ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

AN EMPLOYABILITY TRACER STUDY OF SECONDARY EDUCATION –MATHEMATICS GRADUATES FROM 2022 TO 2023

Erika Mae P. Asoy, LPT[1], Audrey Mae G. Ozaraga, LPT[2], Deveyvon L.Espinosa, MAEd[3], Regine L. Generalao, MST-MATH[4], Jonelson C. Escandallo, PhD[5], Conie B.Cerna,MAEd[6], Kristy Jane R. Muegna, MAEd[7]

[1]ORCID No. 0009-0008-1987-3780, Instructor, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[2]ORCID No. 0009-0001-3369-3929, Instructor, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[3]ORCID No. 0000-0002-2896-5416, Assistant Dean-Institute of Teacher Education, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[4]ORCID No. 0009-0009-3280-3303, BSEd-Mathematics Program Coordinator, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[5]ORCID No. 0000-0001-5808-6749, BSEd-English Program Coordinator, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[6]ORCID No. 0009-0008-1170-3234, BSEd-Filipino Program Coordinator, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte
[7]ORCID No. 0009-0006-9910-0117, BEEd-Generalist Program Coordinator, Kapalong College of Agriculture, Sciences and Technology, Maniki, Kapalong, Davao del Norte

Article DOI: https://doi.org/10.36713/epra16594
DOI No: 10.36713/epra16594

ABSTRACT

This graduate tracer study investigated the employment outcomes and career trajectories of graduates from the Bachelor of Secondary Education Major in Mathematics program at Kapalong College of Agriculture, Sciences, and Technology during the academic years 2022 to 2023. The study, based on survey responses from all 49 graduates, explored demographic characteristics, employment status, income levels, relevance of education to employment, work attitudes, and skills development.

Findings revealed that most graduates were female, single, and aged between 20 to 25 years. While most graduates were employed, a significant portion remained unemployed, with a notable percentage engaged in non-teaching roles. Despite this, a substantial proportion of graduates found their college degree highly relevant to their current work. The study indicated a high level of work attitude among graduates and underscored the institution's provision of quality education and effective skills development.

The employment rate stood at 73.5%, indicating a favorable outcome for many graduates. However, recommendations were proposed to address areas of concern, including the establishment of a graduate employability coordinator, offering training for graduates in non-teaching roles, enhancing technical and entrepreneurial skills through specialized workshops and partnerships, and strengthening industry partnerships to expedite job placement.

Overall, the study highlighted the strengths and areas for improvement in preparing mathematics graduates for the workforce, providing valuable insights for the institution to enhance its support for graduates' career development.

KEYWORDS: *Tracer Study, Mathematics Graduates, Teacher Education*

INTRODUCTION

Tracer surveys serve as indispensable technical tools, meticulously monitoring and analyzing the trajectories of program beneficiaries over time to enhance program management. This systematic tracing enables thorough examination of long-term impacts, identifying strengths, weaknesses, and areas ripe for improvement.

Higher Education Institutions (HEIs) globally conduct tracer studies to glean reliable feedback from graduates regarding program effectiveness. Emphasizing the necessity of possessing the requisite skill set for securing and managing employment effectively, as well as pursuing improved opportunities, is underscored by The International Labour Organization World. In India, Misra and Khurana (2017) delve into theoretical concepts and models of employability, pinpointing disparities between academic teachings and employer expectations during the hiring process. Meanwhile, offering invaluable insights into the intersection of higher education and community needs, they significantly influence academic administration and the broader role of higher

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

education in national development, exemplified by graduates of Medan State University (Hasibuan et al., 2022).

Gines (2014) conducted a meticulous tracer study spanning from 2009 to 2011, delving into employment outcomes, satisfaction levels, and program relevance for PNU graduates. This examination thoroughly scrutinized satisfaction with university services, learning environments, and facilities, assessing the efficacy of teacher education programs in adapting to dynamic standards such as ASEAN integration and evolving competency frameworks for Southeast Asian teachers in the 21st century.

Similarly, Cuadra et al. (2019) emphasize the significance of tracer surveys in providing profound insights into program intervention effectiveness. Through extensive data collection and analysis, these surveys elucidate factors contributing to both success and failure, empowering program managers to make evidence-based decisions and refine strategies, reallocate resources, and optimize outcomes. This fosters continuous improvement and sustainability within the program framework.

In Davao Oriental, a survey conducted by Apostol and Susada (2022) as part of a tracer study gathered responses from 150 graduates under Bachelor of Elementary Education. The findings indicated that these graduates viewed the curriculum they underwent in college as applicable to both their initial and present jobs. They voiced the opinion that the communication skills and discipline they gained during their college years were the most essential assets in their professional endeavors.

In the 21st century's complex educational landscape, higher education emerges as a pivotal force in adapting to reforms through teaching, research, and outreach. Addressing these challenges presents a significant undertaking for Philippine Higher Education Institutions (HEIs). A strategic approach to overcoming these obstacles involves cultivating graduates primed to apply their acquired knowledge effectively in their professional pursuits.

In the local context, a college in Kapalong recognizes the imperative of conducting graduate tracer studies to refine its curriculum and prepare students for the regional workforce. By meticulously tracking alumni career paths, invaluable insights are gleaned into the specific skills and knowledge requisite for success in various professions. This empowers tailoring of the curriculum to align seamlessly with regional employers' needs and expectations, ensuring students receive the most pertinent and practical education possible. Through this endeavor, the college aims not only to enhance graduates' employability but also to contribute to the institution's growth and development by equipping students with the tools necessary to excel in their chosen fields within the local context.

Furthermore, this proactive approach aims to refine the Bachelor of Secondary Education major in Mathematics program by closely monitoring alumni career paths. Understanding alumni trajectories is imperative for fine-tuning the curriculum to meet the dynamic demands of the job market. The institution's objective is to equip graduates with the requisite skills and knowledge to excel in their careers, particularly in the education sector. This initiative not only enhances graduates' employability but also reinforces the institution's commitment to providing high-quality education that prepares students for real-world success.

OBJECTIVES OF THE STUDY

The primary purpose of this study was to:

1. describe the demographic characteristics of graduate-respondents, grouped by academic year, including:
   - 1.1. sex;
   - 1.2. civil status;
   - 1.3. age;
   - 1.4. year graduated; and
   - 1.5. educational attainment and development;
2. describe the employment profile and features of the graduate-respondents, grouped by academic year, including:
   - 2.1. employment rate;
   - 2.2. employment status;
   - 2.3. level of income;
   - 2.4. period of seeking the first job after college;
   - 2.5. relevance of college degree to the present job; and
   - 2.6. job mismatching;
3. determine the level of self-rated evaluation by graduate respondents regarding their attitude toward work;
4. determine the level of self-rated evaluation by graduate respondents regarding the quality of education provided by the institution; and
5. determine the level of self-rated evaluation by graduate respondents regarding the skills and abilities obtained at the institution and their usability in their present occupation.

METHODS

Design

This study used the descriptive type of research as it provides an objective portrayal of specific phenomena or subjects by systematically collecting and analyzing data to generate objective and statistically reliable findings. This method concentrates on characterizing demographic segments, prioritizing the depiction of what occurs rather than delving into the reasons behind it, distinguishing itself by its focus on describing the subject of inquiry without addressing causality (Sidel et al., 2018). Further, descriptive quantitative research involves collecting information about variables without altering the environment or manipulating variables, thereby avoiding investigation into cause-and-effect relationships. This approach may be utilized for various purposes such as theory development, problem identification, justification of current practices, decision-making, or understanding what others in similar situations are doing (Baker, 2017). The study employed descriptive research to outline the employment rate and status of Secondary Education – Mathematics graduates from Kapalong College of Agriculture, Sciences, and Technology. Its

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

aim was to quantify the extent of graduates' employment and detail their employment status alongside demographic information such as gender, age, and marital status.

Population and Sample

This tracer study primarily focused on graduates of the Bachelor of Secondary Education Major in Mathematics program at Kapalong College of Agriculture, Sciences, and Technology from the academic years 2022 to 2023. It employed a complete enumeration method since its main goal was to track and monitor graduates regarding their employment status and rates. Specifically, in 2022, there were 25 graduates, comprising 7 males and 18 females. In 2023, there were 24 graduates, with 11 males and 13 females. Consequently, the total population and sample size for this study were 18 males and 31 females, totaling 49 Secondary Education – Mathematics graduates.

Research Instrument

The research instrument used in this study was adapted from the study of Escandallo (2024) entitled "A Tracer Study on the Elementary Education Graduates from Academic Year 2015 to 2019: Employment in Focus" with a Cronbach's alpha of 0.955. Thus, it can be ensured that the internal consistency of the questionnaire used is excellent.

Data Collection Procedure

Data collection is the systematic gathering of information to ensure accurate, valid, and perceptive study outcomes. It employs various tailored methods, such as surveys and experiments, to capture truthful and nuanced constructs relevant to the research (Sadan, 2017). Thus, the following were the primary steps taken responsibly by the researchers to gather the needed data of the study.

First, the researchers obtained precise and accurate data by requesting the total number of Bachelor of Secondary Education – Mathematics graduates from the institution's registrar, ensuring the inclusion of the entire study population from academic years 2022 to 2023.

Second, upon receiving the total graduate count, the researchers employed a survey tracer questionnaire adapted from Escandallo (2024), covering aspects such as employment rate, employment status, educational progression, work attitude, quality of education, and skills development for each graduate. This questionnaire underwent external validation by experts holding doctoral degrees in relevant fields, ensuring its excellent internal consistency.

Third, following questionnaire validation, the researchers commenced tracking graduates' employment status, educational progression, work attitude, quality of education, and skills development using Google Forms.

Fourth, upon completion of the survey by graduate respondents, the researchers collected and prepared the data for analysis and treatment.

Lastly, the data underwent analysis and interpretation by the institution's designated statistician, who presented the findings in tabular and graphical formats to facilitate comprehension and interpretation of the results.

Data Analysis

To analyze the data, the mean was utilized to determine the average score for assessing the graduates' work attitudes, evaluating the provision of quality education, and measuring the development of various skills and abilities.

RESULTS AND DISCUSSION

The results and discussion are provided in response to the established objectives of the study.

Demographic Characteristics of Secondary Education–Mathematics Graduates

The first objective of this tracer study is to describe the demographic characteristics of the Secondary Education–Mathematics graduates from academic year 2022 up until academic year 2023. These demographic characteristics encompass sex, civil status, age, year graduated, and educational attainment and development.

Sex. Divulged in Table 1 is the total number of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. In batch 2022, comprised of 25 graduates, 18 or 72% of this are female and the remaining 7 or 28% are male. Meanwhile in batch 2023, comprised of 24 graduates, 13 or 54.17% of this are female and the remaining 11 or 45.83% are male.

Year Graduated	Sex	Frequency	Percent
2022	Female	18	72.00%
	Male	7	28.00%
Total		**25**	**100%**
2023	Female	13	54.17%
	Male	11	45.83%
Total		**24**	**100%**

Table 1: Sex Distribution of Secondary Education–Mathematics Graduates

Civil Status. Divulged in Table 2 is the civil status of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. The data reveals that in batch 2022, only 1 or 4% of the graduates are married, while 24 or 96% of the graduates are single. Conversely in batch 2023, 24 or 100% of the graduates are still single. Furthermore, the survey questionnaire incorporates options for *widowed* and *separated,* yet none of the graduates currently identify with these civil statuses.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Year Graduated	Civil Status	Frequency	Percent
2022	Married	1	4.00%
	Single	24	96.00%
Total		**25**	**100%**
2023	Married	0	0.00%
	Single	24	100%
Total		**24**	**100%**

Table 2: Civil Status of Secondary Education–Mathematics Graduates

Overall, it could be gleaned from Summary Table 1 that 97.96% of the graduate-respondents are single. Meanwhile, the remaining 2.04% of the graduate-respondents are already married.

Summary Table 1: Civil Status of Secondary Education–Mathematics Graduates

Year Graduated	Civil Status	Frequency	Percent
2022 and 2023	Married	1	2.04%
	Single	48	97.96%
Total		**49**	**100%**

Age. Divulged in Table 3 is the age distribution of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. In batch 2022, it could be gleaned that 14 or 56% of the graduates are 24 years of age; 7 or 28% of the graduates are 23 years of age; 3 or 12% of the graduates are 25 years of age; and 1 or 4% of the graduates are 26 years of age. On the other hand, in batch 2023, it could be noted that 15 or 62.5% of the graduates are aged 23; 5 or 20.83% of the graduates are aged 24; 1 or 4.17% of the graduates are aged 22; another 1 or 4.17% are aged 25; similarly, another 1 or 4.17% of the graduates are aged 26; and finally, 1 more or 4.17% of the graduates are aged 34.

Year Graduated	Age	Frequency	Percent
2022	22	0	0.00%
	23	7	28.00%
	24	14	56.00%
	25	3	12.00%
	26	1	4.00%
	34	0	0.00%
Total		**25**	**100%**
2023	22	1	4.17%
	23	15	62.50%
	24	5	20.83%
	25	1	4.17%
	26	1	4.17%
	34	1	4.17%
Total		**24**	**100%**

Table 3: Age Distribution of Secondary Education–Mathematics Graduates

Overall, it is reflected in Summary Table 2 that 93.88% of the graduate-respondents are aged 20-25. Conversely, the remaining 4.08% and 2.04% of the graduate-respondents are aged 26-30 and 31-35, respectively.

Age	Frequency	Percent
20-25	46	93.88%
26-30	2	4.08%
31-35	1	2.04%
Total	**49**	**100%**

Summary Table 2: Age Distribution of Secondary Education–Mathematics Graduates

Year Graduated. Divulged in Table 4 is the total number of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. For the year 2022, there are 25 graduates, comprising 51.02% of the graduate-respondents. Meanwhile, for the year 2023, there are 24 graduates, comprising 48.98% of the graduate-respondents.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Year Graduated	Frequency	Percent
2022	25	51.02%
2023	24	48.98%
Total	**49**	**100%**

Table 4: Year Graduated of Secondary Education–Mathematics Graduates

Educational Attainment and Development. Divulged in Table 5 is the overall count of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023 who have acquired vocational education and/or national certification. For batch 2022, only 1 or 4% of the graduates obtained vocational education, specifically on Electrical Installation and Maintenance NC II. Meanwhile, 24 or 96% of the graduates did not. For batch 2023, 1 or 4.17% of the graduates obtained National Certificate Level II for Automotive Servicing, 1 or 4.17% of the graduates attained National Certificate Level II for Animal Production (Swine), 1 or 4.17% of the graduates acquired National Certificate Level II for Computer Systems Servicing, and 1 or 4.17% of the graduates had a National Certificate Level II for Electrical Installation and Maintenance. Conversely, 20 or 83.33% of the graduates did not acquire any vocational education and/or national certification.

Year Graduated	Vocational Education	Frequency	Percent
2022	Without	24	96.00%
	Electrical Installation and Maintenance	1	4.00%
Total		**25**	**100%**
2023	AUTOMOTIVE NCII	1	4.17%
	Animal Production (SWINE)	1	4.17%
	Computer System Services NCII	1	4.17%
	Electrical Installation Maintenance NCII	1	4.17%
	Without	20	83.33%
Total		**24**	**100%**

Table 5: Vocational Education/National Certification of Secondary Education–Mathematics Graduates

Overall, it could be gleaned from Summary Table 3 that 89.80% of the graduate-respondents did not obtain any vocational education. Meanwhile, the remaining 10.20% of the graduate-respondents acquired vocational education, with its corresponding national certification.

Vocational Education	Frequency	Percent
With	5	10.20%
Without	44	89.80%
Total	**49**	**100%**

Summary Table 3: Summary of Vocational Education/National Certificatio of Secondary Education–Mathematics Graduates

Divulged in Table 6 is the overall count of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023 who have pursued postgraduate degrees or studies. The findings show that for batch 2022, only 1 or 4% of the graduates acquired postgraduate degree. Specifically, the graduate is ongoing with his/her master's degree at the University of the Immaculate Conception. Meanwhile, the remaining 24 or 96% of the graduates did not. Similarly, for batch 2023, none of the graduates obtained a postgraduate degree yet.

Year Graduated	Post-graduate Degree/Study	Frequency	Percent
2022	With	1	4.00%
	Without	24	96.00%
Total		**25**	**100%**
2023	With	0	0.00%
	Without	24	100%
Total		**24**	**100%**

Table 6: Postgraduate Degree/Study of Secondary Education–Mathematics Graduates

Overall, it is reflected in Summary Table 4 that only 2.04% of the graduate-respondents pursued a Masters of Arts in Education major in Mathematics while the remaining 97.96% did not.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Post-graduate Degree/Study	Frequency	Percent
With	1	2.04%
Without	48	97.96%
Total	**49**	**100%**

Summary Table 4: Postgraduate Degree/Study of Secondary Education–Mathematics Graduates

Employment Profile and Features of Secondary Education–Mathematics Graduates

The second objective of this tracer study is to describe the employment profile and features of the Secondary Education–Mathematics graduates from academic year 2022 up until academic year 2023. These employment profile and features encompass employment rate, employment status, level of income, period of seeking the first job after college, relevance of college degree to the present job, and job mismatching.

Employment Rate. Presented in Table 7 is the employment rate of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. It could be gleaned from the data that 23 or 92% of the graduates from batch 2022 are employed and only 2 or 8% of the graduates are not employed. Moreover, the data reflected that 13 or 54.2% of the graduates from batch 2023 are employed, but 11 or 45.8% of the graduates are not employed. The details of their employment are discussed further in the next sections of this study.

Year Graduated	Employment rate	Frequency	Percent
2022	Employed	23	92.0%
	Not employed	2	8.0%
Total		**25**	**100%**
2023	Employed	13	54.2%
	Not employed	11	45.8%
Total		**24**	**100%**

Table 7: Employment Rate of Secondary Education–Mathematics Graduates

Overall, it could be gleaned from Summary Table 5 that 73.5% of the graduate-respondents are employed. Meanwhile, the remaining 26.5% are unemployed.

Status	Frequency	Percent
Employed	36	73.5%
Unemployed	13	26.5%
Total	**49**	**100%**

Summary Table 5: Employment Rate of Secondary Education–Mathematics Graduates

Employment Status. Presented in Table 8 is the employment status of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. It is evident from the data that 11 or 44% of the graduates from batch 2022 are working full-time jobs; 7 or 28% of the graduates are working on a contractual basis; 3 or 12% of the graduates are working regular jobs; 1 or 4% of the graduates are self-employed; and another 1 or 4% of the graduates are working under job order. Further, the data reflected for batch 2023 that 4 or 16.17% of the graduates are working full-time; 3 or 12.5% of the graduates are self-employed; similarly, 2 or 8.3% of the graduates are working on a contractual basis; also, 2 or 8.3% of the graduates are working part-time but seeking full-time work; and lastly, 2 or 8.3% of the graduates are working regular jobs.

Year Graduated	Employment Status	Frequency	Percent
2022	Job order	1	4.0 %
	Regular	3	12.0%
	Self-employed	1	4.0%
	Working full-time	11	44.0%
	Working on contractual basis	7	28.0%
	Working part-time but seeking full-time work	0	0.0%
Total		**23**	**92.0%**
2023	Job order	0	0.0%
	Regular	2	8.3%
	Self-employed	3	12.5%
	Working full-time	4	16.7%
	Working on contractual basis	2	8.3%

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

	Working part-time but seeking full-time work	2	8.3%
Total		**13**	**54.2%**

Table 8. Employment Status of Secondary Education–Mathematics Graduates

Overall, it is reflected in Summary Table 6 that 30.6% of the graduate-respondents are working on a full-time basis and 18.4% of the graduate-respondents are working on a contractual basis. Moreover, 10.2% of the graduate-respondents are regularly-employed, but 8.2% of the graduate-respondents are self-employed. On the other hand, the remaining 4.1% and 2% of the graduate-respondents are working part-time but seeking full-time work and working as job order employees, respectively.

Employment Status	Frequency	Percent
Regular	5	10.2%
Self-employed	4	8.2%
Full-time	15	30.6%
Job order	1	2.0%
Working on contractual basis	9	18.4%
Working part-time but seeking full-time work.	2	4.1%%
Total	**36**	**73.5%**

Summary Table 6: Summary of Employment Status of Secondary Education–Mathematics Graduates

Level of Income. Presented in Table 9 is the level of income of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. From the data, it suggests that 11 or 44% of the graduates from batch 2022 are earning Php11,000-Php20,000 monthly; 9 or 36% of the graduates are earning Php1,000-Php10,000 monthly; 2 or 8% of the graduates are earning above Php30,000; and only 1 or 4% of the graduates are earning Php21,000-Php30,000. Meanwhile, among the batch 2023 graduates, 7 or 29.2% are earning Php11,000-Php20,000 and 6 or 25% are earning Php1,000-Php10,000.

Year Graduated	Level of Income	Frequency	Percent
2022	1,000-10,000	9	36.0%
	11,000-20,000	11	44.0%
	21,000-30,000	1	4.0%
	Above 30,000	2	8.0%
Total		**23**	**92.0%**
2023	1,000-10,000	6	25.0%
	11,000-20,000	7	29.2%
	21,000-30,000	0	0.0%
	Above 30,000	0	0.0%
Total		**13**	**54.2%**

Table 9: Level of Income of Secondary Education–Mathematics Graduates

Overall, it could be gleaned from Summary Table 7 that 36.7% of the graduate-respondents have a monthly income of Php11,000-Php20,000 and 30.6% of the graduate-respondents have a monthly income of Php1,000-Php10,000. However, only 4.1% and 2% of the graduate-respondents have a monthly income of Php30,000 above and Php21,000-Php30,000, respectively.

Monthly Income	Frequency	Percent
1,000-10,000	15	30.6%
11,000-20,000	18	36.7%
21,000-30,000	1	2.0%
30,000 above	2	4.1%
Total	**36**	**73.5%**

Summary Table 7: Level of Income of Secondary Education–Mathematics Graduates

period of Seeking the First Job after College. Presented in Table 10 is the period of seeking the first job after college of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. The survey results indicate that for batch 2022, 13 or 52% of the graduates secured a job within 0-3 months; 7 or 28% of the graduates attained employment within 9-12 months; and 3 or 12% of the graduates were employed after one year. Consequently, the table emphasizes that for batch the 2023 graduates, 7 or 29.2% secured a job within 0-3 months; 4 or 16.7% attained employment within 9-12 months; and 2 or 8.3% were employed after one year.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Year Graduated	Period of Seeking the First Job After College	Frequency	Percent
2022	0-3 months	13	52.0 %
	4-8 months	0	0.0%
	9-12 months	7	28.0%
	Above 1 year	3	12.0%
Total		**23**	**92.0%**
2023	0-3 months	7	29.2%
	4-8 months	0	0.0%
	9-12 months	4	16.7%
	Above 1 year	2	8.3%
Total		**13**	**54.2%**

Table 10. Period of Seeking the First Job after College of Secondary Education–Mathematics Graduates

Overall, it is reflected in Summary Table 8 that 40.8% of the graduate-respondents attained employment within 0-3 months only. Moreover, 22.4% of the graduate-respondents landed a job within 9-12 months. Conversely, 10.2% of the graduate-respondents obtained work above 1 year.

Period Seeking Employment	Frequency	Percent
0-3 Months	20	40.8%
4-8 Months	0	0%
9-12 Months	11	22.4%
Above 1 Year	5	10.2%
Total	**36**	**73.5%**

Summary Table 8: Period of Seeking the First Job after College of Secondary Education–Mathematics Graduates

Relevance of College Degree to the Present Job. Presented in Table 11 is the relevance of college degree to the present job of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. Accordingly, for batch 2022, 14 or 56% of the graduates indicated their degree as *very much relevant;* 4 or 16% of the graduates indicated their degree as *much relevant;* parallel to this, 4 or 16% of the graduates indicated their degree as *neutrally relevant;* and only 1 or 4% of the graduates indicated their degree as *a little relevant.* Likewise, for batch 2023 graduates, 10 or 41.7% responded to their degree as *very much relevant;* 2 or 8.3% responded to their degree as *neutrally relevant;* and only 1 or 4.2% responded to their degree as *not at all.*

Year Graduated	Relevance Of College Degree to The Present Job	Frequency	Percent
2022	Very Much	14	56.0%
	Much	4	16.0%
	Neutral	4	16.0%
	A Little	1	4.0%
	Not At All	0	0.0%
Total		**23**	**92.0%**
2023	Very Much	10	41.7%
	Much	0	0.0%
	Neutral	2	8.3%
	A Little	0	0.0%
	Not At All	1	4.2%
Total		**13**	**54.2%**

Table 11: Relevance of College Degree to the Present Job of Secondary Education–Mathematics Graduates

Overall, it could be gleaned from Summary Table 9 that 49% of the graduate-respondents indicated their degree as *very much relevant,* 12.2% as *neutrally relevant,* and 8.2% as *much relevant.* Meanwhile, 2% of the graduate-respondents and another 2% of the graduate-respondents responded to their degree's relevance as *a little* and *not at all,* respectively.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Relevance of college degree to the present job	Frequency	Percent
Very Much	24	49.0%
Much	4	8.2%
Neutral	6	12.2%
A Little	1	2.0%
Not At All	1	2.0%
Total	**36**	**73.5%**

Summary Table 9: Relevance of College Degree to the Present Job of Secondary Education–Mathematics Graduates

Job Mismatching. Presented in Table 12 is the job mismatching or alignment status of the Bachelor of Secondary Education major in Mathematics graduates from the academic year 2021-2022 to academic year 2022-2023. It could be gleaned from the survey results that for batch 2022, 13 or 52% of the graduates are employed as teachers in public schools, private schools, Higher Education Institutions (HEIs), or online teaching platforms. However, 10 or 40% of the graduates pursued non-teaching roles. Also, the data highlights that for batch 2023, 10 or 41.7% of the graduates pursued non-teaching roles. But, only 3 or 12.5% of the graduates are employed as teachers in public schools, private schools, Higher Education Institutions (HEIs), or online teaching platforms.

Year Graduated	Job Category	Frequency	Percent
2022	Non-teaching	10	40.0%
	Teaching	13	52.0%
Total		**23**	**92.0%**
2023	Non-teaching	10	41.7%
	Teaching	3	12.5%
Total		**13**	**54.2%**

Table 12: Job Mismatching of Secondary Education–Mathematics Graduates

Overall, it is reflected in Summary Table 10 that 32.7% of the graduate-respondents pursued teaching roles while 40.8% of the graduate-respondents did not

Job Category	Frequency	Percent
Teaching	16	32.7%
Non-teaching	20	40.8%
Total	**49**	**100%**

Summary Table 10: Job Mismatching of Secondary Education–Mathematics Graduates

Presented in Table 12 is the job specification of the graduates from the academic year 2021-2022 to academic year 2022-2023 who pursued non-teaching roles. It could be gleaned from the survey results that for batch 2022, 2 or 8% of the graduates became business owners; another 2 or 8% worked as government employees; another 2 or 8% worked as office-based clerks; another 2 or 8% worked as call center agents; 1 or 4% worked as account specialist; and lastly, another 1 or 4% worked as company employee. Further, for batch 2023, 3 or 12.5% of the graduates works as call center agents; 2 or 8.3% worked as government employees; another 2 or 8.3% worked as office-based clerks; 1 or 4.2% worked as account specialist; another 1 or 4.2% worked as company employee; and lastly, 1 or 4.2% worked as sales agent.

Year Graduated	Job Specification	Frequency	Percent
2022	Account Specialist	1	4.0%
	Business Owner	2	8.0%
	Call Center Agent	2	8.0%
	Company Employee	1	4.0%
	Government Employee	2	8.0%
	Office-based Clerk	2	8.0%
	Sales Agent	0	0.0%
Total		**10**	**40.0%**
2023	Account Specialist	1	4.2%
	Business Owner	0	0.0%
	Call Center Agent	3	12.5%
	Company Employee	1	4.2%
	Government Employee	2	8.3%
	Office-based Clerk	2	8.3%
	Sales Agent	1	4.2%
Total		**10**	**41.7%**

Table 13: Non-teaching Job Specifications of Secondary Education–Mathematics Graduates

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Overall, it is reflected in Summary Table 11 that 10.2% of the graduate-respondents opted to work as call center agents and 8.2% of them landed a job as government employees. Similarly, another 8.2% of the graduate-respondents acquired work as office-based clerks while 4.1% of them worked as account specialists. Similarly, 4.1% of the graduate-respondents pursued career paths as company employees and another 4.1% of them became business owners. Lastly, the remaining 2% of the graduate-respondents obtained work as sales agents.

Job Specification	Frequency	Percent
Account Specialist	2	4.1%
Business Owner	2	4.1%
Call Center Agent	5	10.2%
Company Employee	2	4.1%
Government Employee	4	8.2%
Office-based Clerk	4	8.2%
Sales Agent	1	2.0%
Total	**20**	**40.8%**

Summary Table 11: Non-teaching Job Specifications of Secondary Education–Mathematics Graduates

Level of Secondary Education–Mathematics Graduates Attitude to Work

Table 14 displays the attitude towards work among Secondary Education–Mathematics Graduates, with an overall mean score of 4.56, indicating a very high level. This suggests that the graduates consistently exhibit positive attitudes across all aspects of their work, as they strongly agree with all sub-questions related to work attitude.

Notably, item 10–*I seek assistance and help from others whenever I have clarifications and queries,* received the highest mean score of 4.75, reaffirming their consistent manifestation among mathematics graduates in their workplace. Conversely, item number 2–*I like the kind of job and work I am doing,* received the lowest mean score of 4.39, yet still considered very high, indicating consistent manifestation among graduates.

Attitude to Work	Mean	Description
1. I am very interested, happy and satisfied with my work and it is very important for me.	4.36	Very High
2. I like the kind of job and work I am doing.	4.39	Very High
3. I accepted assignments and tasks given to me at work without complaints.	4.50	Very High
4. I arrived on time to prepare my work and extend working hours if necessary.	4.47	Very High
5. I can work better and functional under different working environment and situations.	4.56	Very High
6. I participated in all activities and events inside my workplace.	4.64	Very High
7. I have a good relationship with my colleagues and co-employees.	4.70	Very High
8. I submitted necessary documents and papers on time and beat deadlines.	4.64	Very High
9. I performed my task and job with excellence and outstanding quality.	4.64	Very High
10. I seek assistance and help from others whenever I have clarifications and queries.	4.75	Very High
Overall	**4.56**	**Very High**

Table 14: Level of Secondary Education–Mathematics Graduates Attitude to Work

Level of Secondary Education–Mathematics Graduates Quality Education Provisions

Table 15 presents the evaluation of quality education provisions among Secondary Education–Mathematics Graduates, yielding an overall mean score of 4.63, indicating a very high level. This suggests that the graduates consistently experience high-quality education provisions, as they consistently agree with all identified sub-questions related to this aspect.

Among these, item number 4–*Provision of quality practicum guidelines and activities that develops more my skills and abilities from different industry partners and linkages,* received the highest mean score of 4.73, reaffirming its consistent manifestation among mathematics graduates, particularly those who studied at Kapalong College of Agriculture, Sciences and Technology (KCAST). Conversely, item number 5–*Quality of learning facilities for first-hand and direct experiences like of different laboratories,* received the lowest mean score of 4.45, still considered very high, indicating consistent manifestation among mathematics graduates, particularly those who studied at KCAST.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Quality Education Provision	Mean	Description
1. Availability of course materials and different learning resources needed for our studies.	4.53	Very High
2. Quality of course contents from courses offered as well as the teaching and learning process.	4.65	Very High
3. Conduciveness of the learning environment and atmosphere.	4.59	Very High
4. Provision of quality practicum guidelines and activities that develops more my skills and abilities from different industry partners and linkages.	4.73	Very High
5. Quality of learning facilities for first-hand and direct experiences like of different laboratories.	4.45	Very High
6. Quality of different courses offered in the program that develops the total sum of the student skills.	4.65	Very High
7. Level of optimum interaction and contact with my fellow students through different in-campus activities.	4.67	Very High
8. Well-trained and self-renewing Faculty members and staffs.	4.59	Very High
9. Different trainings, seminars and workshops that prepare students for employment.	4.71	Very High
10. Varied learning assessments and instructions which assess students' progress and learning fairly and equally.	4.69	Very High
Overall	**4.63**	**Very High**

Table 15: Level of Secondary Education–Mathematics Graduates Quality Education Provisions

Level of Secondary Education–Mathematics Graduates Skills and Abilities Development

Table 16 illustrates the skills and abilities development among Secondary Education–Mathematics Graduates. The overall mean score of 4.62 suggests a notably very high level of skills and abilities development of the mathematics graduates, as they consistently agree with all evaluated aspects.

Specifically, item number 4–*Creative thinking and creativity, initiative and taking a risk, if necessary,* received the highest mean score of 4.81, indicating a very high level of manifestation among mathematics graduates. Conversely, item number 9–*Technical and Entrepreneurial Skills*, received the lowest mean score of 4.36, still considered very high, suggesting consistent manifestation among mathematics graduates, particularly those from KCAST.

Skills and Abilities Development	Mean	Description
1. Organizational and leadership skill.	4.56	Very High
2. Problem solving and critical thinking skills.	4.72	Very High
3. Ability to work independently as well as team work and team play.	4.78	Very High
4. Creative thinking and creativity, initiative and taking a risk, if necessary.	4.81	Very High
5. Time Management and decision-making skills.	4.67	Very High
6. Writing competence and skills including technical writing.	4.53	Very High
7. Communication and interpersonal skills.	4.64	Very High
8. Computer and ICT Skills.	4.39	Very High
9. Technical and Entrepreneurial Skills	4.36	Very High
10. Ability to work under pressure.	4.58	Very High
11. Ability to write the essentials and basics of effective lesson planning.	4.44	Very High
12. Code of ethics applied to my teaching profession.	4.78	Very High
13. Knowledge with the different teaching methodologies, techniques and approaches through seminars and workshops.	4.69	Very High
14. Expertise about multidisciplinary research that is essential for understanding students' needs and interests.	4.58	Very High
15. Trainings, seminars and workshops about the preparation and evaluation of different instructional materials.	4.72	Very High
Overall	**4.62**	**Very High**

Table 16: Level of Secondary Education–Mathematics Graduates Skills and Abilities Development

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Below is a summary of the findings derived from the collected data via an online survey administered through Google Forms, along with the conclusions reached and the recommendations provided.

Demographic profile of the BSED Math Graduates

The tracer study conducted across the 2022 and 2023 batches of BSED-Mathematics graduates reveals intriguing trends in gender representation. Notably, there was a shift in gender composition between the two years, with 72% female graduates in 2022 compared to 54.17% in 2023. Conversely, male graduates increased from 28% to 45.83% during the same period, suggesting evolving enrollment patterns or shifting interests within the program (Xie and Li, 2023).

Furthermore, the study indicates a predominant single status among respondents, with 97.96% identifying as such, though a small minority of 2.04% reported being married, adding diversity to the group.

Age distribution also varied between the two batches. In 2022, most graduates were 24 years old (56%), while in 2023, the largest segment comprised 23-year-olds (62.5%). This diversity in age profiles suggests varied entry points and completion timelines within the program.

Examining graduation years, the data reveals a near-even split between 2022 and 2023 graduates, indicating consistent program output over consecutive years, possibly reflecting stable enrollment rates or graduation timelines (Hussein, 2023). Regarding vocational education, the vast majority (89.80%) did not pursue any, while a minority (10.20%) obtained vocational certification, potentially enhancing their competitiveness in the job market.

Furthermore, only 2.04% of respondents pursued postgraduate education immediately after their undergraduate degree, indicating a preference for entering the workforce directly. This comprehensive profile provides valuable insights into the program's student body, encompassing gender dynamics, civil status trends, age diversity, and graduation year distribution, all of which contribute to understanding their preparedness for employment (Ganapati & Ritchie, 2021).

Employment Profile and Features of Secondary Education–Mathematics Graduates

The graduate tracer study furnishes crucial insights into the employment landscape and characteristics of individuals graduating from the Secondary Education–Mathematics program Examining the data reveals an overall employment rate of 73.5%, with 26.5% of graduates facing unemployment. Interestingly, a stark contrast emerges between the employment rates of batch 2022, boasting an impressive 92% employment rate, and batch 2023, which witnesses a notable decline to 54.2%. This discrepancy suggests potential shifts in market conditions or divergent career trajectories among the group. (Jackson & Li, 2021).

Diverse employment statuses characterize the graduates, showcasing a range of employment arrangements. While 30.6% secure full-time positions, 18.4% choose for contractual work. Regular employment accounts for 10.2%, while 8.2% venture into self-employment. Conversely, part-time roles and job order positions represent smaller segments, highlighting the multifaceted nature of employment choices among graduates. Meanwhile, income distribution among alumni also exhibits variance, with 36.7% earning between Php11,000-Php20,000 monthly, and 30.6% falling within the Php1,000-Php10,000 range. A mere 4.1% surpass the Php30,000 mark monthly. These figures underscore the economic realities graduates confront upon entering the workforce, emphasizing the significance of income levels in evaluating employment outcomes. (Smith et al., 2018)

The transition period into employment varies, with a substantial 40.8% securing jobs within 0-3 months post-graduation. However, 22.4% endure a more prolonged job search, spanning 9-12 months, while 10.2% have difficulties with a job hunt exceeding one year. Such findings shed light on the dynamic nature of the job market and the persistence necessitated during the post-graduation transition phase. Perceptions regarding the relevance of their college degree to their current job vary among graduates, with 49% considering it very relevant, 12.2% remaining neutral, and 2% deeming it irrelevant (Pitts et al., 2015). This spectrum underscores the importance of aligning educational outcomes with career expectations to bridge potential gaps between academic training and professional roles.

While teaching roles remain a popular career choice, with 32.7% of graduates occupying such positions, a significant 40.8% pursue non-teaching roles. Notably, the diversity of these roles spans call center agents, government employees, clerical staff, account specialists, business owners, and sales agents, underscoring the adaptability of BSED-Mathematics graduates across various career domains (Valdez et al., 2023).

In conclusion, the employment profile of Secondary Education–Mathematics graduates encompasses a broad spectrum of employment statuses, income distributions, job search durations, and perceptions of degree relevance. The prevalence of both teaching and non-teaching roles underscores the adaptability and versatility of graduates in navigating the contemporary job market.

Level of Secondary Education–Mathematics Graduates Attitude to Work

The level of Secondary Education–Mathematics graduates' attitude to work was described as very high. This implies that the graduates' work ethics is consistently manifested and the respondents firmly concur with each and every one of the sub-questions under *attitude to work.*

In connection**,** a recent study on education graduates revealed that they exhibit not only the requisite knowledge and skills but also a praiseworthy commitment to their work. Their passion and dedication to teaching have blossomed throughout their education. Strengthening their teaching abilities will significantly contribute to nurturing well-rounded students in today's rapidly evolving job market. Consequently, Teacher

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

Education Institutions (TEIs) should persist in spearheading efforts that foster both the personal and professional development of aspiring educators (Reusia et al., 2020).

Moreover, Pentang et al. (2022) found that education graduates have demonstrated their proficiency and aptitude to excel in both work and educational environments. The institution has conscientiously equipped them for employment, prioritizing their work ethic and personal qualities above all predefined criteria. Their academic preparedness and exemplary professional demeanor stand as tangible evidence of their successful integration into their respective roles (Pentang et al., 2022).

Level of Secondary Education–Mathematics Graduates Quality Education Provisions

The level of Secondary Education–Mathematics graduates' quality education provisions was described as very high. This underscores the consistent manifestation of quality education provision, as every respondent strongly agrees with each and every sub-question regarding such provisions.

In relation to this, findings from the research indicated that the education program of a certain institution is recognized for delivering high-quality education and arming its graduates with essential skills and knowledge, particularly for professional settings. Furthermore, positive responses from graduates regarding the program's effectiveness in preparing them for the workplace, along with their satisfaction with the program, serve to strengthen the perception of its quality among graduates (Owusu, 2021).

Additionally, a tracer study's outcomes highlight the effective delivery of quality education of a state university. This effectiveness is demonstrated through their high employability rates, with a significant majority of respondents already securing employment. Furthermore, the perceived relevance of the college curriculum to their initial job roles indicates that graduates feel well-prepared and equipped with the necessary knowledge and skills from their educational experience. These findings suggest that the program successfully imparts valuable competencies sought after by employers, affirming its commitment to providing a high standard of education (Albina & Sumagaysay, 2020).

Level of Secondary Education–Mathematics Graduates Skills and Abilities Development

The level of Secondary Education–Mathematics graduates' skills and abilities development was described as very high. This illustrative significance and equivalent demand that the degree of skills and abilities development is consistently shown.

In connection, teacher education graduates of a state university exhibit very high employability skills. This suggests that they possess the necessary skills and abilities required in the workplace, indicating effective preparation by the university. Upon closer examination of each skill, the majority of graduates expressed satisfaction with and a high level of proficiency in communication, problem-solving, as well as planning and organizing skills. Graduates emphasized their achievement in their respective fields or careers through this indicator. Additionally, some graduates demonstrated varying levels of proficiency in leadership, independent work ability, creativity, time management, technological proficiency, critical thinking, and imaginative thinking skills (Pacleb-Ulanday, 2021).

Furthermore, teacher education graduates demonstrated highly favorable employability, emphasizing their possession of essential workplace skills. They perceived all program learning areas as relevant to their employment, with communication and human relations skills being the most valued competencies. Confidence and competence were highlighted as essential values for employment, while entrepreneurial skills and commitment to values were seen as less useful. These findings underscore the importance of student feedback in evaluating institutional performance (Cornillez et al., 2021).

Summary of Findings

Following the successful completion of a survey, which received responses from all graduates of the Bachelor of Secondary Education Major in Mathematics program at Kapalong College of Agriculture, Sciences, and Technology during the academic years 2022 to 2023, the following key findings emerged:

The institution produced a total of 49 graduates, with 31 females and 18 males. Regarding civil status, 97.96% of the graduates are single, while 2.04% are married. In terms of age distribution, 93.88% fall within the 20-25 age bracket, with only 4.08% aged 26-30 and 2.04% aged 31-35. The first batch, in 2022, consisted of 25 graduates, while the second batch, in 2023, produced 24 graduates. Only 5 graduates obtained vocational courses and national certifications, with 1 pursuing post-graduate studies.

In terms of employment, 73.5% of the graduates are employed, with 26.5% unemployed. Of those employed, 30.6% work full-time, and 10.2% hold regular positions. Additionally, 30.67% of graduates earn a monthly income ranging from Php11,000 to Php20,000, with 40.8% securing employment within 0-3 months. Nearly half (49%) agreed that their college degree is highly relevant to their current work. However, 40.8% of graduates are employed in non-teaching roles.

The survey indicated a very high level of work attitude among mathematics graduates, as well as a very high level of quality education provision at the institution. Furthermore, the level of skills and abilities development among graduates was assessed as very high.

Conclusion

After conducting the survey, it was determined that the employment rate of mathematics graduates from batches 2022 to 2023 is 73.5%, indicating that almost three-fourths of the graduates are sufficiently skilled to seek and obtain employment; additionally, the majority are employed full-time and some have secured regular positions. Furthermore, the survey revealed that the graduates' college degree is highly relevant to their job, suggesting that the institution offers

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

quality education that prepares graduates for their respective fields. Additionally, the level of graduates' work attitude was strongly agreed upon, signifying their efficient and effective performance of tasks, while the institution's quality education provisions were rated as very good, indicating the provision of various training, seminars, resources, and competent faculty members. Lastly, the graduates' skills and abilities development was assessed as very high, indicating the institution's success in cultivating a diverse range of skills and interests among its graduates.

Recommendations

Based on the summarized findings and conclusions of the study, the following recommendations are proposed: Firstly, given the percentage of unemployed graduates, the institution should establish a graduate employability coordinator to monitor employment outcomes and organize online forums to disseminate job opportunities. Secondly, for graduates working in non-teaching roles, the institution should offer various training sessions, seminars, and workshops to motivate them to pursue careers in education. Thirdly, addressing the low mean score for technical and entrepreneurial skills, the institution should implement specialized workshops, entrepreneurship courses, and partnerships with local businesses to enhance graduates' skills in these areas. Finally, considering the varying lengths of time it took graduates to secure employment, the institution should strengthen partnerships with local industry partners and community linkages to provide more job opportunities for graduates immediately after completing their degree programs.

REFERENCES

1. *Albina, A. C., & Sumagaysay, L. P. (2020). Employability tracer study of Information Technology Education graduates from a state university in the Philippines. Social Sciences & Humanities Open, 2(1), 100055.*
2. *Apostol, J. M. A., & Susada, B. L. (2022). Tracer Study of Bachelor of Elementary Education graduates of the Davao Oriental*
3. *State University – Cateel Extension Campus, Philippines. https://philpapers.org/rec/APOTSO-4*
4. *Baker, C. (2017). Quantitative research designs: Experimental, quasi-experimental, and descriptive. Evidence-based practice: An integrative approach to research, administration, and practice, 2, 155-183.*
5. *Cornillez Jr, E. E. C., Caminoc, S. R. T., Basas, B. R., Militante Jr, B. T., & Paler, R. R. (2021). Tracer study of teacher education graduates of the eastern Visayas state university-Tanauan campus, Philippines. European Journal of Education and Pedagogy, 2(3), 186-193.*
6. *Cuadra, L., Aure, M. R. K. L., & Gonzaga, G. (2019). The use of Tracer study in improving undergraduate programs in the*
7. *university. ResearchGate. https://www.researchgate.net/publication/335429907_The_Use_of_Tracer_Study_in_Improving_Undergraduate_Programs_in_te_University*
8. *Escandallo, J. (2024). A TRACER STUDY ON THE ELEMENTARY EDUCATION GRADUATES FROM ACADEMIC YEAR 2015 TO 2019-EMPLOYMENT IN FOCUS. EPRA International Journal of Multidisciplinary Research (IJMR), 10(1), 474-483.*
9. *Ganapati, S. V., & Ritchie, T. S. (2021). Professional development and career preparedness experiences of STEM Ph.D. students: Gaps and avenues forimprovement. PloS One, 16(12), e0260328. https://doi.org/10.1371/journal.pone.0260328*
10. *Gines, A. C. (2014). Tracer Study of PNU Graduates. American International Journal of Contemporary Research. http://www.aijcrnet.com/journals/Vol_4_No_3_March_2014/10.pdf*
11. *Jackson, D., & Li, I. (2021). Transition to work, mismatch and underemployment among graduates: an Australian longitudinal study. International Journal of Manpower, 43(7), 1516–1539. https://doi.org/10.1108/ijm-03-2021-0195*
12. *Hasibuan, A. F., Silaban, S. M., Lubis, F., & Prayogo, R. R. (2022). Tracer Study exploration of Medan State University graduates. Advances in Economics, Business and Management Research. https://doi.org/10.2991/aebmr.k.220104.011*
13. *Misra, R. K., & Khurana, K. (2017). Employability Skills among Information Technology Professionals: A Literature Review.*
14. *Procedia Computer Science, 122, 63–70. https://doi.org/10.1016/j.procs.2017.11.342*
15. *Owusu, E. M. M. A. N. U. E. L. (2021). A tracer study on the Bachelor of Arts education graduates of uew 2010 cohorts of graduates (Doctoral dissertation, University of Education Winneba).*
16. *Pacleb-Ulanday, M. L. (2021). Tracer study and employability skills acquisition of teacher education graduates. Psychology and Education Journal, 58(4), 1678-1683.*
17. *Pentang, J. T., Perez, D. R., Cuanan, K. H., Recla, M. B., Dacanay, R. T., Bober, R. M., ... & Nur-aina, A. (2022). 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, 3(3), 419-432.*
18. *Reusia, D. H. R., Danilo Jr, V. R., & Andres, K. P. (2020). Science education graduates of a state university from 2008-2018: A tracer study. The Normal Lights, 14(1).*
19. *Sadan, V. (2017). Data collection methods in quantitative research. Indian Journal of Continuing Nursing Education, 18(2), 58-63.*
20. *Sidel, J. L., Bleibaum, R. N., & Tao, K. C. (2018). Quantitative descriptive analysis. Descriptive analysis in sensory evaluation, 287-318.*
21. *Smith, S., Taylor-Smith, E., Smith, C. F., & Webster, G. (2018). The impact of work placement on graduate employment in computing: outcomes from a UK-based study. International Journal of Work-Integrated Learning, 2018, 19(4), 359-369, 19(4), 359–369. https://files.eric.ed.gov/fulltext/EJ1199461.pdf*
22. *Valdez, M. T., De Paulo, J. R., Vizcarra, E. M., Torres, A. a. L., & Ramos, P. C. F. (2023). Tracer Study of Bachelor of Science in Mathematics Graduates: Unveiling Career Trajectories. International Journal of Research Publication and Reviews, 4(11), 2724–2730. https://doi.org/10.55248/gengpi.4.1123.113142*
23. *Woya, A. A. (2019). Employability among Statistics Graduates: Graduates' Attributes, Competence, and Quality of Education.Education Research International, 2019, 1–7. https://doi.org/10.1155/2019/7285491*

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 10| Issue: 4| April 2024|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2024: 8.402 || ISI Value: 1.188

24. *Xie, G., & Li, X. (2023). Gender in mathematics: how gender role perception influences mathematical capability in junior high school. the Journal of Chinese Sociology, 10(1). https://doi.org/10.1186/s40711-023-00188-3*