Gross Monthly Salary	Below Php10,000	10	2.4
	Php10,000 to Php20,000	247	59.7
	Php20,001 to Php30,000	88	21.3
	Php30,001 to Php40,000	19	4.6
	Php40,001 to Php50,000	10	2.4
	Php50,001 above	22	5.3
	Prefer not to say	18	4.3

Source: Own authorship.

In terms of employment status, 71.3% (295) are regular workers, followed by probationary workers (13.0%), contractual/project-based workers (7.7%), and workers hired through agencies/contractors (1.7) (Table 2).

Table 2.
Respondents' nature of employment

	f	%
Regular worker	295	71.3
Probationary	54	13.0

Contractual/Project-based	32	7.7
Worker hired through agencies/contractors	7	1.7
Others	6	1.4
Prefer not to answer	20	4.8
Total	414	100.0

Source: Own authorship.

In terms of rank or position, 60.6% of the respondents are rank and file workers (workers who do not fall within the managerial or supervisory classification of employees), while 10.4% are at the supervisor level. Meanwhile, around 5.8% of them work as managers and executives, while only one is in the top management (C-suite) level (Table 3).

Table 3.
Respondents' employment rank or position

	f	%
Rank and file workers	251	60.6
Supervisors	43	10.4
Managers and Executives	24	5.8
Top Management (C-suite)	1	0.2
Others	9	2.2
Prefer not to answer	85	20.5
No answer	1	0.2
Total	414	100

Source: Own authorship.

Acquired competencies and skills while studying in QCU

In terms of the extent to which the graduates have acquired the specific competencies and skills while studying at QCU, the competencies and skills that received the highest agreement (to a great extent) include "willingness to be trained" (76%; $X = 3.73$), "flexibility" (71%; $X = 3.67$), "ability to work under pressure" (69%; $X = 3.65$), and also "integrity" (69%; $X = 3.65$). This was followed by "independence" ($X = 3.63$), "teamwork" ($X = 3.63$), "diligence" ($X = 3.62$), and "creativity" ($X = 3.58$). Meanwhile, "entrepreneurial and negotiation skills" received the highest "did not acquire this skill" responses (3%) with a weighted mean of 2.13 and 3.22, respectively (Table 4).

Table 4.
Competencies and skills acquired while studying at QCU

Would you please rate the extent to which you have ACQUIRED the following competencies and skills while studying in QCU?	To a great extent		To a good extent		To a little extent		Did not acquire this skill		Weighted Mean
	f	%	f	%	f	%	f	%	
Communication Skills	165	39.9	212	51.2	33	8.0	4	1.0	3.30
Entrepreneurial Skills	146	35.3	190	45.9	65	15.7	13	3.1	3.13
Interpersonal Skills	179	43.2	197	47.6	37	8.9	1	0.2	3.34
Professional Skills	211	51.0	175	42.3	26	6.3	2	0.5	3.44
Problem Solving Skills	198	47.8	192	46.4	23	5.6	1	0.2	3.42
Technical Skills	176	42.5	194	46.9	43	10.4	1	0.2	3.32
Organization Skills	208	50.2	176	42.5	26	6.3	4	1.0	3.42
Leadership Skills	188	45.4	180	43.5	39	9.4	7	1.7	3.33
Practical Skills	203	49.0	185	44.7	24	5.8	2	0.5	3.42
Research Writing Skills	140	33.8	212	51.2	59	14.3	3	0.7	3.18
Basic Computer Skills	225	54.3	155	37.4	33	8.0	1	0.2	3.46
Advance Information Technology Skills	146	35.3	195	47.1	63	15.2	10	2.4	3.15
Letter Writing Skills	152	36.7	201	48.6	57	13.8	4	1.0	3.21
Negotiation Skills	161	38.9	193	46.6	49	11.8	11	2.7	3.22
Decision-making Skills	203	49.0	188	45.4	21	5.1	2	0.5	3.43
Statistical Skills	155	37.4	216	52.2	37	8.9	6	1.4	3.26
Critical Thinking	201	48.6	187	45.2	24	5.8	2	0.5	3.42
Time Management	247	59.7	146	35.3	18	4.3	3	0.7	3.54
Teamwork	275	66.4	126	30.4	11	2.7	2	0.5	3.63
Flexibility	292	70.5	109	26.3	11	2.7	2	0.5	3.67
Ability to work under pressure	286	69.1	113	27.3	13	3.1	2	0.5	3.65
Self-confidence	221	53.4	163	39.4	25	6.0	5	1.2	3.45
Ability to deliver results on time	249	60.1	152	36.7	11	2.7	2	0.5	3.57
Integrity	285	68.8	117	28.3	10	2.4	2	0.5	3.65

Diligence	271	65.5	129	31.2	12	2.9	2	0.5	3.62
Willingness to be trained	314	75.8	91	22.0	7	1.7	2	0.5	3.73
Creativity	260	62.8	135	32.6	17	4.1	2	0.5	3.58
Independence	276	66.7	124	30.0	12	2.9	2	0.5	3.63

Source: Own authorship.

Significant differences between demographic profile and the acquired skills of respondents while studying in QCU

The Kruskal-Wallis test revealed no statistically significant differences in respondents' perceived acquired skills while studying in QCU based on their program/course, year graduated, nature of employment, employment rank, and monthly salary (Table 6).

Table 5.

Results of the Kruskal-Wallis test between the respondents' program/course, year graduated, nature of employment, employment rank, and monthly salary, and their perceived acquired skills while studying in QCU

		Program/ Course	Year Graduated	Nature of Employment	Employment Rank	Monthly salary
Acquired skills while studying in QCU	$\chi^2(2)$	7.965	2.778	6.158	7.344	5.903
	df	4	4	7	6	6
	p-value	0.093	0.596	0.521	.290	.434

Source: Own authorship.

Significant differences between demographic profile and the relevance of the acquired skills of respondents while studying in QCU to their current job

The Kruskal-Wallis test revealed no statistically significant differences in the respondents' perceived relevance of their acquired skills while studying in QCU based on their program/course, the year graduated, and the nature of employment. However, the same test showed that there is a statistically significant difference between the relevance of the acquired skills to the current job of the respondents and their employment rank, $H(3) = 14.321$, $p = .026$, and their monthly salary, $H(3) = 15.196$, $p = .019$. Those who have higher positions and higher monthly salaries believe that their acquired skills are relevant to their current jobs (Table 6).

Table 6.

Results of the Kruskal-Wallis test between the respondents' program/course, year graduated, nature of employment, employment rank, and monthly salary, and the perceived relevance of acquired skills while studying in QCU to their current job

		Program/ Course	Employment Status	Nature of Employment	Employment Rank	Monthly Salary
Relevance of acquired skills to the current job	$\chi^2(2)$	3.440	5.523	9.269	14.321	15.196
	df	4	4	7	6	6
	p-value	0.487	0.238	0.234	.026*	0.019*

Source: Own authorship.

Conclusions

Graduates of QCU see that the competencies and skills they acquired while studying in school are beneficial in their careers and helps in their rankings and salaries. Results also revealed that there are no significant differences in demographic profile and the acquired skills of the respondents while studying at QCU; and between demographic profile and the relevance of the acquired skills of respondents while studying at QCU to their current job. Furthermore, only employment rank was found to have a significant association with the relevance of acquired skills to the current job across all demographic and employment profiles. Those with higher positions and higher monthly salaries believe that their acquired skills are relevant to their current jobs. This is supportive of previous studies that found a relationship between employed graduates' field of specialization or discipline and their academic-acquired competencies and skills. The results also suggest that the university's goal of being the number one choice for employable graduates is manifested in the workplace.

There should be a separate survey for each course offered by QCU to see specifically how their acquired skills are relevant to the type of job they got. Moreover, there should also be a comparison among the graduates from the different year levels to see how the specific course has fared throughout the other years. Also, respondents from the different years should at least be equal in number to have a more credible result. Once all the surveys for each course have been done, there could be a table showing the similarities and differences among the various courses offered by the university.

In terms of policies, the academic council of QCU may consider revisiting and improving its curriculum programs to ensure that students will acquire the necessary skills and competencies, which respondents of this survey believe they have not acquired entirely from QCU, and to meet the required skills and competencies expected of their graduates. This would

ensure that students meet the necessary skills and competencies expected of their graduates (i.e., entrepreneurial skills). It is also important that the school's formation program has the appropriate mechanisms. For colleges to address the needs of the industry and ensure that the skills and competencies that are transferred to students are relevant to the workplace, the colleges should seek regular feedback from graduates, which be used as a basis for the continued improvement of instruction.

Finally, there should also be studies on the importance of entrepreneurial and negotiation skills in the workplace, which could later be integrated into the university's curricula if seen as one of the contributing factors to success among QCU graduates.

Discussion

The study focuses on the employment status of selected graduates of QCU from 2017 to 2021, the skills they believe they acquired while studying at QCU, and their relevance to their current job. The researchers also determined if there is a significant difference between the respondents' acquired skills while studying at QCU and their demographic profile, specifically their program/course, employment status, nature of employment, employment rank, and monthly salary.

Likewise, the researcher also studied if there is a significant difference between the perceived relevance of the respondents' acquired skills while studying at QCU, and their demographic profile. Various educational institutions are attempting to build closer synergy between the demands and aims of their curricular programs and the labor markets or industries. The quality of a curricular program and the value of skills acquired from such a program could be assessed by its graduates.

Conducting tracer surveys is critical for sustaining curriculum relevance and providing targeted advantages to graduates to improve the marketability of an institution's curricular offerings (Bolaane et al., 2010; Woya, 2019). Adequate knowledge of university graduates' employment outcomes, the skills they acquired while studying, and the relevance of these skills to their present job could aid in the formulation of policy aimed at improving curriculum and combatting social issues like unemployment and underemployment.

In terms of the extent to which the graduates have acquired the specific competencies and skills while studying at QCU, the competencies, and skills that received the highest agreement (to a great extent) include "willingness to be trained" (76%; $X = 3.73$), "flexibility" (71%; $X = 3.67$), "ability to work under pressure" (69%; $X = 3.65$), and also "integrity" (69%; $X = 3.65$). This was followed by "independence" ($X = 3.63$), "teamwork" ($X = 3.63$), "diligence" ($X = 3.62$), and "creativity" ($X = 3.58$). Meanwhile, "entrepreneurial and negotiation skills"

received the highest “did not acquire this skill” responses (3%) with a weighted mean of 2.13 and 3.22, respectively.

A study highlighted the importance of giving sufficient attention to developing employable skills and competence. When this is done, it can help address the concerns affecting job performance (Abas et al., 2016) and work habits other than unemployment and underemployment. And in today’s knowledge-based industry, the ability to work well in groups and to communicate effectively using various forms of technology are both necessary talents (Schleicher, 2012).

But beyond any skills, attitude in the workplace is a vital component in employee recruitment, selection, and promotion. Organizations that cultivate good workplace attitudes among their employees improve communications efficiency and achieve better teamwork and collaboration in the course of work (Fallah, 2017). In the Philippines, employers have reported poor levels of satisfaction with their employees’ interpersonal and communication skills and their work ethics (Acosta & Igarashi, 2017).

Therefore, it is good to note that the respondents believe they acquired the willingness to be trained while studying at QCU. An article by Indeed.com (2021), an American worldwide employment website, stated that willingness to learn (or be trained, as mentioned in this study) is the desire to gain knowledge and develop skills to improve your work performance. Employees who demonstrate a willingness to learn are typically always searching for new opportunities to stay ahead of modern trends, achieve professional goals, and complete more challenging tasks.

Other attitude-related or work ethics-related competencies acquired by the graduates of QCU include “flexibility,” “ability to work under pressure,” and “integrity.” Competence in personal adaptability and learning continuously are contributory across all elements of contextual performance (Abas & Imam, 2016). The ability to personally adjust to changing circumstances and to continue one’s education is a factor that contributes to one’s contextual performance (Abas & Imam, 2016).

These abilities are also known as soft skills, a collection of personal characteristics, routines, attitudes, and social graces that make someone a good worker and compatible with others (Vasanthakumari, 2019). Hard skills, also known as technical skills, are the opposite of soft skills and are what one needs to do their work (Vasanthakumari, 2019; Laker & Powell, 2011; Kim et al., 2011;). Computer skills, research skills, and letter writing abilities are all examples of transferable skills used in the workplace. Soft skills are a combination of people skills, social skills, communication skills, character or personality traits, attitudes, career attributes, social and emotional intelligence, and intelligence quotients that enable people to

navigate their environment, work well with others, perform well, and achieve their goals in addition to complementing their hard skills. Hard skills include building things, using power tools, and operating heavy machinery (Vasanthakumari, 2019). Patacsil and Tablatin (2017) noted that there is a requirement to improve the level of soft skills for future employees who will be entering the local workforce, as well as the fact that soft skills are considered to be relevant employability skills by both students and employers (Goswami, 2013; Williams, 2015; Bringula et al., 2016).

World Bank scholars emphasized that “...employees are hired because of their technical skills, but fired due to their behaviors or attitudes...” (Acosta & Igarashi, 2017). Acosta et al. (2017) further noted that employers look beyond the traditional cognitive and technical skills when hiring, and socioemotional skills are core competencies for higher labor productivity. It is also notable that QCU graduates can acquire such good skills and attitudes that will make them prosper in their respective fields. Furthermore, Tutor et al. (2021) discovered in their research titled “The 4th Philippine Graduate Tracer Study: Examining Higher Education as a Pathway to Employment, Citizenship, and Life Satisfaction from the Learner’s Perspective” that graduates have the perception that they did not sufficiently develop communication, critical thinking, and problem-solving skills during their time in school. It is important to note that this does not apply to graduates of QCU or QCPU who responded to the survey saying that they obtained those abilities to some extent while studying in the institution.

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