The Role of Higher Education Curriculum in the Employability of Health Sciences Graduates

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Abstract

One of the primary goals of Higher Education Institutions (HEIs) is to ensure that all students develop the skills necessary to respond to rapidly changing labor market requirements and conditions. Universities must consider how they train their students to be employable graduates. This study determined how Bachelor of Science in Medical Technology/Medical Laboratory Science (BSMT/BSMLS) and BS Physical Therapy (BSPT) programs prepared the graduates for employment in the Philippines. The study employed a descriptive-correlational research design to establish a relationship between the graduates' level of satisfaction with their education and the level of adequacy of the BSMLS and BSPT programs. An alumni survey was distributed to all Academic Year 2014-2018 program graduates via e-mail and Messenger. The survey revealed that the preparation for the board examination is the most common influencing factor in the transition from graduation to employment. The vast majority of graduates were employed locally and in positions that were relevant to their programs. The survey also revealed that the University adequately prepared graduates for jobs related to their degrees, and that graduates are satisfied with their education due to high-quality instruction and well-established student internship programs. Pearson correlation revealed that there is a moderate and positive relationship between the level of adequacy of the programs and the level of satisfaction. The study concludes that that graduates' high employability both locally and globally is a result of the adequate academic preparation they received at the University.

Keywords: *employability, health sciences programs, graduates, satisfaction, tracer study*

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1. Introduction

One of the primary goals of Higher Education Institutions (HEIs) is to ensure that all students develop the skills necessary to respond to rapidly changing labor market requirements and conditions. Universities must consider how they train their students to be employable graduates. In other words, HEIs should be talent engines that foster innovation and competence development (Abelha et al., 2020) resulting to highly qualified graduates who can eventually compete in a local and global arena (Cuadra et al., 2019). HEIs must prepare students for jobs that do not yet exist, for using technologies that have yet to be invented, and for solving problems that no one has thought of (Römgens et al., 2020). However, there is some debate about whether university courses adequately prepare students for 21st-century workplace skills (Oraison et al., 2019) to prepare them for the real contexts involved in their professional practice. As a result, it is not surprising that graduate employability has become one of the central issues driving the mission of HEIs (Small et al., 2018).

In a study conducted by Valdez (2010) to assess the career-entry level competencies expected of the graduates of the College of Medical Technology, it was found that further improvement and retooling is needed on competencies such as critical thinking, problem solving and decision-making; communication, teamwork and interactive skills, instrumentation and computer skills; leadership and management; and teaching and training responsibilities. In another study conducted by Lonogan (2016) to assess the career-entry level competencies of BMLS/BSMT graduates, the results have shown that further improvement and retooling are also needed on critical thinking, problem-solving and decision-making competencies. The same arrangement was emphasized in the field of Physical Therapists, as confirmed by the study of Acosta et al. (2020). Moreover, Pacheco et al. (2013) present in their study that about 80.8% of graduates are currently employed and 76.8% are actually practicing physical therapy. Results show that there is no 100% job alignment.

There are various circumstances in which one is unable to take the desired jobs due to the unavailability of jobs that match the individual skills. A requirement in the industry compels one to respond to industry demand, even if it necessitates additional training and skill acquisition. These musings and articulations of the responses demonstrate that industry demand can change individuals' job priorities to fit in with the world of work, regardless of whether or not it is related to the degree they have learned.

It is clear that even in the health sector, there is growing dissatisfaction with how well-prepared graduates are to function in a fast-paced workplace. HEIs must therefore provide their graduates with skills that go beyond disciplinary knowledge in order for them to perform well in the workplace (Pillay et al., 2019; Briones et al., 2021; Bawica, 2021; Gaite et al., 2022; Refugia, 2021). Universities, health services, and health students now have a vested interest in developing work-ready graduates to improve employment prospects, practice standards, and healthcare outcomes (Jones et al., 2015).

This research is therefore carried out to determine how well the University's BSMT/BMLS and BSPT programs have trained students to be highly employable graduates. In addition, the study assessed if the adequacy of job preparations provided by the University translates to the graduates' satisfaction. Specifically, the study determined the respondents' profile concerning transition from graduation to employment, alignment of work to the completed program, and classification of the workplace (local or international). It also established a relationship between the programs' level of adequacy and the satisfaction of the graduates with their education. The results will form the basis for revisiting the programs to develop further the competencies and abilities of graduates contributing to long-term employability.

2. Literature review

It is claimed that graduates lack the competencies required by end-users, which is reflected in the growing trend of graduate unemployment worldwide. Among the contributing factors is a curriculum that lacks innovative aspects that would enable graduates to acquire the competencies required by employers or the skills required to be self-employed (Fulgence, 2015). According to Pan and Lee (2011), the aims of providing a good, high-quality curriculum and of enhancing employability are not oppositional, but that instead, good learning, teaching and assessment projects will be developing practices that are also likely to help students make good, well-founded claims to employability. Thus, curriculum design and personal development planning are closely linked to discussions on employability competencies (Billet, 2015). As further pointed out by Theron (2014), HEIs must include the development of employability skills in their program offerings to respond to the needs of the industry and expectations from graduates to maintain a competitive status. Cuadra et al. (2019) discovered that relevance of the degree program to professional requirements was a major strength of the

undergraduate curriculum in a study involving 1,983 graduates from one of the Philippines' state universities.

Oraison et al. (2019) suggest that employers seek and prioritize graduates who possess practical competencies and 21st-century skills such as problem-solving and communication. The industry requires professionals who can fulfill the demands of the new contexts and trends, such as the Fourth Industrial Revolution (Schwab, 2016). According to Pillay et al. (2019), employers maintain that emerging graduates, while usually skilled in the subject and career-specific knowledge, lack competencies that would enable them to transform and adapt to their organizations. These popularized graduate attributes typically include interpersonal skills, the ability to work in a team, respect for multiculturalism and diversity, effective communication skills, creative thinking, and problem-solving skills.

While curricula and graduate attributes are frequently developed with industry involvement to address the gap between previous academic goals and industry needs (Gill, 2018), the research findings summarized in the study of Oraison et al. (2019) indicate that the gaps remain. Gaps have been identified in Europe, with graduates from 13 countries expressing dissatisfaction with their tertiary education training. More than 40,000 students from the United Kingdom, France, Italy, and Spain are reported to lack the required job skills, and the skills they have acquired at university are believed to be of limited practical workplace use. Furthermore, Spanish employers stated that university training offered poor resemblance to industry requirements. Similarly, employers in the United States, the United Kingdom, and Australia expressed concern about graduates' skill gaps, reporting deficiencies in the graduates' skill sets by identifying unmet industry requirements such as teamwork and communication. Several tell-tale signs of job-education mismatch were reported in the 4th Philippine Graduate Tracer Survey, which included 11,547 graduates from AY 2009-2011: (a) graduates believe they did not sufficiently develop communication, critical thinking, and problem-solving skills; (b) less than 70% believe their college degree is relevant to their first job; and (c) less than half believe occupational skills, which they learned in college, are the main reason for their success. Thus, graduates and employers are in congruence on the skills gaps preventing graduates from achieving their preferred occupations (Tutor et al., 2019).

The available literature clearly demonstrated that employability in relation to how well university courses adequately prepare graduates is a critical issue among higher education

institutions. To address this, a graduate tracer study must be carried out on a regular basis. Graduate tracer studies (GTS) are conducted by HEIs around the world in response to a need to understand how graduates perceive their experiences during their degree program and transition to the labor market. A GTS is a highly effective tool that can provide valuable information on the success of education and training in relation to graduates and employers (Cuadra et al., 2019). Tracer studies are one of the tools that educational institutions may use to gauge the applicability of the courses they offer to their work environments (Pentang et al., 2022). If universities want to improve their graduate education and training, they should start by learning from and improving on the diverse experiences of their graduates (Badiru & Wahome, 2016). As Caňizares (2015, p. 82) emphasizes, "GTS is important to Higher Education Institutions because it enables such institutions to accommodate changes in society, particularly the demands of current and potential employers, through evaluation and constant review of their curricula."

Various definitions of employability have been developed. Robinson (2000) described employability skills as the basic skills needed for one to get a job and enable him or her to carry out duties well. Yorke (2004) argues that the term employability derives from complex learning and is a concept of a wider range than those of 'core' and 'key' skills". He states that employability is a collection of capacities or achievements that constitute a necessary but insufficient condition for gaining employment. However, according to Amoako (2022) employability is a "a set of achievements - skills, understandings, and personal attributes - that make individuals more likely to gain employment and be successful in their chosen occupations, benefiting themselves, the workforce, the community, and the economy."

Knight and Yorke (2004) proposed not only a definition of employability but also a framework for incorporating it into the curriculum. They proposed a close relationship between employability and good learning and emphasized that employability results from a combination of achievements in four broad areas. They represented this in their USEM model, one of the best known and respected in the area of employability. Their model proposes four inter-related components of employability: **Understanding** (of disciplinary subject matter and how organizations work); **Skillful practices** (academic, employment, and life in general); **Efficacy beliefs** (reflects the learner's notion of self, their self-belief, and the possibility for self-improvement and development); **Metacognition** (complements efficacy, embraces self-

awareness, how to learn, and reflection. It encompasses knowledge of learning, thinking, and problem-solving strategies, and supports and promotes continued learning/lifelong learning).

This study is supported by the functionalist theory of education, which focuses on how education serves the need of society through the development of skills encouraging social cohesion (Asuncion, 2019). The importance of achievements, competition, and equality of opportunity are attained through education. Education provides the students with the necessary skills needed for the economy and utilizes each individual for the most relevant jobs according to their talents and qualifications. Emile Durkheim believed schools imprint social values, playing a central role in modern societies (Thompson, 2023).

3. Methodology

3.1. Research Design

The study employed a descriptive-correlational research design as it determined the respondents' profile concerning transition from graduation to employment, alignment of work to the completed program, and classification of the workplace (local or international). It also established a relationship between the programs' level of adequacy and the satisfaction of the graduates with their education.

3.2. Sample of the Study

The study included all 2014-2018 BSPT and BSMLS graduates from one of the universities in the Philippines. With the help of the School Alumni coordinators, the Google forms were distributed via e-mail and Messenger to 527 graduates, 452 of whom are BSMT/BMLS, and 75 are BSPT. The survey received 282 responses, representing a response rate of 53.51 percent. Of a total of 282 respondents, a great majority (227 or 80.50%) were from the BSMT/BMLS program, considering that there are more BSMT/BMLS than BSPT graduates from 2014 to 2018. Despite this, the BSPT group showed a higher response rate (73.33%) than the BSMT/BMLS graduates (50.22%). The lowest and the highest percentage of the respondents came from the 2014 and 2018 graduates, respectively.

3.3. Data Gathering Tool and Procedures

From March to May 2020, an alumni survey developed by the University's Quality Assurance Office was distributed to all 2014-2018 BSPT and BSMLS graduates. The Google

form link of the survey was shared on the School's Facebook page and Messenger Group Chat. The research tool was validated by the university's Research and Development Center.

3.4. Treatment of Data

Frequency counts and percentages were computed to describe the respondents' profile. Mean values were computed and interpreted using the scales shown in Tables 1 and 2 to determine the level of adequacy of the BSMLS and BSPT programs in preparing graduates for a job aligned to their degree, as well as the level of satisfaction of BSMLS and BSPT graduates with UB education.

Table 1

Likert Scale for the Level of Adequacy of the BSMLS and BSPT Programs

Likert Scale	Statistical Limit	Interpretation	
4	3.51 – 4.00	More than adequate	The program enabled the graduates to develop a very high level of competency required to land jobs aligned to their degree.
3	2.51 - 3.50	adequate	The program enabled the graduates to develop a high level of competency required to land jobs aligned to their degree.
2	1.51 – 2.50	somewhat adequate	The program only developed a low level of competency among graduates for them to land jobs aligned to their degree.
1	1.00 – 1.50	not adequate	The program did not develop the required competencies among graduates for them to land jobs aligned to their degree.

Table 2

Level of Satisfaction of the BSMLS and BSPT Programs

Likert Scale	Statistical Limit	Interpretation	
4	3.51 – 4.00	Very satisfied	The students are very satisfied with their academic experience in the University
3	2.51 - 3.50	satisfied	The students are satisfied with their academic experience in the University
2	1.51 – 2.50	Dissatisfied	The students are dissatisfied with their academic experience in the University
1	1.00 – 1.50	very dissatisfied	The students are very dissatisfied with their academic experience in the University

The Pearson correlation was used to determine whether there is a significant relationship between the level of adequacy of the programs and the level of satisfaction of the graduates with the University's Education. The following scale adopted from Cohen (1988), was utilized to interpret the Pearson's correlation coefficients:

Table 3
Interpretation of the Pearson moment correlation coefficient

Pearson Correlation Coefficient	Interpretation
0 to -/+ .09	trivial or very small relationship
-/+ .10 to -/+ .29	small (weak) relationship
-/+ .30 to -/+ .49	medium (moderate) relationship
-/+ .50 to -/+ 1.0	large (strong) relationship

Ethical Consideration

The respondents were adequately informed of the purpose of the study. All responses from the graduates were kept with utmost confidentiality; personal information will not be known, and only generalizations and recommendations were disclosed. Thus, the data collection procedures warranted the anonymity of the participants. Completing the alumni profile was voluntary. The respondents were assured that whether or not they participated, they would not suffer long-term physical, emotional, and psychological harm as a consequence of participating in the survey. Participants were made to understand that they could withdraw anytime. Besides the internet connectivity, the participants were assured that they would not spend or use other resources to answer the alumni profile.

4. Findings and Discussion

4.1. Employment Status of the Graduates

Table 4 shows the employment status of the University graduates in 2020. The employment rate for 2014-2018 BSMT/BMLS graduates ranged from 64.7 percent to 79.7 percent, while the employment rate for BSPT graduates ranged from 50 percent to 76.9 percent. Overall, 71.8 percent of BSMT/BMLS graduates and 63.6 percent of BSPT graduates are employed. The findings imply that the programs produced a good number of highly employable graduates over a five-year period, albeit at lower rates than the Philippines' overall employment rate. The employment rate in the Philippines in April 2020 was 82.4 percent, which was lower than in previous years due to the COVID-19 pandemic. Previous years' employment rates were 95.4 percent in 2019, 94.7 percent in 2018, and 94.3 percent in 2017 (Philippine Statistics Authority, 2020).

Table 4

Employment status of the University Graduates

			BSMT/BMLS Graduates			
			Unemployed	Employed	Self Employed	Total
Year Graduated	2014	Count	3	14	2	19
		%	15.8%	73.7%	10.5%	100.0%
	2015	Count	7	15	0	22
		%	31.8%	68.2%	0.0%	100.0%
	2016	Count	8	30	3	41
		%	19.5%	73.2%	7.3%	100.0%
	2017	Count	12	51	1	64
		%	18.8%	79.7%	1.6%	100.0%
	2018	Count	24	53	4	81
		%	29.6%	65.4%	4.9%	100.0%
Total		Count	54	163	10	227
		%	23.8%	71.8%	4.4%	100.0%
			BSPT Graduates			
			Unemployed	Employed	Self Employed	Total
Year Graduated	2015	Count	0	8	3	11
		%	0.0%	72.7%	27.3%	100.0%
	2016	Count	2	10	1	13
		%	15.4%	76.9%	7.7%	100.0%
	2017	Count	3	8	2	13
		%	23.1%	61.5%	15.4%	100.0%
	2018	Count	5	9	4	18
		%	27.8%	50.0%	22.2%	100.0%
Total		Count	10	35	10	55
		%	18.2%	63.6%	18.2%	100.0%

Although medical professionals including nurses, physical therapists, pharmacists, and medical technologists are in high demand in the Philippines (Adrian, 2020), an oversupply of labor and increasing tertiary enrollment rates are the main reasons of unemployment in the health sector. For example, more than 100 schools offer a medical technology program in the country. Furthermore, from 2014 to 2018, the National passing rates in the Medical Technology licensure examinations were high, ranging from 70% to 80% (Find University, 2022), with the University's passing percentage consistently above the National passing rate. As a result, there is a large supply of Medical Technologists on the employment market, creating fierce competition among graduates. On the other hand, the employment status of University's BSPT graduates can be attributed to the job market supply as well as the performance on the licensure examination. National passing rates ranged from 52% to 68% from 2014 to 2018 (Find University, 2022), but the University's passing rate was not consistently good. This affects the competitiveness of the graduates in the job market.

When comparing the employment rates of graduates from different disciplines, health and welfare graduates have a much lower employment rate than those from other disciplines. This is according to the 4th Philippine Graduate Tracer Survey conducted by Tutor et al. (2019), which included 11,547 graduates. Only 84 out of 100 Health and welfare discipline graduates are in the labor force, and only 72 of those are employed. Furthermore, graduates of Education programs fare best, with 90 out of 100 being in the labor force and a high employment rate of 91%. Engineering, manufacturing, and construction graduates are also doing well, with a labor force participation rate of 89.3%. Meanwhile, graduates of Social sciences, business, and law have a labor force participation rate of 87.2% and an employment rate of 91.6%. The worse employment outcomes for graduates of Health and welfare programs can be related to their longer job transition phase. Thus, in relation to the University's BSMT/BMLS and BSPT graduates' employment rates, the findings suggest that some BMLS/BSMT and BSPT graduates experienced a prolonged job transition period. Thus, these graduates were unemployed during the time the study was conducted.

The COVID-19 pandemic may have impacted the employment rate of the University's 2018 graduates. Some may have begun seeking work in 2019 until early 2020 after passing the board exams in 2019. Unfortunately, the COVID-19 pandemic, which began in March 2020, destroyed the labor market's balance of demand and supply, leading to an immediate and massive reduction in labor demand, working hours, and earnings (International Labor Organization, 2020). Because of the economic downturn, youth unemployment rates have dramatically increased, reflecting the challenges and barriers that young people face in finding employment and integrating into the labor market (Papadakis et al., 2020). The study of Zhu et al. (2021) showed that the career-advancement rate of medical graduate students in 2020 is 71.3%, which is considerably lower than that for the preceding 4 years from 2016 to 2019. The majority of medical graduates believed that the COVID-19 pandemic had a significant or moderate effect on career advancement.

4.2. Transition from Graduation to Employment

Literature shows that employability has been a serious concern among HEIs. It is common knowledge that the longer each graduate waits to land a job, the more costly the lost opportunities are (Caingcoy et al., 2021). The International Monetary Fund (2020) reported the cost of joblessness. Accordingly, "unemployment imposes high costs on individuals, society, and country." Its value is more than just financial. When prolonged, it may lead to one's

skepticism. Eventually, the value of education and training would lose among unemployed individuals (Simpson, 2020).

Table 5 shows how long BSMLS and BSPT graduates were employed after graduation. The majority, or 70% of the BSMT/BMLS graduate respondents, were employed within 6 months, and 17% were employed from 7 months to one year after graduation. Of the BSPT graduates, 64% and 20% were employed within six months and from seven months to one year, respectively, after graduation. Based on the survey, the most common reason graduates were not employed within six months after graduation was their preparation for the board examination. Furthermore, among the unemployed respondents, the common reasons for unemployment were: "have not been successful in finding a suitable job," "pursued / currently pursuing another degree program," and "did not apply for a job." Some self-employed respondents started their businesses or became freelancers. These reasons were quite inconsistent with the findings of Albina and Sumagaysay (2020) and Billo et al. (2017). They discovered that family concerns were the primary reason for some graduates' inability to find work. Interestingly, "qualifications did not fit for the job," "further studies," "health-related concerns," and "did not look for a job yet" are ranked at the bottom of this category.

Table 5

Transition from graduation to employment

	BSMT / BMLS		BSPT	
	N	%	n	%
Within 6 months	159	70%	35	64%
7 months to 1 year	38	17%	11	20%
More than 1 year	13	6%	6	11%
No response	17	7%	3	5%
Total	227	100%	55	100%

The findings of the current study conform with the results of Quinto and Posada (2020) involving 2016 and 2017 Medical Technology program graduates, where 91% reported that they were able to be hired within 1 year of graduation. Similarly, in the survey conducted by Contreras and Moreno (2017), the graduate respondents were largely employed full-time and working. More than half of them could obtain employment within 3 months of securing their license. As stated by Absuelo (2014), Philippine graduates with medical technology degrees

were particularly successful at obtaining jobs commensurate with their educational qualifications despite relatively few holding advanced degrees. In the 4th Philippine Graduate Tracer Survey by Tutor et al. (2019), on average, graduates looked for work 4.6 months after graduation. Graduates of programs requiring a PRC license started their job search on average 5.9 months after graduation. They spent 9 months looking for work and started their first job 15 months after finishing college. As further revealed in the study by Tutor et al. (2019), among those who were not working at the time of their graduation, the main reason for not looking for work was to review for licensure exams (41%) and to rest (33%). Around 12% did not look for work because they got married, got pregnant, or had to take care of family duties.

4.3. Alignment of Work to Program

A college education's direct output is the knowledge and skills that can be translated into competencies that are ideally relevant to industry needs. These competencies determine the transition of the graduate from college life into a productive member of the labor force (Tutor et al., 2019). Table 6 shows that the majority of BSMT/BMLS (148 or 65.2%) and BSPT (30 or 54.5%) had work aligned to their respective programs. The findings highlight the relevance and responsiveness of the University's BMLS and BSPT curricula to graduate employability. As a result, their jobs have enabled them to put their degree program knowledge to use. According to Tutor et al. (2019), one of the main reasons professionals stay in their jobs is that their work is related to their course program of study. This means that the programs met the needs of society after students graduated with skills in communication, human relations, critical thinking, problem solving, information technology, and teaching. When graduates enter the labor force, they will need these skills (Hansen & Hansen, 2019).

Table 6

Alignment of Work to Program

BSMT/BMLS program			
Unemployed	Employed with work aligned to program	Employed with work not aligned to program	**Total**
54	148	25	227
23.8%	65.2%	11.0%	100.0%
BSPT Program			
Unemployed	Employed with work aligned to program	Employed with work not aligned to program	**Total**
10	30	15	55
18.2%	54.5%	27.3%	100.0%

Billet (2015) pointed out that curriculum design and personal development planning are closely linked to discussions on employability competencies. The results conform with the tracer study of Ang and Candelario (2021) among Medical Laboratory Science (MLS) graduates from batch 2011 to 2018. Findings showed that the majority of the graduates are employed in the health and social work sector. The analysis of the transcripts revealed that graduates were trained well in terms of skills, attitudes, and knowledge. The study by Quinto and Posada (2020), which covered the first two graduate batches of the Medical Technology program, revealed that a great majority (86%) of the graduates are working in the program they studied, with 10.5% reporting that they were already promoted to supervisors and section /area heads in their work. Further, 66.3% reported working in hospitals or diagnostic laboratories.

4.4. Work Classification of the Graduates

As shown in Table 7, the majority of BSMT/BMLS and BSPT graduate respondents (90 percent and 66 percent, respectively) chose to work locally. The study's results conform with the findings of Cuadra et al. (2019), which involved 1,983 graduates in the Philippines. Their tracer study revealed that most respondents work locally in the Philippines, indicating that a large fraction chose to stay and impart their knowledge/expertise in the country.

Table 7

Classification of workplace (local or international)

BSMT/BMLS Graduates		
Local	**International**	**Total**
146	16	162
90.1%	9.9%	100.0%
BSPT graduates		
Local	**International**	**Total**
23	12	35
65.7%	34.3%	100.0%

According to Arthur (2019), every Filipino's motivation and inspiration is their career growth. This includes working abroad to fulfill their dreams and apply their educational attainment in a practical setting. Table 7 further shows that around 10% of the University's BSMT/BMLS and 34% of BSPT graduates work abroad. Their reason could be derived from the study of Castro-Palaganas et al. (2017), which states that overseas employment is seen as

a means for personal development since advanced professional learning and training may not be accessed in the Philippines but may be available in more developed countries. Although there are more opportunities for personal and professional development abroad, only a small percentage of the University's BSMT/BMLS and BSPT graduates work abroad. One reason could be the requirement to practice the profession outside the Philippines or in a foreign country. To work as an international medical technologist, certification and the skills to handle and test medical samples are required in addition to a college degree. Depending on the employer, additional laboratory experience may be required, as well as a postgraduate certificate in medical technology or a state Medical Technologist License (Clinical Laboratory Technologist License or Clinical Laboratory Scientist License) (Temporary or Permanent). To practice as a physical therapist in the United States, for example, one must have a Bachelor of Science in Physical Therapy, have passed the PRC board exam, have a doctor of physical therapy degree from a Commission on Accreditation in Physical Therapy Education-accredited physical therapist education program, and pass a state licensure exam (American Physical Therapy Association, n.d.)

In a broader sense, 66 percent of 31,000 registered jobseekers in a survey conducted by the Department of Labor and Employment (DOLE) and the online employment company JobStreet.com Philippines worked in the Philippines. They cited family, work environment, culture, and work-life balance as primary reasons for choosing local jobs (Uy, 2016).

4.5. Relationship between the level of adequacy of the programs and the level of satisfaction of the graduates with the University's Education

As shown in Table 8, the current study revealed that BSMT/BMLS graduates perceived that their program is 'more than adequate' in preparing them for a job aligned to their degree (M=3.55, SD = 0.55). Furthermore, BSPT graduates found that their program has 'adequately' prepared them (M=3.05 and SD = 0.56) for a job aligned to their degree. The graduates' responses suggest that their respective programs have enabled them to acquire sufficient knowledge and develop the necessary skills applicable to their professional careers. Specifically, the BSMT/BMLS program enabled the graduates to develop a very high level of competency in performing clinical laboratory tests, analytical and critical thinking skills in the workplace, collaborative and interpersonal skills, and life-long learning activities. On the other hand, the BSPT program allowed the graduates to achieve a high level of competency in

planning and executing appropriate physical therapy interventions for patients/clients across the lifespan within a broad continuum of care. The University develops BSMT/BMLS and BSPT graduate competencies through high-quality teacher instruction and well-established internship programs for students. Students in the BSMLS program are required to complete a 12-month internship. During the first six months of their internship, students are sent outside of the university to various affiliation centers. On the other hand, students in the BSPT program must complete a 10-month internship. One of the important aspects of tertiary education is to provide students with learning outcomes to gain access to a complex and global job market (Harrison & Grant, 2016). These learning outcomes should consider industry demands and standards to facilitate the transition to employment (Oraison et al., 2019).

Table 8

Levels of program adequacy and graduate satisfaction

	Mean	Std. Deviation	N	Interpretation
BSMT/BMLS Adequacy	3.5507	.54920	227	More than adequate
BSMT/BMLS Satisfaction	3.5903	.51910	227	Very satisfied
BSPT Adequacy	3.0545	.55838	55	Adequate
BSPT Satisfaction	3.2364	.54309	55	Satisfied

The adequacy of preparation of the graduates for job alignment redounds to the relevance of the University's BMLS and BSPT degree programs to industry requirements. Thus, this becomes one of the major strengths of the programs' curricula. The results of the current study conform with the findings of Ang and Candelario (2021) involving Medical Laboratory Science (MLS) graduates from batch 2011 to 2018. Their findings revealed that graduates were trained them well in terms of skills, attitudes, and knowledge. Furthermore, the graduates affirm that the curriculum reflects the University core values. Further supporting the findings are Cuadra et al. (2019), which stated that most of the graduates recognized that their degree programs provided them with the necessary knowledge and skills useful in their respective careers. In addition, the study of Reusia et al. (2020) found graduates' educational background and acquired skills were highly relevant to their current jobs. Based on a study of Cornillez Jr. et al. (2021), graduates of teacher education thought that the scope of the curriculum was relevant, and the general education and teaching practicum learning areas were

identified as the most important topics that have the greatest impact on their ability to find employment.

The results further revealed that BMLS graduates were 'very satisfied with their University education (M=3.59, SD = 0.52). On the other hand, BSPT graduates were 'satisfied' with their University education (M=3.24 and SD = 0.54). The results parallel James-MacEachern's (2017) findings that there was a high degree of student satisfaction with overall institutional experience: 75.6% of undergraduate students reported that they were 'satisfied' or 'very satisfied with the overall quality of instructions. Likewise, a majority of students indicated that they were 'satisfied' or 'very satisfied with the overall academic experiences at the institution at 75.3%, overall university experiences at 71.6%, and overall quality of University services and facilities 70.4%.

Pearson correlation revealed that there is a moderate and positive relationship between the level of adequacy of the programs and the level of satisfaction of the BMLS (r = .484, p=.000) and BSPT (r=.445, p=.001) graduates with the University's education as shown in Tables 9 and 10, respectively. The satisfaction of the graduates with University's education reflects the adequacy of the BMLS and BSPT programs in preparing the graduates for professional careers and employment. According to a study by James-MacEachern (2017), students felt more prepared for the workplace as a result of their academic experiences than other supports the institution provided. The findings suggested that instead of focusing on career and support services, institutions would be better served by focusing on the academic and learning opportunities available to their students. According to James and Yun (2018), students generally felt satisfied with their progress both academically and personally. In essence, they felt satisfied with the abilities and knowledge acquired at a university, regardless of job expectations, and ready for the workplace.

Table 9

Correlation between the level of BSMT/BMLS program adequacy and satisfaction

		BSMT/BMLS Adequacy	BSMT/BMLS Satisfaction
BSMT/BMLS Adequacy	Pearson Correlation	1	.484**
	Sig. (2-tailed)		.000
	N	227	227
BSMT/BMLS Satisfaction	Pearson Correlation	.484**	1
	Sig. (2-tailed)	.000	
	N	227	227
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 10
Correlation between the level of BSPT program adequacy and satisfaction

		BSPT Adequacy	BSPT Satisfaction
BSPT Adequacy	Pearson Correlation	1	.445[**]
	Sig. (2-tailed)		.001
	N	55	55
BSPT Satisfaction	Pearson Correlation	.445[**]	1
	Sig. (2-tailed)	.001	
	N	55	55

**. Correlation is significant at the 0.01 level (2-tailed).

5. Conclusion

This study showed that the graduates of the BSMT/ BSMLS and BSPT are mostly given employment opportunities both locally and internationally, employed within 6 months after graduation and with work aligned to the program. The BSMLS and BSPT programs of the University adequately prepared the graduates for the job alignment to their degree, hence, graduates were satisfied with the University's education. Furthermore, the completed program is moderately and positively related to the adequacy of the BSMLS and BSPT programs and the adequacy of the programs is also moderately and positively related to the satisfaction of the graduates with the University's Education (BMLS: r = .484, p=.000; BSPT: r=.445, p=.001). Based on the results, it is concluded that the University's graduates are highly employable both locally and internationally, owing to the adequate academic preparation they have acquired while in the university. Because of the lower employment rate of the BSPT graduates, it is recommended to further improve the BSPT curriculum to adequately prepare graduates for jobs aligned to their program. Given the limitations of the study, it is recommended to conduct another study to identify the graduates' knowledge and skills acquired during their academic years at the University. To highlight the graduates' local and international presence, a tracer study can be done per program in relation to the standard competencies. The research can also be expanded to other medical professionals such as nurses, pharmacists, and dentists.

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