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Graduate employment rate of one state university of the Calabarzon region in Philippines: A retrospection

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ABSTRACT

Every higher education institution (HEI) needs to monitor the employability status of its graduates as this reflects the quality education that HEIs provide to their students. In this study, a retrospective approach was used to analyze the employment status of graduates of a state university in the Philippines from 2015 to 2019. A data mining procedure was adopted to obtain necessary data and analysis. It was hypothesized in the study that the employment rates are the same across programs per year. Also, the employment rates from 2015 to 2019 are the same as the targeted employment rate in the strategic plan of the university. Statistical treatments such as mean, median, and standard deviation, Shapiro-Wilk test, and Analysis of Variance (ANOVA) were used to test the hypothesis. Results show that the employment rate of graduates of 2015-2019 is in the high-level category and significantly higher than the targeted employment rate in the university strategic plan. Similarly, findings show significant differences in the employability rates of graduates considering the programs they enrolled in. On the contrary, no significant difference in the employment rate of graduates per year graduated. The study concluded that the university is consistent in producing employable graduates.

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1. INTRODUCTION

An ideal learning environment for higher education institutions is one in which its students acquire a high-quality general and professional education, and meaningful field of studies and specialization programs. In addressing the emerging and complex nature and challenges of the 21st century, high education stands out as one of the major keys to coping with reforms. Through its essential functions of instruction, research, extension, and production, higher education makes up a vital and strategic part of development. One of the indicators to measure that the university delivers quality education is through its employment of graduates [1], [2]. This is done through a tracer study. Tracer study is one of the tools used by higher education institutions in both undergraduate [3], [4] and graduate programs [5], [6] to determine the status of their graduates in terms of employment as proof of the outcomes of education [7]. It aims to determine the outcomes in the form of transitioning from the higher education world to the world of work and its ancillaries [8] using a reliable system [9].

In the Philippines, the employability of graduates has been used as an indicator to assess the performance of higher education institutions. This is in addition to licensure examinations, research, extension, and production. While passing the licensure examination is a pre-requisite in board-related works and jobs, it is not the sole requirement in immediate employment.

Since the government implements various programs, projects, and services to increase the employment rate in the country, the competition for qualified graduates from higher education institutions is now a concern. According to Hartini, Bhakti, and Hartanto [10], the quality of graduates is dependent on the educators, facilities, and the policy implemented in higher education institutions. For this reason, it is on the part of the institutions of higher learning to train future professionals to be employable and ready for the complexity of the real world outside classrooms whether virtual or face-to-face.

In various universities across the country, parameters such as training on leadership, human relations, leadership skills, problem-solving skills, research skills [11], communication skills [12]–[14], technical skills [15], and character [16] are considered adequate as enablers of the high employment rate of graduates. On the other hand, irrelevant skills learned, little work experience [17], determining the root cause of conflicts, and prioritizing problems [18] are considered as needing improvement to further strengthen the employment rate of graduates while lack of professional eligibility are the pulling factors on the unemployment of graduates [19]. For these reasons, it is necessary for an institution of higher learning to produce graduates who are ready to respond to the increasing demands of the century skills and equipped with human relation skills, problem-solving skills, technological skills, communicative skills [20], self-reliant and independent in searching for a job [21]. Also before a student graduates, they should know how to handle challenges in work which is one of the indicators of staying longer in a job [22].

Thus, this study analyzes the employment rate status of graduates of several programs of one state university in the Philippines and tests the underlying differences per year, per program, and vis-à-vis its strategic target. This research also serves as the baseline information for the succeeding tracer study to be conducted in the university since no published research serves as the baseline data on the employment rate of the graduates. Hence, this study is a jumpstart initiative for further monitoring and improving the employment of the graduates through providing programs, projects, and activities/services which benefit both the alumni and the university.

This study primarily focused on the status of the employment rate of graduates of one state university in the Calabarzon Region of the Philippines batch 2015 to 2019. In particular, it tried to answer the following research questions: i) What is the Employment Rate of Graduates of one state university from 2015 to 2019 per program?; ii) Is there a significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to the year graduated?; iii) Is there a significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to program graduated? iv) Is there a significant difference between the average annual employment rate target of the university from 2015-2019 and the actual annual employment rate of graduates?

The following null hypotheses were tested at a 5% alpha level of significance: i) There is no significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to the year graduated; ii) There is no significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to program graduated; iii) There is no significant difference between the average annual employment rate target of the university from 2015 to 2019 and the actual annual employment rate of graduates.

2. RESEARCH METHOD

This research utilizes a descriptive-comparative design. Through document analysis and data mining procedure, the study collected data from the Office of the Alumni Affairs and Placement Services of the university where the study was conducted. A total of 3,622 graduates from 18 undergraduate programs of the university were traced. Claims about the data for each undergraduate program were verified by the researchers through the reported annual accomplishment of the university posted on their transparency seal on the university website and the Alumni and Placement coordinators of each college. Similarly, copies of the strategic development plans of the university were examined in the office of the Planning and Development of the said university to check the annual employment targets of the university. To promote the highest ethical standard, the researchers verified first the result of the study to the concerned college through its coordinators and solicited feedback from the experts. Statistical analyses were done using mean, median, and standard deviation for descriptive, Shapiro-Wilk for normality testing, and One-Way Analysis of Variance (ANOVA) for testing the significant difference. The alpha level was set at 5%.

3. RESULTS AND DISCUSSION

3.1. Employment rate of graduates of one state university from 2015 to 2019

Table 1 presents the employment rate of graduates of one state university from 2015 to 2019. It can be seen from the table that the median employment rate is 74.27% denoting that overall, graduates have a

high employment rate. Likewise, 5 out of 18 (28.78%) programs offered obtained an employment rate median of 81%-100% while the majority (10 out of 18 or 55.56%) of the programs have noted an employment rate ranging from 61%-80%. Three programs (16.67%) are noted with a 41%-60% employment rate which falls in the average employment category. Dumlao [23] found several reasons why graduates find it difficult to look for a job which includes lack of position or item, the inadequacy of experience, personal factors, falling short on required standards, and mismatch in qualifications required for a job. Based on the strategic development plan, the average employment rate target of the university is 67.4% from 2015-2019. Thus, based on the result, the average rate of employment at the university from 2015-2019 surpassed the targeted employment rate. Results indicate that the university was able to provide graduates with the needed competencies, values, and skills suitable to the demands of the industry and government. The result of the study is similar to some tracer studies conducted by other universities [24]–[27].

In particular, from 2015 to 2019, it is reflected in the table that graduates of 2017 got the highest employment rate of 72.92% while graduates of 2019 obtained an employment rate of 46.43%. Based on the result, the median rate of a Bachelor of Science in Agricultural Technology is 60.80%. Also, graduates of 2015-2018 reached above 50% while 2019 falls short of the 50% employment rate. As for Bachelor in Elementary Education, graduates of 2016 obtained the highest employment of 85.71% followed by graduates of 2015 (80.56%) while last is the employment rate of 2019 graduates. It is revealed also in the table that graduates of 2015-2016 almost reached 100% employment rate. Data revealed also that from 2015 to 2019, graduates of Bachelor in Elementary Education surpassed the 50% employment rate. The median rate of Bachelor in Elementary Education employment rate is 69.85%. Results for Bachelor of Science in Criminology show that graduates of 2019 are above 50% rate while the rest fall short of the 50% employment rate. Also, graduates of 2018 did not reach a 20% employment rate. On average (median), the employment rate for a Bachelor of Science in Criminology is 40.74%.

For the Bachelor of Science in Accountancy, graduates' employment rate surpassed 75% and even 80% employment rate. Likewise, graduates of batch 2017 are all employed while graduates of 2015 and 2019 are approaching a 100% employment rate. On average (median) 73.68% of Bachelor of Science in AgriBusiness graduates are employed which graduates of 2015, 2017, and 2018 surpassing the 70% employment rate. It is seen in the table also that above 50% of graduates from Bachelor of Science in Agricultural Education from 2015 to 2019 are employed. The median value of the employment rate of Bachelor of Science in Agricultural Engineering graduates is 71.43% which is above the 70% employment rate in which graduates of 2016 and 2018 are heading already toward a 90% employment rating. With respect to the Bachelor of Science in Agriculture, obtaining a median score of 74.19%, the employment rate has been consistent in its performance above 70%.

Also, graduates 2015 of the program achieved a 100% employment rate. The employment rate median for Bachelor of Science in Business Administration graduates is 69.36% which is above the 50% employment rate of the graduates. The highest was found in 2015 while the lowest rate is found in 2016. When it comes to the employment rate for a Bachelor of Science in Computer Science, graduates obtained a median score of 88.20% which is above the 85% employment rate. Also, graduates of 2017 obtained a 100% employment rate followed by batch 2019 which almost reached a hundred percent rate. On the other hand, graduates of 2018 are recorded with the lowest employment rate of 61.54%. This scenario in the employment rate of computer science program graduates is found contradicting to the result of the study [28] stated that there is a need for the graduates of the computer science program to improve employment.

Bachelor of Science in Food Technology produced its first batch of graduates in 2019 based on the result, an 87.50% rate of employment is obtained. This percentage of employed graduates showed promising employment performance in the program. The employment rate of graduates with a Bachelor of Science in Hotel and Restaurant Management reached above 75%. It is also noted from the table that graduate employment rates of 2015-2016 surpassed 90% rate while a sudden decrease in 2017 but a gradual increase in the succeeding years. Graduates of Bachelor of Science in Information System are all employed based on the employment rate record of 100%. With a median score of 70.54%, Bachelor of Science in Information Technology graduates surpassed the 70% employment rate. Likewise, there is an increasing trend in the employment rate of Bachelor of Science in Information Technology in terms of its graduates, net the graduates of 2018 that shows above 20% decrease in the employment rate compared to 2017.

Graduates with a Bachelor of Science in Office Administration show a 41.67% employment rate on average. Also, based on the table, the employment rate of graduates of 2015 and 2016 did not reach a 25% rate as compared to 201-2019 which reached a 50% employment rate. For the Bachelor of Science in Psychology, based on the median score of 76.49%, the employment rate of Bachelor of Science in Psychology graduates surpassed the 75% employment rate. Similarly, graduates of batch 2017 obtained the highest employment rate followed by 2015 while the lowest is in 2016. Obtaining a median value of 68.49%, it was found that graduates of Bachelor of Science in Tourism Management surpassed the 50% employment rate and headed toward a 70% employment rate. However, the trend shows that from 2016, graduates'

employment rate decreases gradually until 2019. Finally, graduates of Bachelor of Secondary Education show a consistent employment rate of above 80% from 2015 up to 2019 obtaining a median rate of 81.72%. Though there is a gradual decrease from 2017 to 2019, the trend in the employment rates, still the rate surpasses 80%. The result is the same as what Caingcoy [29] found graduates of teacher education have a high employment rate. Based on the data analysis, several factors were identified in the data trend such as fluctuations of data collected due to the low response rate from the alumni on the communication sent to them, and the number of graduates per year per program.

Table 1. Employment rate of graduates of one state university from 2015 to 2019

Program	Year graduated					Ave.	Verbal interpretation
	2015	2016	2017	2018	2019		
Bachelor of Science in Agricultural Technology	62.50	65.57	72.92	59.09	46.43	62.50	High
Bachelor of Elementary Education	80.56	85.71	66.67	73.02	64.29	73.02	High
Bachelor of Science in Criminology	40.00	40.74	55.56	52.63	47.50	47.50	Average
Bachelor of Science in Accountancy	83.33	76.47	100.00	68.18	85.00	83.33	Very high
Bachelor of Science in Agricultural Business	73.68	55.56	82.61	75.68	68.75	73.68	High
Bachelor of Science in Agricultural Education	60.61	51.72	62.02	52.10	50.38	52.10	Average
Bachelor of Science in Agricultural Engineering	-	88.89	71.43	88.24	68.75	79.83	High
Bachelor of Science in Agriculture	100.00	74.19	71.05	77.78	78.38	77.78	High
Bachelor of Science in Business Administration	72.73	63.86	70.00	70.27	68.81	70.00	High
Bachelor of Science in Computer Science	87.50	88.89	100.00	61.54	96.43	88.89	Very high
Bachelor of Science in Food Technology	-	-	-	-	87.50	87.50	Very High
Bachelor of Science in Hotel and Restaurant Management	90.32	94.12	72.41	75.76	77.78	77.78	High
Bachelor of Science in Information System	-	-	-	-	100.00	100.00	Very high
Bachelor of Science in Information Technology	58.33	78.57	84.78	62.50	90.91	78.57	High
Bachelor of Science in Office Administration	33.33	20.00	60.00	50.00	62.50	50.00	Average
Bachelor of Science in Psychology	84.38	71.43	90.00	73.91	79.07	79.07	High
Bachelor of Science in Tourism Management	69.23	88.89	69.57	67.74	60.00	69.23	High
Bachelor of Secondary Education	81.54	86.84	87.84	86.00	81.90	86.00	Very high
Employment Rate	71.87	70.72	76.05	68.40	73.02	74.27	High

3.2. Test of normality using Shapiro-wilk

Table 2 shows the result of the normality test for the employment rate of graduates per year and per program. Using Shapiro-Wilk's test, employment rate per year and per program follows a normal distribution path. The p-values which are all greater than the 0.05 alpha level of significance indicate that the employment rate of graduates in the university does not deviate from the normal distribution curve. For this reason, parametric statistical treatment can be applied to test the hypothesis of the study.

Table 2. Test of normality using Shapiro-wilk

		Shapiro-Wilk	p-value	Interpretation
Year graduated	2015	0.944	0.470	Normally distributed
	2016	0.884	0.066	Normally distributed
	2017	0.924	0.249	Normally distributed
	2018	0.969	0.857	Normally distributed
	2019	0.976	0.946	Normally distributed
Program	Bachelor of Science in Agricultural Technology	0.938	0.520	Normally distributed
	Bachelor of Elementary Education	0.832	0.194	Normally distributed
	Bachelor of Science in Criminology	0.825	0.175	Normally distributed
	Bachelor of Science in Accountancy	0.975	0.699	Normally distributed
	Bachelor of Science in Agricultural Business	1.000	0.973	Normally distributed
	Bachelor of Science in Agricultural Education	0.835	0.201	Normally distributed
	Bachelor of Science in Agricultural Engineering	0.848	0.235	Normally distributed
	Bachelor of Science in Agriculture	0.993	0.842	Normally distributed
	Bachelor of Science in Business Administration	0.889	0.351	Normally distributed
	Bachelor of Science in Computer Science	0.959	0.611	Normally distributed
	Bachelor of Science in Food Technology	0.922	0.458	Normally distributed
	Bachelor of Science in Hotel and Restaurant Management	1.000	0.993	Normally distributed
	Bachelor of Science in Information System	0.794	0.100	Normally distributed
	Bachelor of Science in Information Technology	0.990	0.805	Normally distributed
	Bachelor of Science in Office Administration	0.963	0.632	Normally distributed
	Bachelor of Science in Psychology	0.872	0.302	Normally distributed

3.3. Significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to the year graduated

Table 3 shows the difference between the employment rate of graduates of one state university from 2015-2019 when grouped according to year graduated. Using ANOVA, the result shows that there is no significant difference in the employment trend of graduates of one state university when classified according to year. This reveals that from 2015 to 2019, there is a consistent employment trend of graduates from the university. The result further shows that over the years, the university maintains its high employment rate and produced graduates that are employable similar to other universities across the country [30], [31]. These can be attributed to the initiatives of the university on religiously implementing programs and projects for the employment of the graduates and strengthening its linkages in the industry, and other stakeholders, in response to achieving its set targets in the Strategic Plan (SDP 2012-2017; 20218-2022; 2020-2024).

Table 3. Significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to year graduated

Groups	Sum of squares	df	Mean square	F	P-value	Difference
Between	389.827	4	97.45675			
Within	20323.2	75	270.9759	0.360	0.837	Not significant
Total	20713.02	79				

3.4. Significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to program graduated

Table 4 shows the significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to program graduated. Using ANOVA, the result shows that there is a significant difference on the employment trend of graduates of one state university when classified according to program graduated. With the use of post hoc analysis, it was found that employment of graduates of Bachelor of Science in Computer Science is not significantly different on employment rates of programs Bachelor of Elementary Education, Bachelor of Science in Accountancy, Bachelor of Science in Hospitality Management and Tourism, Bachelor of Science in Agriculture, Bachelor of Science in Psychology, Bachelor of Science in Agricultural Engineering, Bachelor of Science in Information Technology, and Bachelor of Elementary Education while significantly different on employment rates of programs Bachelor of Science in Agribusiness, Bachelor of Science in Tourism Management, Bachelor of Science in Business Administration, Bachelor of Agricultural Technology, Bachelor of Science in Agricultural Education, Bachelor of Science in Office Administration, Bachelor of Science in Criminology. Programs Bachelor of Science in Food Technology and Bachelor of Science in Information System were removed from the data employment data of graduates of the two programs are only found in 2019.

Table 4. Significant difference between the employment rate of graduates of one state university from 2015 to 2019 when grouped according to program graduated

Groups	Sum of squares	df	Mean square	F	P-value	Difference
Between	15000	15	1000			
Within	7642	63	121	8.24	<0.001	Significant
Total	22642	78				

Program	Grouping *(program sharing the same letters are not significantly different)*					
Bachelor of Science in Computer Science	a					
Bachelor of Secondary Education	a					
Bachelor of Science in Accountancy	a	b				
Bachelor of Science in Hotel and Restaurant Management	a	b	c			
Bachelor of Science in Agriculture	a	b	c			
Bachelor of Science in Psychology	a	b	c			
Bachelor of Science in Agricultural Engineering	a	b	c			
Bachelor of Science in Information Technology	a	b	c			
Bachelor of Elementary Education	a	b	c	d		
Bachelor of Science in Agricultural Business		b	c	d		
Bachelor of Science in Tourism Management		b	c	d		
Bachelor of Science in Business Administration			c	d		
Bachelor of Science in Agricultural Technology				d	e	
Bachelor of Science in Agricultural Education					e	f
Bachelor of Science in Criminology						f
Bachelor of Science in Office Administration						f

3.5. Significant difference between the average annual employment rate targets of the university and the actual annual employment rate of graduates

Table 5 portrays the significant difference between the average annual employment rate targets of the university and the actual annual employment rate of graduates. Using a one-sample t-test, this study analyzes the significant difference between the average employment rate target of the university in their strategic development plan (67.4%) and the actual employment rates of undergraduate programs of the university from 2015 to 2019. Based on the result, the average employment rate of graduates of the university from 2015 to 2019 is significantly higher than the 67.4 average annual employment target of the university at a 5% alpha level of significance (t=5.43; p=0.006). This result provides an implication about the course of actions done by the university in achieving the target set in the strategic plan specifically on ensuring that graduates are employable and responsive to the needs of the industry. Several initiatives were noted based on the interview done by the researchers with some administrators of the university. These initiatives include strengthening of hiring and promotion of the faculty, establishment of curriculum division and quality assurance, and regular coordination with the partner agencies in order to orient graduating students on the needs of the industries as well as the requirements for applying for a job. The university also intensified its alumni affairs and placement services unit consistently monitors the employment status of graduates and connects the unemployed alumni to the industry partner aligned with their field of specialization.

Table 5. Significant difference between the average annual employment rate targets of the university and the actual annual employment rate of graduates

Annual employment rate	Mean	SD	t-value	p-value	Decision	Interpretation
Theoretical (Set in the StratPlan)	67.40	-	5.43	0.006	Reject Ho	Significant
Actual	74.27	2.83				

4. CONCLUSION

Based on the foregoing findings, the study concluded that the university surpassed its targeted annual employment rate in its strategic plan. It was also concluded that the employment rate of the university is high. More so, similar to other institutions of higher learning, there are some employment rates that are consistent over the years while some are fluctuating. It is manifested also in the study that the course of actions implemented in the university is effective in achieving its employment targets that can be benchmarked by other universities in the region. Since some undergraduate programs were noted as very high in terms of employment rate, it is worthy to recommend conducting a mentoring or benchmarking program across undergraduate programs of the university and considering these very high employment rate programs as mentors. Because this study only focused on the establishment of baseline information, an in-depth study on tracing the whereabouts of the graduates, the responsiveness of graduates to the needs of the industry, the status of employment, effectiveness of the curriculum, and employer's feedback can be conducted.

REFERENCES

[1] L. A. Støren and P. O. Aamodt, "The Quality of Higher Education and Employability of Graduates," *Quality in Higher Education*, vol. 16, no. 3, pp. 297–313, Nov. 2010, doi: 10.1080/13538322.2010.506726.

[2] A. A. Woya, "Employability among Statistics Graduates: Graduates' Attributes, Competence, and Quality of Education," *Education Research International*, vol. 2019, pp. 1–7, Jan. 2019, doi: 10.1155/2019/7285491.

[3] M. J. F. Cañizares, "Tracing University of San Carlos' science and mathematics education graduates: How well are we in developing teacher professionals?" *International Journal of Research Studies in Education*, vol. 4, no. 2, Jan. 2015, doi: 10.5861/ijrse.2015.985.

[4] E. G. T. Sumanasiri, M. S. A. Yajid, and A. Khatibi, "Review of literature on Graduate Employability," *Journal of Studies in Education*, vol. 5, no. 3, p. 75, Jul. 2015, doi: 10.5296/jse.v5i3.7983.

[5] D. Fajardo-Atian, "Institutional Study on Employability and Scope of Nursing Graduates with Master of Arts Degree in Philippines," *International Journal of Educational Sciences*, vol. 31, no. 1–3, Sep. 2020, doi: 10.31901/24566322.2020/31.1-3.1153.

[6] J. L. Dela Cruz, "Tracer Study of Graduate School Graduates of a State Higher Education Institution in the Philippines from 2016 to 2020," *International Journal of Education and Literacy Studies*, vol. 10, no. 2, pp. 149–154, Apr. 2022, doi: 10.7575/aiac.ijels.v.10n.2p.149.

[7] K. Daubney, "'Teaching employability is not my job!': redefining embedded employability from within the higher education curriculum," *Higher Education, Skills and Work-Based Learning*, vol. 12, no. 1, pp. 92–106, Jan. 2022, doi: 10.1108/HESWBL-07-2020-0165.

[8] S. Andari, A. C. Setiawan, Windasari, and A. Rifqi, "Educational Management Graduates: A Tracer Study from Universitas Negeri Surabaya, Indonesia," *IJORER: International Journal of Recent Educational Research*, vol. 2, no. 6, pp. 671–681, Nov. 2021, doi: 10.46245/ijorer.v2i6.169.

[9] P. W. Yunanto, A. Idrus, V. M. Santi, and A. S. Hanif, "Tracer study information system for higher education," *IOP Conference Series: Materials Science and Engineering*, vol. 1098, no. 5, p. 052107, Mar. 2021, doi: 10.1088/1757-899X/1098/5/052107.
[10] S. Hartini, C. Putra Bhakti, and D. Hartanto, "A Tracer Study on the Graduates of Guidance and Counseling Department of Ahmad Dahlan University," *Proceedings of the 1st Yogyakarta International Conference on Educational Management/Administration and Pedagogy (YICEMAP 2017)*, 2017, doi: 10.2991/yicemap-17.2017.22.
[11] E. E. C. Cornillez Jr., S. R. T. Caminoc, B. R. Basas, B. T. Militante Jr., and R. R. Paler, "Tracer Study of Teacher Education Graduates of the Eastern Visayas State University-Tanauan Campus, Philippines," *European Journal of Education and Pedagogy*, vol. 2, no. 3, pp. 186–193, Jul. 2021, doi: 10.24018/ejedu.2021.2.3.143.
[12] G. Briones, E. J. Apat, D. G. I. Lorica, and M. Valenzuela, "Employers' Preference on Employability Skills of Business Management and Accounting Graduates," *International Journal of Academe and Industry Research*, vol. 2, no. 3, pp. 64–85, 2021, doi: 10.53378/348730.
[13] A. C. Albina and L. P. Sumagaysay, "Employability tracer study of Information Technology Education graduates from a state university in the Philippines," *Social Sciences & Humanities Open*, vol. 2, no. 1, p. 100055, 2020, doi: 10.1016/j.ssaho.2020.100055.
[14] R. D. Martín, "The Importance of Communication Competency for Employability," *Procedia - Social and Behavioral Sciences*, vol. 139, pp. 387–394, Aug. 2014, doi: 10.1016/j.sbspro.2014.08.024.
[15] M. E. Caingcoy, "Scoping Review on Employability Skills of Teacher Education Graduates in the Philippines: A Framework for Curriculum Enhancement," *International Journal of Education and Literacy Studies*, vol. 9, no. 4, p. 182, Nov. 2021, doi: 10.7575/aiac.ijels.v.9n.4p.182.
[16] E. V. Sagarino *et al.*, "A tracer study on the University of the Immaculate Conception graduates of bachelor of music," *Journal of Advanced Research in Social Sciences and Humanities*, vol. 2, no. 5, Oct. 2017, doi: 10.26500/jarssh-02-2017-0503.
[17] M. T. B. Kalaw, "Tracer study of Bachelor of Science in Mathematics," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 8, no. 3, p. 537, Sep. 2019, doi: 10.11591/ijere.v8i3.17434.
[18] T. Wale, M. Melese, Z. Siraye, and T. Abebe, "A tracer study on employability of business and economics graduates at Bahir Dar University," *International Journal of Higher Education and Sustainability*, vol. 2, no. 1, p. 45, 2018, doi: 10.1504/IJHES.2018.10013675.
[19] G. R. Villanueva Jr. and L. W. Binay-an, "A Tracer Study on the Employability of Information Technology Graduates of Ilocos Sur Polytechnic State College, Tagudin Campus," *Psychology and Education Journal*, vol. 58, no. 2, pp. 5792–5795, Feb. 2021, doi: 10.17762/pae.v58i2.3007.
[20] E. C. Deblois, "The Employment Profile of Graduates in a State University in Bicol Region, Philippines," *Journal of Education, Management and Development Studies*, vol. 1, no. 1, pp. 33–41, Jun. 2021, doi: 10.52631/jemds.v1i1.10.
[21] M. S. Daguplo, P. Lee, G. Capili, A. Rose, C. Estrella, and A. L. Bano, "Tracking the Employment and Employability Characteristics of the Graduates of the College of Teacher Education," *Part III Asia Pacific Journal of Multidisciplinary Research*, vol. 7, no. 2, pp. 67–74, 2019, doi: 10.13140/RG.2.2.33923.04642.
[22] E. A. J. van Hooft, J. D. Kammeyer-Mueller, C. R. Wanberg, R. Kanfer, and G. Basbug, "Job search and employment success: A quantitative review and future research agenda.," *Journal of Applied Psychology*, vol. 106, no. 5, pp. 674–713, May 2021, doi: 10.1037/apl0000675.
[23] T. R. Dumlao, M. H. Lopez, and J. G. Manago, "Tracing CCI education graduates: How well are we in developing professional teachers?" *CC The Journal: A Multidisciplinary Research Review*, Vol. 15, Oct. 2020, doi: 10.13140/RG.2.2.18081.35686.
[24] M. V. Tutor, A. C. Orbeta Jr., and J. M. B. Miraflor, *The 4th Philippine Graduate Tracer Study: Examining Higher Education as a Pathway to Employment, Citizenship, and Life Satisfaction from the Learner's Perspective*. Quezon city: Philippine Institute for Development Studies, 2021.
[25] J. T. Pentang *et al.*, "Tracer Study of Teacher Education Graduates of Western Philippines University - Puerto Princesa Campus: Basis for Curriculum Review and Revision," *International Journal of Multidisciplinary: Applied Business and Education Research*, vol. 3, no. 3, pp. 419–432, Mar. 2022, doi: 10.11594/ijmaber.03.03.12.
[26] J. B. Hipona, J. E. T. Cuevas, and J. A. Martin, "A Tracer Study of the Bachelor of Science in Nursing Program of La Consolacion University Philippines Graduates: A Reflection on Institutional goals," *Cosmos An International Journal of Art & Higher Education*, vol. 10, no. 1, pp. 16–26, 2021, doi: 10.46360/cosmos.ahe.520211004.
[27] J. C. Mina, E. J. G. Reyes, and R. F. Salas, "A Tracer Study of Bachelor of Science in Information Technology (BSIT) Graduates of Nueva Ecija University of Science and Technology (NEUST), San Isidro Campus," *International Journal of English Literature and Social Sciences*, vol. 5, no. 4, pp. 1337–1344, 2020, doi: 10.22161/ijels.54.77.
[28] R. S. Malahay and P. M. Saing, "A tracer study of Bachelor of Science in Computer Science Graduates of Negros Oriental State University-Guihulngan City Campus, Philippines," *International Journal of Applied Research*, vol. 4, no. 12, pp. 44–46, 2018.
[29] M. Caingcoy, "Cross-Sectional Inquiry on Employability and Employment Status of Bachelor of Secondary Education Graduates (2016-2018): A Tracer Study," *SSRN Electronic Journal*, 2020, doi: 10.2139/ssrn.3632058.
[30] E. R. P. Corpuz, "Tracer Study of Nueva Ecija University of Science and Technology Graduates (Atate Campus)," *International Journal of English Literature and Social Sciences*, vol. 5, no. 2, pp. 434–440, 2020, doi: 10.22161/ijels.52.17.
[31] M. J. B. Calpa, I. E. Esquierdo, and O. D. Unay, "Tracer Study of Bs in Mathematics Graduates (2001 – 2015) of the College of Science, University of Eastern Philippines," *Asian Research Journal of Mathematics*, pp. 38–44, Feb. 2021, doi: 10.9734/arjom/2021/v17i130263.

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