Research Article

Career Trajectory of the BSBA Graduates: The NEMSU Tracer Study

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Abstract:

Purpose: This study intended to examine the total population of college graduates from the BSBA Financial Management (FM) and the Human Resource Development Management (HRM) programs who firmly committed to develop North Eastern Mindanao State University (NEMSU) also known previously as Surigao del Sur State University (SDSSU) to be their main path for access to higher education in the year of 2030, and in an international "global" setting. Specifically. The objective of the study is to analyze the career development pathways of the BSBA batch of 2011–2019.

Method: The descriptive research approach was used in this study to precisely describe the graduates of BSBA 2011-2019 of North Eastern Mindanao State University (NEMSU), Tagbina campus. Another example of sample survey implementation is managing the scope of the study to the manageable fraction of the bigger population and able to find few key insights. Additionally, a part of the study is also dedicated to the opinion survey, as most variables relates around what respondents have seen and perceived. The type of descriptive research approach was relevant in this study, because the question is determined by determining the graduate status needed by description related to the condition of the current graduates. The tracer study was descriptive in nature, used to understand the career trajectories, job satisfaction, and professional achievement of graduates (Kresnawati et al, 2021). The education institution applied this approach in order to get a more realistic perception regarding the career path of its graduates from the graduation period to make rational decisions related to updating the curricula or designing appropriate career services for the students (Stroj et al., 2023). These studies incorporate descriptive analysis even hinting towards trends and patterns that are not only useful for benchmarking but also for measuring the efficacy of programs (Liu et al., 2023).

Findings: The employment data indicates that 73% of the respondents who remain in the country are in some form of regular or permanent employment. Between 1 and 2 months was the average time it took the graduates to get their first job, and it was reported that they spent less than 6 months in their first positions.

Unique Contribution to theory, practice, and policy: The study also reveals the prevalence of clerical support staff in both groups and stresses that there is greater need for more industry relevant curricula so as to enable graduates secure jobs as well as progress in their careers. These factors prove that tracer studies serve a great purpose in the modernization of learning structures.

Keywords: Tracer Study, Financial Management, Human Resource Development Management.

1.1 Background of the Study

Employment in the Philippines is affected by many factors along with legislative measures like RA 10691 and amending RA 8759, which seeks to increase job prospects through public employment service offices (Bachita & Bayoneta, 2021). Employment level in the country is responsive to GDP changes (Busts, 2024). Youth unemployment together with a mismatch between educational training provided and current labor market provisions qualifies some graduates as unemployed; students are not receiving adequate injury skills from some institutions (Mseleku, 2021). Youth unemployment is one of the major issues in the Philippines worsened by poor skills, lack of experience and underemployment (Igarashi & Acosta, 2022).

The unemployment of young people, productivity deficit, and bottleneck formations in development are detrimental effects of job mismatch on the labor market in the Philippines (Acut et al., 2021). The redundancy of many programs not honing students with transferable skills required by employers further widens these gaps (Khan & Mojkury, 2021) as fast-changing technology and fragmented curricula in higher education compound the job shortage mismatch. In the face of mismatch between the skills of the graduating students and the requirements of the labor market, this has led to brain drain as these same students would rather take jobs that do not require them to fully utilize their qualifications just as long as such jobs are available in the market (Acosta et al., 2020).

Tracer studies, which the Commission on Higher Education (CHED) (Sayson et al. 2024) mandates are essential pieces in evaluating Philippine educational institutions' effect on their graduates' work (Sayson et al., 2024). They provide vital inputs to align converted competencies to the job requirements and assist institutions and labour markets to resolve jobs-sort (Toquero & Ulanday, 2021). Curriculum tracer studies inform how educational programs should be amended to minimize misfits and enhance the economic returns in the better matching of available skills demand (Posadas et al., 2021) It helps with the assessment of what is

being offered versus what the current industry needs; therefore, shaping the modifications in studies.

Problems in the Philippines' general labor market need to be addressed, such as the high youth unemployment rate, the mismatch between the demand and supply of professional skills, and underemployment rates. Despite several legislative and higher education efforts to achieve the right balance, job mismatch still hinders productivity and growth in the sector. Such gap needs to be bridged where academic courses and industry needs can be harmonized through adult education and professional development. Developing the appropriate skills, talents, and capacity among graduates, building a skilled workforce without the risk of brain drain, and supporting sustainable economic development, are all key focus areas. Tracer studies required by the Commission on Higher Education assess whether graduates are employed or not after graduation and serve, in return, as a crucial source of information on how and what curricula need to be schooled or pushed over to suit the demands of the current market. To this end, higher education institutions should focus on education for adults and continuing professional education, in part to address the gap between the competencies graduates have when they become productive members of the labor market and the competencies that employers require.

1.2. Problem Statement

North Eastern Mindanao State University (NEMSU), previously recognized as Surigao del Sur State University (SDSSU), has been instrumental in offering higher education opportunities in the Caraga region, especially through its Bachelor of Science in Business Administration (BSBA) programs in Financial Management (FM) and Human Resource Development Management (HRM). The university aims to fulfill its function within a "2030-point" agenda and a globally competitive, locally anchored ("glocal") educational framework, making it essential to evaluate the effectiveness of its support for the long-term professional development of its graduates. Notwithstanding the university's contributions, there is a deficiency of empirical data regarding the actual career growth trajectories of its BSBA graduates from the cohorts of 2011 to 2019. There is a limited comprehension of the graduates' demographic attributes, employment conditions, current job roles, industries they are involved in, and the congruence of their present occupations with their academic training—especially concerning CHED Memorandum Order No. 17, Series of 2017, which delineates policies, standards, and guidelines for BSBA programs. The deficiency of information poses a problem in assessing the pertinence and efficacy of the university's academic programs in equipping graduates for significant, aligned jobs. This study aims to examine the career paths of BSBA-FM and HRM graduates to enhance curriculum development, career support services, and institutional initiatives that effectively address local and global labor market demands.

2. Literature Review

2.1 Overview of Tracer Studies

A tracer study — which most universities know as an alumni survey — is an excellent method for higher education institutions (HEIs) to ascertain the whereabouts of their graduates and how they are doing post-graduation. It is to evaluate whether the Knowledge and attitude they gained during student life into is in competent level required by the employers (Hasibuan et al., 2022). Such input is indispensable in allowing schools to adjust their syllabi, and revised teaching methods. This will allow institutions to investigate the performance of graduates in the long-run, such as job satisfaction levels and career advancement in cases of at-risk (Abdulloh et al., 2022). Moreover, tracer studies results can also be part of the guarantee of quality and accreditation process, because what students learn should match with the demands for the job market (Hapsari & Putra, 2022).

This kind of tracer study on quality and effectiveness of the programs in universities is so important and we can see this from the answer to the questions from Hapsari dan Putra (2022). This is also an excellent piece of knowledge related to graduates' employability skills development job growth needs (Sumiyati & Jaya, 2023). Such studies help Universities to analyze their curricula and attempt to change in such a way so as students can be adequately prepared for workforce institutions with the required standard (Miranda & Lhaksamana, 2022). In addition, while institutions get much faster feedback about program effectiveness through tracer studies, they also provide information to the policy through similar information that assist in the formulation and evidence-based assessment information (Chima et al., 2023).

From tracer studies, such data is vital to enhance program relevance and success in graduation rates (Lukman et al., 2023). This continuous assessment helps ensure that any launched education initiative will not become out of date in terms of subject-matter needs but also out of date of evolving needs of the labor force (Romadlon & Arifin, 2021). Filling the gaps or making the changes that are necessary, allowing the institutions to properly tailor their programs and fulfill the needs of the employers, while educating the students at the same time (Escandallo, 2024). Tracer studies would ultimately be a must-have for upholding strong academic standards and ensuring employment assistance for both short-term and long-term graduates (Procurato et al., 2024).

Tracer studies track the professional practice of graduates and the effects of learning outcomes through the use of surveys, interviews and focus groups (Romadlon & Arifin, 2021). The use of internet procedures and information technologies will facilitate more accurate data collection and collection (Supriyadi et al., 2020). Digital transformation is complemented with other technologies, whether digital or not, such as artificial intelligence. That can enhance communication and data analysis (Hasibuan et al., 2022). Pilot studies and testing of survey instruments represent valuable contributions for redesigning and wordings of questions (Loedy et al., 2023). In education, longitudinal research designs track the pattern over time to assess the ongoing effects of interventions. They have been used for the monitoring of the students (Imbriano & Raghunathan, 2020).

The use of these methods ensure that the data collection is both accurate and comprehensive as a result making the tracer study effective (Mewes et al., 2020). Funding and institutional flows, along with study design, are important to better understand the outcomes generated by the education system, and whether they respond to the demand of the industry (Tuononen & Hyytinen, 2022). For example, graduating-wise from education program tracking, up to a test to measure program performance drawing in

well-informed decisions by education institutions. By this, education can cater real-world needs and increase preparedness and graduate relevance (Elfina & Andriany, 2023).

2.2. Challenges Faced by Trace Studies

Tracer studies have a number of challenges (such as the "Hawthorne Effect," where study participants change their behavior because they know they are being tracked, potentially contaminating the results; Bosch & Revilla, 2022). Self-reported data can also be encrusted with bias because people being studied may adjust their responses to adhere to social standards or conventions. In such cases, the result may therefore be skewed and the data quality affected (Geldsetzer, 2020). These add even more to its prevalence in sensitive situations that demand much in fitting within preconceived notions (Menon & Muraleedharan, 2020).

However, keeping in touch with former students and monitoring their career progression over time can be difficult, due to factors such as ever-changing contact details, differences in levels of engagement, and the requirement for ongoing, targeted resources in order to effectively track and document their career progression (Senekal & Munro, 2019). Problems such as this with, tracking may result in data that is incorrect or inaccessible, and it becomes difficult to measure a program's fidelity as well as academic achievements (Hapsari & Putra, 2022). Therefore, these difficulties complicate obtaining reliable and useful information by the tracer studies (Geldsetzer, 2020).

As a result, universities must determine graduates' career prospects, as well as the efficiency of their institutions, in order to evaluate the efficacy with which they are equipping students for the workforce as well as how well their curricula meet industry standards (Putra et al., 2022). This allows curriculum designers to modify their offerings in order to better prepare graduates for the workforce (Chima et al., 2023). AI and web-based systems founded on innovations in data collecting and analysis have automated such research, allowing for greater efficiency and accuracy through immediacy of insightful perspectives and the ability to analyze more nuanced patterns and outcomes (Hasibuan et al., 2022).

The tracer studies conducted were, therefore, useful tools to ascertain the extent to which educational needs are matched with labour market demands as they provided important analyses of the output of employment and skills of the graduates. This allows for an understanding of academic preparation and indicators that map the expectations of the industry (Hapsari & Putra, 2022). As a contribution to programme-based educational effectiveness in terms of empowering students to participate in the workforce and relevance of curriculum content, Sumiyati and Jaya (2023) add value to that objective of this study. As far as results are concerned, research into new methods and technologies to allow for better data gathering and analysis is of clear importance (Mewes et al., 2020).

Job incongruence — the mismatch between what a person is capable of and what the job demands of them — is one of the deadliest killers of careers and organizational performance. It reduces also lower job satisfaction, productivity and turnover (Patel et al., 2024). Some other key reasons behind this are inadequate remuneration, skill gap, job discontent, and lack of career opportunity (Carthon et al., 2021). Besides, the disparity in social and economic development leads to dependence between the two regions (Khan et al., 2020), while culture shock and spatial mismatch weaken the involvement and productivity of workers because of poor job integration problems facing them, making them unable to adapt to the surrounding environment and cope with geographic distances (Yektiningsih et al., 2021).

Moreover, tracer studies are also used to measure the stakeholders' overview, to find out the achievements of graduates, and to find out whether the education programs carried out are in accordance with job market expectations (Pratiwi & Rahmawati, 2020). In order for a study program owned by a university to adapt to the suitability of industry needs, provide an adequate opportunity for the workforce produced by the university to be absorbed in the work field, and can be accredited by an institution, the involvement of stakeholders is needed in the evaluation and revision process of the curriculum (Supriyadi et al., 2020). Involving stakeholders in tracer studies is critical because their cooperation increases trust and the effectiveness of educational activities (Romito et al., 2023).

The other stakeholders also must be involved in evaluating the need and development of the curriculum to enrich the career opportunities through employment aspects (Hafiz, 2020). Tracer studies are used to assess how well graduates are meeting the needs of the job market (Pratiwi & Rahmawati, 2020) and the inclusion of university stakeholders in these processes promotes good practices that support data-driven strategies to improve educational quality while contributing to the sustainability of graduate preparation, resulting in professionals as lifelong learners making a valuable impact on successful careers (Aigwi et al., 2020).

This misalignment in the employment industry shows that whilst individuals possess capabilities and understanding of certain skills, they require help to find an opportunity (Shahidan & Ismail, 2021). A minimum definition of education-job mismatch is when someone with a specific level of education or skill does not have it to perform their job (Kadir et al., 2020). This poses as qualification-job mismatch and field-of-study-job mismatch (Farooq, 2017).

Research conducted by (Senkrua, 2021) found that graduates in job mismatch tend to be bitter about their jobs - they defend their work and complain about the company - and that graduates in job mismatch are about 10% more likely to want to switch jobs than those who are in suitable jobs. It is also strongly negatively correlated with job satisfaction and general well-being (Choi & Ahn, 2024), decreasing the levels of career satisfaction through horizontal mismatch (More & Rosenbloom, 2020).

A common employability barrier in the potential job is the job mismatch which is similar to unemployment and underemployment (Quimilat, 2023) in the Philippines. The low-skilled platform labor also worsens the problem, where highly

educated people are absorbed in smaller prestige occupations, a situation known as job mismatches (Soriano & Cabañes, 2020). This is not to say that badgering and berating students into learning is the answer, but rather that colleges and universities should focus on adult education offerings and continuous professional development to combat the skills gap (Mercado & Villenas, 2024). On the contrary, if graduates choose a career path that is opposite to what they can offer, none will be employed due to the mismatch (Pagud-Sarabia, et. al., 2021).

2.3. Theoretical Framework

The theoretical foundation of this study is rooted in Human Capital Theory proposed by Gary Becker since the 1960s, which suggests that individuals' education and training can increase their productivity and earning potential (Caire & Becker, 1967). This theorizing was expanded upon in 1990 by Myra Strober, in which, building on tracer studies of college leavers, she argued that those who invest in their education will significantly enhance their productivity and capacity to be employed, with potential implications for higher earnings and better job positions. According to this theory, education prepares an individual with skills and knowledge needed to equip the workforce.

In tracer studies, the Human Capital Theory continues to be a leading theory as investments in education are tracked down to the effects on productivity, employment, and income (Avien et al., 2020) Such a theory means that human capital is interpreted as the amount spent on education that converts into profits, illustrative designates the optimal level of investments required to reap the highest returns (Kling et al., 2020). It distinguishes general from high entrance and impacts on the accumulation of human capital. This will enable the theory to analyze better how different educational tracks can have implications on more general outcomes in economics as a basis for bettering educational strategies with better economic outcomes (Li et al., 2023).

Conceptualized from the Human Capital Theory, tracer studies are vital to enhancing the quality of the programs, guidelines for policy-making, advice on careers, and the relevance of educational offerings (Chima et al., 2023). These do so by providing information on graduates' employability and career development as well as the outcome of a program that will help the providers of education understands the effectiveness of the program (Escandallo, 2024). Tracer studies also have information value for institutions of higher education as they take into account the relevance of master's programmes in education for graduates' employability and professional development, and guarantee that educational investments will pay dividends both on the economic result for the individual and society (Sanchez et al., 2023).

2.4. Conceptual Framework:

Conceptually, the authors incorporated the discerned elements to form the schematic of tracing the BSBA graduates of North Eastern Mindanao, batch 2011-2019, illustrated in Fig. 1. We define a framework for this study including the demographic profile of the graduates, occupational classification of the graduates, major line of business, employment profile, status of employment and alignment of current occupations of the graduates. This framework outlines the connection or tie-in among the demographic profile, employment rate and career trajectory of the graduates.
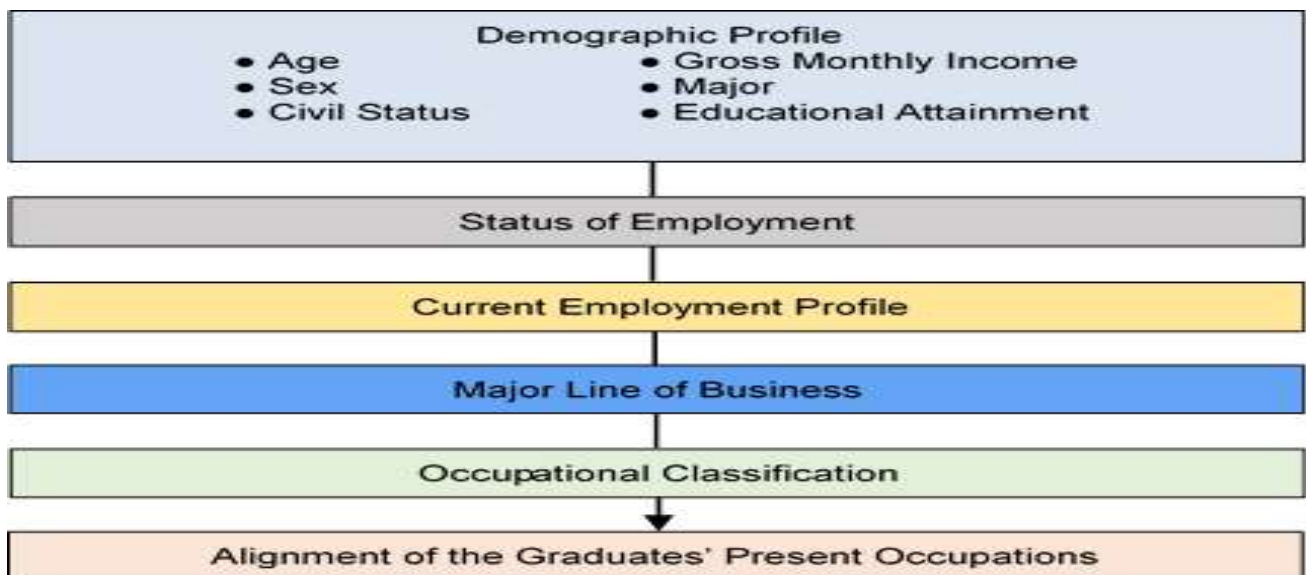
2. Methodology

2.1 Research Design

The descriptive research approach was used in this study to precisely describe the graduates of BSBA 2011-2019 of North Eastern Mindanao State University (NEMSU), Tagbina campus. Another example of sample survey implementation is managing the scope of the study to the manageable fraction of the bigger population and able to find few key insights. Additionally, a part of the study is also dedicated to the opinion survey, as most variables relates around what respondents have seen and perceived. The type of descriptive research approach was relevant in this study, because the question is determined by determining the

graduate status needed by description related to the condition of the current graduates.

The tracer study was heavily descriptive, used to understand broadly the career trajectories, job satisfaction, and professional achievement of graduates (Kresnawati et al, 2021). The education institution applied this approach in order to get a more realistic perception regarding the career path of its graduates from the graduation period to make rational decisions related to updating the curricula or designing appropriate career services for the students (Stroj et al., 2023). These studies incorporate descriptive analysis even hinting towards trends and patterns that are not only useful for benchmarking but also for measuring the efficacy of programs (Liu et al., 2023).

2.2 Research Philosophy

In order to extract the aforementioned needed information, the coordinators and assistants of the BSBA department of the institution administered a polar closed-ended survey questionnaire from the BSBA department which was an adaptation of graduate tracer competencies of Commission on Higher Education CHEDe. The questionnaire had six major components which consisted of Part A- Letter of Consent, Part B- Demographic Profile, Part C- Current Employment Profile, Part D- Major Line of Business, Part E Occupational Classification and Part F dealt on the Alignment of the Graduates' Present Occupations. Thus, this ensured that all the items included in the research instrument were duly verified and addressed all issues concerning the BSBA program. Following devising the instrument, it was submitted to the department chairs for validation through content analysis.

3.3 Sampling Technique

The respondents in the study were graduates of BSBA from 2011-2019. Out of 599 BSBA graduates, 282 respondents responded through the social media site. This facilitated the collection of rich data on each graduate's employment outcome and career trajectory. The census mechanism also was relevant because surveying the entire population is relevant when trying to deliver complete and real picture of the career path of all the business administration graduates from 2011-2019. As such, the collation of thorough data offered valuable insight into the career journeys of the successful graduates — a key discovery to guide future educational and career development initiatives across the institution.

3.4. Source of Data

Tracer study undertaken with the BSBA graduates of North Eastern Mindanao State University Study subjects were candidates from the 2011 to 2019 cohorts. Afterwards permission was sought to monitor the employment of graduates and to track their career progress. The study was conducted after obtaining permission through written letters inviting response from the graduates. Upon receiving permission, all the major respondents were briefed about the aims and objectives of the study. Outline included the actual definitions of the study's key elements, interdependencies between variables and anticipated outcomes.

The respective categorical data were analyzed using descriptive statistics. Frequency count was used for the systematic summary and analysis of categorical data. This statistical technique counted the number of times each category or value appeared in the dataset, henceforth making provision for ordered and more transparent data interpretation.

3. Analysis and Discussion of Results

3.1 Demographic Profile of the Respondents

Of the 282 graduated graduates, a demographic profile suggests that they tend to be young, female and relatively economically moderate. 57% are aged 26-30, with 26% aged 31-35, 14% aged 21-25, and a tiny 2% aged 36+. The gender distribution reveals a skew, with 59% of the sample is female and 41% of the sample is male, an 18% higher proportion of females. According to members' relationship statuses, 61% of members are Single, 36% are Married, and the rest are Single Parents, Married not Living Together, or Widowed, each at 0.4%. The majority by income, from ₱10,001 to ₱15,000 (46%), ₱15,001 to ₱20,000 (next at 22%) and fewer in the higher ranges. Most of the college degrees earned can be put under the Business Administration (BSBA) graduates, who are 266 graduates. Some have taken education units (9), master's in Education units (4), or have been able to pass the board exam for Licensed Professional Teacher (2), one has master's degree in Education. By the field of study, 52 percent were studying Financial Management (FM) and 48 percent were studying Human Resource Development Management (HRDM), a somewhat diverse but imbalanced trend with respect to education.

Table 1. Demographic Profile of the Respondents

Characteristics	Frequency	%
Age		
26-30	161	57
31-35	74	26
21-25	42	14
36 and above	5	2

Total	**282**	**100**
Sex		
Female	166	59
Male	116	41
Total	**282**	**100**
Civil Status		
Single	173	61
Married	100	36
Single Parent but not Married	7	3
Married but not Living Together	1	4
Widow	1	4
Total	**282**	**100**
Gross Monthly Income		
₱10,001 to less than ₱15,000	128	46
₱15,001 to less than ₱20,000	62	22
₱20,001 to less than ₱25,000	39	14
₱25,001 to less than ₱30,000	22	8
₱35,001 and above	21	8
₱30,001 to less than ₱35,000	10	4
Total	**282**	**100**
Major		
FM	147	52
HRDM	135	48
Total	**282**	**100**
Educational Attainment		
BSBA Graduate	266	94
With education units earned (teacher certificate program)	9	3
With masteral unit earned in Education	4	1
Passed the Board Licensure Examination for Professional (LPT)	2	1
Master's degree holder in Education	1	1
Total	**282**	**100**

The demographic profile tells us that the majority of people taking this survey are between the ages of 26-30, which is significant as; they can be considered low-mid level talent, they have only recently transitioned from education to working in professional roles therefore are active job seekers. This coincides with (Kalaw, 2019) where they focused more on the employability of graduates within a certain age bracket, which all mirrors the high number of those youth numbers in the population. What this means is that this new group of younger alumni may experience different challenges or advantages in the workforce. It may also be indicative of a wider employment-related trend, for example, a delay in labour market entry due to economic instability or increasing access to higher-level qualifications. Dec 3, 2023: This is a testament to how much this segment continues to be important in conversations about employability, workforce readiness and the kind of facilitation these young professionals would require to navigate their careers.

Next to the age-related demographics, the gender distribution of the respondents add depth to the results obtained in this study. It appears that almost all of the respondents were females, which holds on very strong female presence. The tracer study of Valdez et al. (2023), the authors argue that a considerable number of graduates are women. They have different career progression issues than men do. The same finding is also seen on the employability of graduates in teacher education where another previously mentioned portion predominantly female was discovered in the population that the authors surveyed (Posadas et al., 2021).

The civil status of the respondents in this study was most likely single, as in NEMDOZA et al. (2023), which also showed that a substantial percentage of management graduates were single as well. In addition, the results of the study of Victoriano et al. In fact, in a study conducted by Ballardino et al. (2022) that set out to describe the graduates' profiles, it was found that most of the graduates were single, which corroborated the findings of this study.

The demographic profile of the respondents here based on the gross monthly income category shows that a significant number of alumni earned a monthly salary between 10,001 and 15,000 pesos (Philippine currency) similar to the study of Pentang et al. (2022),

46% of respondents report making similar figures. Furthermore, Kresnawati et al. The higher education statistics break down graduates by faculty and demographic data, confirming with context that many graduates earn in this range (2021).

Financial Management (FM) graduates ranked higher in number, while Human Resource Development Management (HRDM) graduates ranked lower, as per the demographic background of the respondents in this study, which is consistent with the tracer study of Albina and Sumagaysay (2020), where graduates who selected in the Information Technology Program exhibited an increased tendency to fit into financial management positions, further supporting the observation that FM scored higher in employability-related percentages, as compared to HRDM. Victoriano et al. (2021a,b) provide further evidence in this direction. (2022) which illustrated that all graduates (business and finance included) stated financial management skills as significant in terms of their job performance

Respondents demographic profile in this study has showed that a total of 282 respondents had a greatly considerable number of BSBA graduates. Contextualized with the tracer study by Austero et al. It was stated in (2012) in which the demographic profile of the higher education institutions in the region also showed that there were a significant number of graduates who had finished business-related programs which suggested that the educational system of the country, the Philippines is highly influenced by the perceived employability and market demand of the businessmen in the country. Roman and Villanueva's (2023) study revealed that business administration degrees were obtained by most graduates from state universities in the Calabarzon area, which in turn indicated the high prevalence of this particular degree in the region.

4.2 Employment Profile of the Respondents

As shown in Figure 1, the data indicate that the majority of employees are in regular/permanent positions (73%), with 16% belonging to the contractual/casual roles and only 11% of these graduates are holding probationary/temporary positions, suggesting that only a few employees are in less stable, temporary roles.
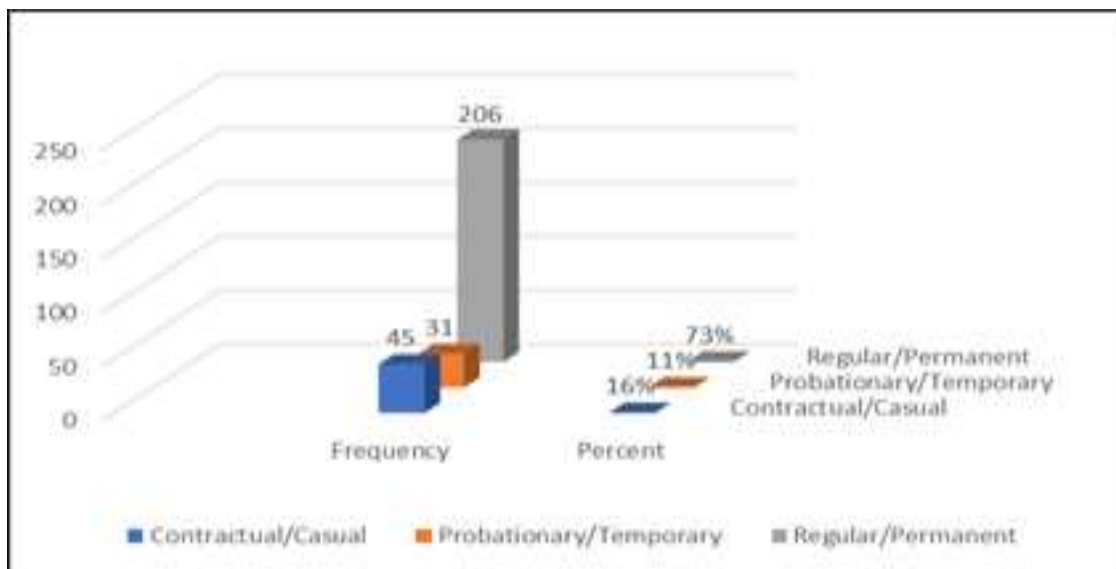

Figure 2. Status of Employment

The employment status of the respondents shows that a lot of the employees are still working on contract or casual basis in the organization. This is parallel to the findings of Roman and Villanueva (2023) who did a retrospective study of graduate employment rate, revealing that majority of the graduates can be found in casual or contractual work, agreeing with findings from previous studies. This is in line with the findings of Caingcoy and Barroso (2020) where varying the employment statuses were still relevant for the graduates, and the majority were still in employment in casual or less secure jobs regardless of qualification. Together, the findings of these studies underscore the struggle of graduates for permanent jobs, with a large proportion stuck in casual or contractual employment. In other words, although such forms of casual employment may form a crucible for more stable occupations, for many workers it is the most general form of employment (Cai, 2023).

4.3 Employment Profile of the Respondents

The vast majority of these individuals are shown in Table 2. Among these graduates, 93% of them already working in the local and the rest 7% are onboard abroad. More than a third of respondents had held their role less than 1 month (32%) or 1-2 months (46%), while smaller numbers had been in their positions for 7-11 months (11%), 1 year < 2 years (5%), 2 years < 3 years (5%), or 3 years < 4 years (1%). Around 24% stayed at their first job for 1 to 6 months, and 19% for three years to less than four years, and 16% for two years to less than three years. In terms of job continuity, the largest group is on their second job (34%), closely followed by those on their third job (28%) demonstrating moderate levels of career progression. A significant 21% are first-time employees or first-time employed, while, relatively speaking, fewer are on their fourth job (8%), fifth job (7%), or have had six or more (3%).

Table 2. Employment Profile of the Respondents

Variables	Frequency	%
Place of Employment		
Local	263	93
Foreign/Abroad	19	7
Total	**282**	**100**
Time Waited before Landing the First Job		
1 to 2 months	128	46
Less than a month	90	32
7 to 11 months	25	9
1 year to less than 2 years	23	9
3 years to less than 4 years	23	4
2 years to less than 3 years	6	6
Total	**282**	**100**
Length of Stay in the First Job		
1 to 6 months	66	24
3 years to less than 4 years	54	19
2 years to less than 3 years	45	16
1 year to less than 2 years	41	15
More than 4 months	41	15
7 to 11 months	30	11
Less than a month	5	2
Total	**282**	**100**
Number of Times Employed		
This is my second job	96	34
This is my third job	78	28
This is my first job as well as my present / latest job	58	21
This is my fourth job	23	8
This is my fifth job	20	7
More than 5 times	7	3
Total	**282**	**100**

According to the study results, a wide majority of respondents, work locally. This study is aligned and same with the tracer study of (Sayson, et al., 2024), which showed that Bachelor of Science in Accountancy graduates work and employed in local area, thus showing that local graduates of such field have an advantage with the local market. That also reproduces the results of Sanchez et al. (2023) states that most participants were largely working locally regardless of a year or two post-graduations (Sanchez et al., 2023). An additional study by Penera and co-workers, traced most of the graduates of Cebu Technological University as employed on a permanent status, with the results of this research showing its effect on the general Cebuano education industry (Penera et al., 2021).

Then, the majority of participants are 1-2 months in their current job. These findings were consistent with the tracer study conducted by Narciso (2021) which showed that a significant percentage of graduates, were employed within one to two months after their graduation due to the preparedness of their education that met the needs of the labor market. Additionally, the findings of Sueno and Balala (2022) support the idea that graduates get hired in quick succession; they state that most graduates get hired within just two months of graduation, indicating effective educational preparation. The results confirm with those of Caingcoy and Barroso (2020) which show that most graduates work in jobs based on their education immediately after graduation.

When it comes to how long individuals remain in their first job, the study results revealed that most of them stay between one to six months. This finding parallels the study of Tan-Lim et al. (2024), studying healthcare worker satisfaction and retention in the Philippines, showing that a considerable proportion of healthcare professionals state that they intend to leave in their first year of employment. This is notably important as it runs parallel to the study, confirming the notion that a large portion of the population does not stay in their first job long term. Moreover, Austria also investigates the employment effect of nursing graduates, which found that a higher percentage of respondents had jobs to them within six months after graduation so that most jobs obtained were had in-line with the issue obtained from the other studies in relation to the first job duration (Austria, 2023).

Finally, a sizable percentage said their current work is their second job. This result is also consistent with a tracer study of BSBA graduates undertaken by Bauto et al., (2024), which indicated that a considerable number of students hold a job as their second job,

suggesting movement away from the first exposure to employment and into more stable employment. This resonates with wider trends seen in other studies regarding the employment landscape for BSBA graduates. This reassured the work of Eslit (2023) as it highlighted the importance of knowing where alumni progress to as also a number of graduates were indeed in their second or higher jobs, re-emphasizing the variability between post-graduation work opportunities.

4.4 Major Line of Business of the Respondents Present Employment (FM)

An employment spectrum observed among the FM graduates in represented through table 3 reflects that the prominent sector is wholesale and retail trade at 22%, signifying that the graduates are highly driven towards consumer services. Financial Intermediation comes at 14%, while Local Government Units and Cooperatives absorb 12% and 10% of graduates, respectively, underscoring involvement in public service and community-oriented positions. 10% of graduates manage to find jobs in smaller sectors such as Agriculture, Armed Forces, and National Agencies. Other sectors such as Business Process Outsourcing, Construction, and Pharmaceuticals are hardly represented, pulling in only about 2% to 3% each, but the diversity of the graduates' employment functions — including Domestic Helper and Consultancy — indicates exploratory career mapping.

Table 3. Major Line of Business of the Respondents' Present Employment (FM)

Major Line of Business	Frequency	%
Wholesale and Retail Trade including sale and repair of cars, motorcycles, personal and household goods, appliance centers (EMCOR, Desmark, and the like)	32	22
Financial Intermediation (Palawan Express, RD Pawnshop, etc.)	21	14
Local Government Unit (Cities, Municipalities, Barangay Levels	17	12
Cooperative	14	10
Agriculture, Hunting, Fisheries, and Forestry	8	6
Armed Forces (PNP, Army, AFP, etc.)	8	6
National Agencies (e.g DepEd, CHED, DENR, BIR, SSS, DSWD, etc.)	6	4
Electricity, Gas and Water Supply	4	3
Hotels, Restaurants, Resort, and Tourism	4	3
Private Banks (BDO, Metro Bank, Security Bank, etc.)	4	3
Business Process Outsourcing (BPO)	3	2
Construction	3	2
Pharmaceutical	3	2
Real State, Renting, and Business Activities	3	2
Domestic Helper Household Employment (DHE)	2	2
Insurance	2	2
Logistics, / Express Courier / Cargo (LBC, J&T, etc.)	2	2
Manufacturing	2	2
Non-Teaching Personnel (Basic Education to Tertiary Levels in the government)	2	2
Private Education (Non-Teaching: Basic Education to Tertiary Levels)	2	2
Transportation	2	2
Consultancy Services and Engineering	1	1
Manpower and Janitorial Services	1	1
Private Hospitals, Clinics	1	1
Total	**147**	**100**

FM graduates have a high employment rate in several industries through this primary line of business. The Wholesale and Retail Trade is first with 32 people. This reinforces the findings of Bauto et al (2024), in their study, which proved that majority of the graduates of BSBA are also employed in such sector. Additionally, a similar study to these observations is also obtained from Abella et al. (2024) due to the results showing that a significant number of accountancy graduates transferred to the Wholesale and Retail Trade industry. The survey further showed that, at present, graduates were being placed in the sector characterized by robust job opportunities (Abella et al., 2024).

4.5 Major Line of Business of the Respondents Present Employment (HRDM)

As shown in Table 4, HRDM graduates are mostly engaged in Wholesale and Retail Trade (31 persons, 23%), followed by Financial Intermediation (15 persons, 11%) and Private Banks (10 persons, 8%). Eight individuals (6%) are from Business Process Outsourcing (BPO) while six individuals (5%) are from Local Government Units; Manufacturing; Agriculture; Cooperatives; and Non-teaching Government Personnel. Factory and Pharmaceutics - 5 individuals (4%). Other minor representations include Electricity, Gas and Water Supply — 3 individuals (2%); Manpower (2%); National Agencies (3 individuals each, 2%); Real Estate (3 individuals and each 2%); Armed Forces (2 individuals); Hospital / Rural Health Units (2 individuals); Mining and Quarrying (2 individuals); Teaching Positions (2 individuals). Finally, the specialized or niche types of industries such as Church-Parish Priest,

Logistics, Manpower Providers, NGOs, non-life insurance, and Private Education (teaching and non-teaching) have the least amount

Table 4. Major Line of Business of the Respondents Present Employment (HRDM)

Major Line of Business	Frequency	%
Wholesale and Retail Trade including sale and repair of cars, motorcycles, personal and household goods, appliance centers (EMCOR, Desmark, and the like).	31	23
Financial Intermediation (Palawan Express, RD Pawnshop, etc.)	15	11
Private Banks (BDO, Metro Bank, Security Bank, etc.)	10	8
Business Process Outsourcing (BPO)	8	6
Local Government Unit (cities, municipalities, barangay levels)	7	5
Manufacturing	7	5
Agriculture, Hunting, Fisheries, and Forestry	6	5
Cooperative	6	5
Non-teaching Personnel (basic education to tertiary levels) in the government	6	5
Construction	5	4
Pharmaceutical	5	4
Electricity, Gas, and Water Supply	3	2
Manpower	3	2
National Agencies (e.g. DepEd, CHED, DENR, BIR, SSS, DSWD, etc.)	3	2
Real State, Renting and Business Activities	3	2
Armed Forces (PNP, Army, AFP, etc.)	2	2
Hospital/ Rural Health Units in the government	2	2
Mining and Quarrying	2	2
Teaching Position (basic education to tertiary levels) in the government	2	2
Church-Parish Priest	1	1
Logistics / Express Courier / Cargo (LBC, J&S, etc.)	1	1
Manpower Provider	1	1
Non-Government Organization (NGO)	1	1
Non-Life Insurance	1	1
Private Education (non-teaching: basic education to tertiary levels)	1	1
Private Education (teaching personnel: basic education to tertiary levels)	1	1
Private Firms / Company	1	1
Transportation	1	1
Total	**135**	**100**

4.6 Occupational Classification of the Respondents (BSBA FM)

The largest group, Clerical Support Workers, is comprised of 79 people (54%), indicating a strong workforce in administrative roles as displayed here in Table 5. Third are Technicians and Associate Professionals (19 persons — 13%), followed by Professionals (15 persons — 10%). 13 are Managers (9%) and 9 are Service and Sales Workers (6%) The Armed forces category contains seven individuals (5%), Elementary occupations contain three (2%), while Craft and related trade workers and Plant and machine operators each hold 1 individual (1%).

Table 5. Occupational Classification of the Respondents (BSBA FM)

Occupational Classifications	Frequency	%
Clerical Support Workers	79	54
Technicians and Associate Professionals	19	13
Professional	15	10
Managers	13	9
Service and Sales Workers (such as housekeeper (institutions), caretaker, saleslady/salesman, salesperson in retail or Wholesale establishment, store cashier, promo staff/merchandiser, sales clerk, police officer, security guard, and the like).	9	6
Armed Forces Occupation and Non-gainful Activities, and Special Occupations (such as military personnel, army, navy, and the like).	7	5
Elementary Occupations (such as domestic helper, housemaid, room attendant, vehicle cleaner, and the like).	3	2

Crat and Related Trade Workers	1	1
Plant and Machine Operators	1	1
Total	**147**	**100**

4.7 Occupational Classification of the Respondents (BSBA HRDM)

In Table 6, the largest group is Clerical Support Workers comprising of 42% and Professionals making up 22%, according to the data. Technicians and Associate Professionals-14% and Managers–13%. The four largest occupational groups are: plant and machine operators, and service and sales workers, each at 4%, and armed forces Occupations and similar roles at 2% as the smallest group. Notably, there is a clear prominence of clerical and professional professions, with a growing number of people—the majority of them—in operational and military roles.

Table 6. Occupational Classification of the Respondents (BSBA HRDM)

Occupational Classification	Frequency	%
Clerical Support Workers	56	42
Professionals	30	22
Technicians and Associate Professionals	19	14
Managers	18	13
Plant and Machine Operators	5	4
Service and Sales Workers (such as housekeeper (institutions), caretaker, saleslady/salesman, salesperson in retail or wholesale establishment, store cashier, promo staff/merchandiser, sales clerk, police officer, security guard, and the like).	5	4
Armed Forces Occupation and Non-gainful Activities, and Special Occupations (such as military personnel, army, navy, and the like).	2	2
Total	**135**	**100**

Occupational Classification of Respondents for the BSBA FM program (79 out of 154 respondents) Clerical Support Workers The findings on this study corresponded to the tracer study which was conducted at Divine Word College of Jan Jose, declaring that a large proportion of 86.67% of the graduates are not just sitting home (Bauto et al., 2024), however, they were able to land for themselves a job as rank and file workers which means among the occupations of the graduates are clerical support workers. This means that the BSBA program actually will produce graduates that could be employed as clerks in entry-level business setting positions. More over employment profile study of Bicol university graduates shows that bulk of employment implies that most of graduates is on the position of employee that this graduate can fit the education background. The same trend once again shows graduates were adopted in clerical and administrative capacity (Deblois, 2021).

For BSBA HRDM, 42% of the respondents are still Clerical Support Workers. This is a manifestation that the presence of clerical roles is vast and prominent among both categories. Similar findings have been made by Agustian et al., in 2023 that clerical support roles in Financial Management (FM) and Human Resource Development Management (HRDM) serve as critical enhancement in communication, organization, and efficiency of business enterprises. Wherever human resource management implementation necessitates the back-office support, their functions are core inputs and HR also cannot be implemented without their support. HR practitioners do their administrative activities on the basis of these roles. Additionally, the result of the tracer study also substantiates the study of Sayson et al. (2024) who stated that "a very large proportion" of graduates were doing clerical and administrative types of jobs, which is a perfect match for the sort of pattern that is generally seen in the other business-related programs. De Vera (2024), who also confirmed documentation for a significant portion of students working between school hours, supporting clerical support roles in the labor market, further supported this study.

4.8 Alignment of the Graduates' Career per CMO 17 series of 2017 (BSBA FM and BSBA HRDM)

As shown in Table 7, it is clear that 51% or 75 of graduate's work in jobs other than Financial Management, while 49% or 72 work in jobs in their field. Meanwhile, Graduates working in areas unrelated to their specialisation are most likely to work in Marketing (47%) or Human Resource Management (27%), suggesting these sectors account for the largest slice of the pie when it comes to graduates not working in a related field. Smaller proportions of participants were from the Armed Forces (11%), Social Work (9%), Overseas Context Work (3%), or more rarely; from electrician roles or Teaching Profession (1% each). Interestingly, this breakdown highlights the strong representation of Marketing and Human Resources graduates in non-Financial Management roles.

Table 7. Alignmnent of the Graduates' Career per CMO 17 series of 2017 (BSBA FM)

Variables	Frequency	%
Breakdown of Jobs not related to Financial Management	75	51
Financial Management related jobs	72	49
Total	**147**	**100**

Careers		
Marketing	35	47
Human Resource Management	21	27
Armed Forces	8	11
Social Work	7	9
Overseas Context Work (OCWs)	2	3
Electrician	1	1
Teaching Profession	1	1
Total	**75**	**100**

Alignment of the Graduates' Career per CMO 17 series of 2017 (BSBA HRDM)

As shown in Table 8, 51% or 69 of the workforces appear in the domain of Human Resource Development Management, 49% or 66 graduates in an unrelated field. Non-human resources development roles show that a significant 46% of these roles belong to the marketing field. 29% of the population is employed in Financial Management related positions, which shows a huge chunk of people involved in financial sectors; Just 14% of workers are Operations Management roles, meaning they represent a smaller but still significant, segment of workers in this area. At a lower representation are the Teaching Profession 6%, Armed Forces 3%, Health Profession 2%, and Religion 2%. The distribution seems quite balanced between Human Resource Development Management and other job groups except that marketing and financial groups show some concentration comparatively more than other groups.

Table 8. Alignment of the Graduates' Career per CMO 17 series of 2017 (BSBA HRDM)

Variables	Frequency	%
Human Resource Development Management related jobs	69	51
Jobs not related to Human Resource Development Management	66	49
Total	**135**	**100**
Careers		
Marketing	30	46
Financial Management	19	29
Operation Management	9	14
Teaching Profession	4	6
Armed Forces	2	3
Health Profession	1	2
Religion	1	2
Total	**66**	**100**

Mention of Financial Management as required by CHED Memorandum Order 17 series of 2017, in the Table, below shows the potential for a considerable number of the respondents being employed even beyond graduates aligned with the profession. Marketing has the largest percentage of this. This finding is in line with a tracer study conducted by Eslit (2023) which found that economic conditions and market demands determined the employment trajectories of graduates wherein many were forced to accept jobs that are not aligned with their academic training like working in marketing instead of financial management. Furthermore, Kassa's (2022) findings provide further evidence of this phenomenon, as graduates of programs related to business tend to find employment in fields separate from those where they have trained, illustrating that most graduates from business-related programs receive employment in marketing.

For the placement of their graduates' current jobs according to CHED Memorandum Order 17 series of 2017, Human Resource Development Management shows that the respondents who are all employed related to their field are a considerable number. Next is the very high percent in Marketing. The current study is aligned with the tracer study carried by Deblois (2021) which reflected the employment profile of the graduates of Bicol University and showed that a good number of graduates are employed in a field closely related to their education, specifically HR, and marketing jobs. Also, the study of Caingcoy et al. (2021) supports these findings providing the competencies developed by Bachelor of Secondary Education graduates and the meeting of this variable compared to the different work roles that graduates entered as HR and marketing, which confirmed the trend of graduates entering these sectors. Likewise, the study of Espada et al. (2023) reinforces the idea that a significant percentage of graduates are employed in marketing functions, thereby further supporting the argument that marketing roles are a major pathway for graduates who are not directly employed in HR.

4. Managerial Implication

There is key trends in employment outcomes of BSBA graduates majoring in Financial Management and Human Resource Development Management. These trends are part in nation building because people are the best assets in business organizations. This study is in line to the Sustainable Development Goals of the United Nations; stand, as quality education (SDG 4) and decent work and economic growth (SDG 8). In case of Financial Management, 51% work in jobs unrelated to financial management. 47% of these work in unrelated/non-marketing related jobs out of these. In the meantime, 49% of financial management alumni work in jobs directly correlating to the study course. This duality implies a great need for enhancement of career guidance to be more attuned with the industry needs.

With 49 % of the HRDM graduates whose job is not relevant to the human resource management development profession, the skills of these HRDM graduates were also noticed. 46 per cent of marketing jobs have become marketing jobs, up from 33 per cent during working hours. Such high shift could originate as a further development in course design and industry engagement. Addressing these lags, both for Financial Management and HRDM programs, can enhance preparation for relevant career opportunities and employment outcomes more broadly. Furthermore, 69 or 51% are already working, and in the same field.

This employment trend of graduates in Financial Management and Human Resource Development explained through Human Capital Theory and Bandura's Social Cognitive Framework. Knowledge to be educated The Human Capital Theory says that lifelong learning is invested in, providing more motivation to improve your productivity, which will serve in job hunting. In addition, the mismatch between the vast number of graduates working in industries unrelated to their fields of expertise suggests that there is room for improvement, and curricula need to better reflect what is required in the marketplace. Bandura's theory mainly concentrates on personal self-efficacy however highlights the social aspects to make decisions regarding career in the world. Finally, aligning these theories would establish a conducive environment for focusing on the activities that can be put in place, to influence the nature of students in becoming academically relevant, uplift their faith and career perceptions, can gradually move them towards better job opportunities.

4.1 Theoretical Implication

This study's findings about the career paths of BSBA graduates from 2011 to 2019 provide significant theoretical implications for career development, higher education outcomes, and labor market alignment. This study enhances the theoretical discourse on Career Construction Theory (Savickas, 2005) and Human Capital Theory (Becker, 1964) by analyzing the professional trajectories of graduates from the Financial Management (FM) and Human Resource Development Management (HRM) programs. Career Construction Theory asserts that individuals actively shape their occupations by personal interpretation, adaptability to socio-economic environments, and life events. This study substantiates the idea by demonstrating how BSBA graduates maneuver their professional trajectories in response to fluctuating economic circumstances, institutional factors, and individual ambitions. Patterns in occupational selection, industry affiliation, and educational achievement illustrate how graduates modify and redefine their professional identities in reaction to opportunities and limitations.

Human Capital Theory underscores the significance of education and skill development in improving employability and productivity. This research examines the career paths of NEMSU graduates, providing empirical insights into the correlation between their academic preparation and labor market outcomes. It also contests or validates the presumption that investment in specialized education (e.g., FM or HRM) directly results in employment within corresponding disciplines, particularly in light of CHED's Memorandum Order No. 17, s. 2017. This study enhances previous theories by offering localized, empirical information on the impact of educational institutions in regional contexts, such as NEMSU, on career development. The research highlights the necessity for more cohesive models that consider "glocal" (global and local) dynamics influencing career trajectories, especially in emerging areas.

4.2 Recommendations

Take into considerations a range of recommendations based on the findings of the study. To shape the courses offered to the current market, they can re-align the curricula of the Financial Management and Human Resource Development Management (HRDM) as well. The curricula of these courses should be redesigned with possible inclusion of a more application-oriented approach, case studies and new trends to ensure that the students are equipped with the skills that would be most relevant to the needs of the industry, present as well as future. Also, the university's career services may also be boosted. Graduates would thus be educated on such stakes of the job industry, and comprehensive assistance, like career counselling, resume preparation and interview preparations, would augment their probabilities of being hired.

Internship and job placement opportunities can be attracted to the graduates through collaborations with locals and industry organizations that enable them to have real life experience outside the campus and enhance their network at the same time. Attending workshops to develop transferable skills such as communication and teamwork and problem solving will make graduates more attractive to a range of sectors. Such a wide alumnae network would be helpful in deriving mentorship and guidance for the current students and also provide inputs with respect to the job market.

Mapping the offerings of a marketing management course from the faculty perspective with the lessons learnt from the corporate engagement is an important step to address the job mismatch. And since most of the graduates of this program are employed with in the fields of marketing related jobs, it may be better to introduce BSBA major in marketing management as a supplementary course in order to comply with these industry changes in the job market highlighting these skills to be competitive

along with the makes it all the more relevant and effective curriculum. This will contribute to improved graduation outcomes and reduce discrepancies between qualifications and employment opportunities, making graduates better prepared in the job market.

5.3 Limitations and Suggestion for Future Studies

The research exclusively examined BSBA graduates in Financial Management and Human Resource Development Management from 2011 to 2019 at North Eastern Mindanao State University. Exclusion of graduates from alternative programs and campuses constrains the generalizability of the findings to the wider NEMSU graduate demographic.

1. Response Rate and Accessibility
Owing to time limitations and accessibility challenges, not all graduates from the specified cohorts were contacted. Certain graduates were unreachable owing to obsolete contact details, relocation, or insufficient internet access, thereby impacting the data's representativeness.

2. Self-Reported Information
The research predominantly utilized self-reported data obtained via surveys and interviews. This raises the potential for recollection bias, exaggeration, or understatement, especially about work status, salary, and job alignment.

3. Absence of Longitudinal Monitoring
The tracer research documented employment outcomes at a specific moment in time. It fails to consider long-term professional advancement, transitions, or frequent job changes that could offer a more nuanced perspective on career development.

4. Unaccounted External Factors
The study inadequately examined external factors, including labor market demand, economic fluctuations (e.g., post COVID-19 adjustments), and regional development policies that could have influenced the graduates' career paths.

Subsequent tracer studies ought to encompass graduates from additional programs and sites within NEMSU to facilitate a more thorough institutional evaluation of job outcomes.

1. Enhance Alumni Monitoring Systems
NEMSU ought to invest in a consolidated and consistently updated alumni database to enhance tracking, communication, and involvement for research and institutional advancement objectives.

2. Implement Longitudinal Research
It is advisable to conduct long-term follow up studies to document the progression of career trajectories over time, encompassing employment moves, promotions, and additional schooling or certifications.

3. Incorporate Employer Feedback
Future research may incorporate employer viewpoints to confirm the pertinence and efficacy of the BSBA curriculum and evaluate the occupational performance and competences of graduates.

4. Integrate Labor Market Analysis
Aligning graduate outcomes with local and global labor market trends might provide enhanced insights into employability problems and program adaptability.

5. Establish Career Support Initiatives
The result underscores the significance of ongoing career counseling, internships, and employment placement initiatives. Institutional support must be augmented to assist students in preparing for the expectations of real-world work.

References

1. Abdulloh, F. F., Rahardi, M., Aminuddin, A., Anggita, S. D., & Nugraha, A. Y. A. (2022). Observation of imbalance tracer study data for graduates' employability prediction in Indonesia. *International Journal of Advanced Computer Science and Applications*, *13*(8), 169–174. http s://doi.org/10.14569/ijacsa.2022.0130820

2. Abella, F. S., Bation, N. D., Bation, E. D., & Bation, W. C. (2024). Tracer study of the graduates of the school of business and accountancy, Pilgrim Christian College Cagayan De Oro City, Philippines. *International Journal of Social Science and Human Research*, *7*, 1737–1746. https://doi.org/10.47191/ijsshr/v7-i03-31

3. Acosta, A. S., Narisma, J. E. B., Belarmino, C. G. A., P.Maragana, T. M., U. Carino, R. M., & D. Torres, M. K. (2020). Doing things right: The lived experience of overseas filipino workers having brain drain. *International Journal of New Technology and Research*, *6*(1), 16–22. https://doi.org/10.31871/ijntr.6.1.8

4. Acut, D. P., Curraraton, E. P., Latonio, G. C., & Latonio, R. A. C. (2021). Work immersion performance appraisal and evaluation of grade 12 STEM students in science and technology-based industries. *Journal of Physics: Conference Series*, *1835*(1), 012013. https://doi.org/10.1088/1742-6596/1835/1/012013

5. Agustian, K., Pohan, A., Zen, A., Wiwin, W., & Malik, A. J. (2023). Human resource management strategies in achieving competitive advantage in business administration. *Journal of Contemporary Administration and Management (ADMAN)*, *1*(2), 108–117. https://doi.org/10.61100/adman.v1i2.53

6. Aigwi, I. E., Phipps, R., Ingham, J., & Filippova, O. (2020). Characterisation of adaptive reuse stakeholders and the effectiveness of collaborative rationality towards building resilient urban areas. *Systemic Practice and Action Research*, *34*(2), 141–151. https://doi.org/10.1007/s11213-020-09521-0

7. 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. https://doi.org/10.1016/j.ssaho.2020.100055

8. Austero, J., Armenia, P., & Seriño, M. N. (2012). Employment outcomes of graduates in selected higher educational institutions in eastern Visayas, Philippines. *Annals of Tropical Research*, *34*(1), 147–162. https://doi.org/10.32945/atr3419.2012

9. Austria, J. S. (2023). Tracer study of the nursing graduates in a state college. *International Journal of Multidisciplinary*, *4*(9), 3318–3328. https://doi.org/10.11594/ijmaber.0 4.09.20

10. Avien, C., Simui, F., & Muleya, G. (2020). Exploring effects of the educational investments and returns on teachers with upgraded qualifications acquired on self-sponsorship in lusaka district. *International Journal of Research and Innovation in Social Science*, *4*(12), 457–465. https://doi.org/10.47772/ijriss.2020.41222

11. Bachita, E. B., & Bayoneta, Ma. J. A. R. (2021). Implementation of public employment services in a Philippine local government unit. *Philippine Social Science Journal*, *4*(3), 133–144. https://doi.org/10.52006/main.v4i3.412

12. Bauto, A. D., Graganta, A. B., Isidro, A. C., Love, C., David, J. C., Alyssa, J., Tanteo, J. L., & Limos-Galay, J. A. (2024). Tracer study on Bachelor of Science in Business Administration in Divine Word College of Jan Jose, academic year 2018-2022. *International Journal of Research Studies in Management*, *12*(3). https://doi.org/10 .5861/ijrsm.2024.1058

13. Bischof, S. (2021). Mismatched, but not aware of it? How subjective and objective skill mismatch affects employee job satisfaction. *Social Sciences*, *10*(10), 389. https://doi.org/10.3390/socsci10100389

14. Bosch, O. J., & Revilla, M. (2022). When survey science met web tracking: Presenting an error framework for metered data. *Journal of the Royal Statistical Society Series A: Statistics in Society*, *185*(Supplement_2), S408–S436. https://doi.org/10.1111/rssa. 12956

15. Bustos, R. (2024). Bridging the gap: Aligning higher education priorities with the shifting job landscape in the Philippines. *Recoletos Multidisciplinary Research Journal*, *12*(1), 9–24. https://doi.org/10.32871/rmrj2412.01.02

16. Cai, L. (2023). The Steppingstone Effect of Casual Employment in Australia: A Re-Examination*. *Economic Record*, *99*(326), 385–409. https://doi.org/10.1111/1475-4932.12736

17. Caingcoy, M. E., & Barroso, D. A. (2020). Cross-Sectional Inquiry on Employability and Employment Status of Bachelor of Secondary Education Graduates (2016-2018): A Tracer Study. *Zenodo (CERN European Organization for Nuclear Research)*, *3*(10), 306–313. https://doi.org/10.36349/easjmb.2020.v03i10.002

18. Caingcoy, M. E., Ramirez, I. A. L., Gaylo, D. N., Adajar, Ma. I. W., Lacdag, E. O., & Blanco, G. A. B. (2021). Employment, employability, and competencies of the bachelor of secondary education graduates. *International Journal of Research in Education and Science*, *7*(3), 872–884. https://doi.org/10.46328/ijres.2328

19. Caire, G., & Becker, G. S. (1967). *Human capital, A theoretical and empirical analysis with special reference to education* (3rd ed., Vol. 18, Issue 1). The University of Chicago Press. https://doi.org/10.2307/3499575

20. Carthon, J. M. B., Travers, J. L., Hounshell, D., Udoeyo, I., & Chittams, J. (2021). Disparities in nurse job dissatisfaction and intent to leave. *JONA: The Journal of Nursing Administration*, *51*(6), 310–317.

21. Chima, T., Mkwinda, E., Kumwenda, S., & Machaya, T. (2023). A tracer study of psychosocial counselling graduates working in different healthcare facilities across Malawi. *Journal of Multidisciplinary Healthcare*, *16*, 2977–2992. https://doi.org /10.2147/JMDH.S427513

22. Choi, S., & Ahn, J. (2024). Gender labor market outcome differentials in Korea. *Hitotsubashi Journal of Economics*, *65*(1), 32–50. https://doi.org/10.2307/273101 13

23. De Vera, J. T. (2024). Beyond the degree: Gendered outcomes for BSBA marketing management graduates. *International Journal of Multidisciplinary Research and Analysis*, *7*(3), 1401–1403. https://doi.org/10.47191/ijmra/v7-i03-66

24. Deblois, E. C. (2021). The employment profile of graduates in a state university in Bicol Region, Philippines. *Journal of Education, Management and Development Studies*, *1*(1), 33–41. https://doi.org/10.52631/jemds.v1i1.10

25. Elfina, M. L., & Andriany, D. (2023). Career self-efficacy and future career anxiety on Indonesian fresh graduates during pandemic. *Jurnal Kajian Bimbingan Dan Konseling*, *8*(1), 24–32. https://doi.org/10.17977/um001v8i12023p24-32

26. S, N. 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. https://doi.org/10.36713/epra1 5629

27. Eslit, E. R. (2023). *Tracing the uncharted odyssey: A 2017-2022 tracer study of the college of arts and sciences alumni's career paths*. Preprints.Org. https://doi.org/10.20944 /preprints202309. 1458.v1

28. Espada, I. C., Alingasa, R. D. C., & Quero, S. M. C. (2023). Employability of West Visayas State University Communication Graduates Philippines. *Jurnal Studi Jurnalistik*, *5*(1), 31–39. https://doi.org/10.15408/jsj.v5i1.31618

29. Farooq, S. (2017). The utilisation of education and skills: Non-Pecuniary consequences among graduates. *The Pakistan Development Review*, *56*(1), 1–17. https://doi.org/1 0.30541/v56i1pp.1-17

30. Fernandez, C., Balijon, M., & Ancho, I. (2023). Career preferences of Filipino senior high school students. *CTU Journal of Innovation and Sustainable Development*, *15*(3), 81–91. https://doi.org/10.22144/ctujoisd.2023.053

31. Geldsetzer, P. (2020). Use of rapid online surveys to assess people's perceptions during infectious disease outbreaks: A cross-sectional survey on COVID-19. *Journal of Medical Internet Research*, *22*(4), e18790. https://doi.org/10.2196/18790

32. Hafiz, A. (2020). Tracer study of alumni from the early childhood islamic education program at STAIN Gajah Putih Takengon. *Jurnal As-Salam*, 1–12. https://doi.org/10.37249/as-salam.v4i1.150

33. Hapsari, A. M. S., & Putra, C. B. A. (2022). System design of tracer study development in higher education. *Jurnal Teknologi Informasi Dan Pendidikan*, *15*(1), 50–56. https://doi.org/10.24036/jtip.v15i1.574

34. Hasibuan, A. F., Silaban, S. M., Lubis, F., & Prayogo, R. R. (2022). *Tracer study exploration of Medan State University graduates*. 77–83. https://doi.org/10.2991 /aebmr.k.220104.011

35. Igarashi, T., & Acosta, P. (2022). Who benefits from dual training systems? Evidence from the Philippines. *Philippine Review of Economics*, *59*(1), 26–45.

36. Imbriano, P. M., & Raghunathan, T. E. (2020). Three-Form split questionnaire design for panel surveys. *Journal of Official Statistics*, *36*(4), 827–854. https://doi.org/10.2478/jos-2020-0040

37. Kadir, J. M. A., Naghavi, N., Subramaniam, G., & Halim, N. A. A. (2020). Unemployment among Graduates—Is there a Mismatch? *International Journal of Asian Social Science*, *10*(10), 583–592. https://doi.org/10.18488/journal.1.2020.1010.583.592

38. Kalaw, M. T. B. (2019). Tracer study of Bachelor of Science in Mathematics. *International Journal of Evaluation andResearch in Education (IJERE)*, *8*(3), 537–548. https://doi.org/10.11591/ijere.v8i3.17434

39. Kassa, E. T. (2022). Exploring employability of business graduates: Evidence from Woldia University. *Journal of the Knowledge Economy*, *14*, 1033–1051. https://doi.org/10.1007/s13132-021-00856-0

40. Khan, Md. A. I., & Mojkury, Md. A. H. (2021). Curricula and employability: An empirical study on tertiary level students of Bangladesh. *Asian Journal of Education and Social Studies*, *17*(2), 1–10. https://doi.org/10.9734/ajess/2021/v17i230415

41. Kling, G., Pesqué-Cela, V., Tian, L., & Luo, D. (2020). A theory of financial inclusion and income inequality. *The European Journal of Finance*, *28*(1), 1–21. https://doi.org/10.1080/1351847x.2020.1792960

42. Kresnawati, E. S., Irmeilyana, I., Amran, A., & Saputra, D. M. (2021). Independence test and plots in correspondence analysis to explore tracer study data. *International Journal of Applied Sciences and Smart Technologies*, *3*(2), 241–256. https://doi.org/10.24071/ijasst.v3i2.3891

43. Kurniatuhadi, R., Hadary, F., Sulistyarini, S., Anzani, Y. M., Fahruna, Y., & Muthahhari, M. (2024). The chronology of development tracer study system at Tanjungpura University. *Jurnal Teknologi Informasi Dan Pendidikan*, *17*(1), 218–228. https://doi.org/10.24036/jtip.v17i1.746

44. Li, Y., Cao, K., & Jenatabadi, H. S. (2023). Effect of entrepreneurial education and creativity on entrepreneurial intention in college students: Mediating entrepreneurial inspiration, mindset, and self-efficiency. *Frontiers in Psychology*, *14*, 1240910. https://doi.org/10.3389/fpsyg.2023.1240910

45. Liu, S., Du, H., Tian, J., Zhang, Y., Liu, J., Tian, X., Wang, Z., & Huang, K. (2023). Study on an anti-adsorption micromaterial tracer system and its application in fracturing horizontal wells of coal reservoirs. *ACS Omega*, *8*(31), 28821–28833. https://doi.org/10.1021/acsomega.3c03773

46. Loedy, N., Coletti, P., Wambua, J., Hermans, L., Willem, L., Jarvis, C. I., Wong, K. L. M., Edmunds, W. J., Robert, A., Leclerc, Q. J., Gimma, A., Molenberghs, G., Beutels, P., Faes, C., & Hens, N. (2023). Longitudinal social contact data analysis: Insights from 2 years of data collection in Belgium during the COVID-19 pandemic. *BMC Public Health*, *23*, 1298. https://doi.org/10.1186/s12889-023-16193-7

47. Lukman, S., Rizal, I., & Tiara, O. (2023). Graduate income and profession linkage: Tracer study of public relations graduates. *PRofesi Humas Jurnal Ilmiah Ilmu Hubungan Masyarakat*, *7*(2), 234–249. https://doi.org/10.24198/prh.v7i2.42355

48. Mendoza, X. L. D., Pichay, S. B., & Tadeo, J. B. (2023). Utilization of modified SERVQUAL model in crafting strategies among courier services. *International Journal of Multidisciplinary: Applied Business and Education Research*, *4*(3), 701–712. https://doi.org/10.11594/ijmaber.04.03.03

49. Menon, V., & Muraleedharan, A. (2020). Internet-based surveys: Relevance, methodological considerations and troubleshooting strategies. *General Psychiatry*, *33*(5), e100264. https://doi.org/10.1136/gpsych-2020-100264

50. Mercado, F. M., & Villenas, B. N. (2024). Grounded theory on creating and maintaining adult education programs in selected higher education institutions in the Philippines. *European Journal of Educational Research*, *13*(4), 1455–1475. https://doi.org/10.12973/eu-jer.13.4.1455

51. Mewes, B., Oppel, H., Marx, V., & Hartmann, A. (2020). Information-Based machine learning for tracer signature prediction in karstic environments. *Water Resources Research*, *56*(2), 1–20. https://doi.org/10.1029/2018wr024558

52. Mina, J. C., Reyes, E. J. G., & Salas, R. F. (2024). 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*, *5*(4), 1337–1344. https://doi.org/10.22161/ijels.54 .77

53. Miranda, A., & Lhaksamana, K. M. (2022). Classification analysis of waiting period for Telkom University alumni to get jobs using decision tree and support vector machine. *Building of Informatics, Technology and Science (BITS)*, *4*(2). https://doi.org/10.47065/bits.v4i2.1963

54. More, S., & Rosenbloom, T. (2020). Job-Field underemployment and career satisfaction: A relationship of cause and effect.*International Journal of Business and Management*, *15*(10), 82. https://doi.org/10.5539/ijbm.v15n10p82

55. Mseleku, Z. (2021). Youth high unemployment/unemployability in South Africa: The unemployed graduates' perspectives. *Higher Education, Skills and Work-Based Learning*, *12*(4), 775–790. https://doi.org/10.1108/heswbl-06-2021-0114

56. Narciso, R. M. C. (2021). Tracer study of BSBA major in human resource management graduates (2017-2020) of UM Tagum College. *IJEBD (International Journal of Entrepreneurship and Business Development)*, *4*(5), 700–712. https://doi.org/10.29138/ijebd. v4i5.1462

57. Pagud-Sarabia, Ma. T., & Bapilar, M. S. (2021). Utilization of Philippine aptitude classification test (PACT) result in career awareness program. *International Multidisciplinary Research Journal*, *3*(2), 16–24. https://doi.org/10.54476/iimrj282

58. Patel, R., Mishra, S., Nikhil Ailani, Mirani, S., Ren, Z., & Mohammed, S. (2024). *Personalized context-oriented job recommendation system based on knowledge graph*. https://doi.org/10.36227/techrxiv.171259571.14656666/v1

59. Penera, L. K. B., Beduya, N. L., Mantos, T. L., & Gulbe, I. L. (2021). The human capital from Cebu Technological University: An employment tracer inquiry. *Cypriot Journal of Educational Sciences*, *16*(5), 2609–2620. https://doi.org/10.18844 /cjes. v16i5.6335

60. Pentang, J. T., Perez, D. R., Cuanan, K. H., Recla, M. B., Dacanay, R. T., Bober, R. M., Dela Cruz, C. E., Egger, S. P., Herrera, R. L., Illescas, C. M., Salmo, J. M., Bucad, Jr., Manuel L., Agasa, J. V., & Abaca, N. 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. https://doi.org/10.11594/ijmaber.03.03.12

61. Posadas, K. F., Osabel, A. C., Cruz, M. T. A. D., Villaflor, M. R. D., Suarez, N. C., Flores, J. T., Maňas, J. L., Yago, C. S., & Adrales, Dr. D. M. (2021). Employability of teacher education graduates of Nueva Ecija university of science and technology, San Isidro campus. *International Journal of Applied Research*, *7*(6), 159–164. https://doi.org/10.22271/allresearch.2021.v7.i6c.8650

62. Pratiwi, R., & Rahmawati, A. (2020). Tracer study of stakeholder responses for evaluation and development of study program curriculum. *At-Taqaddum*, *12*(1), 55. https://doi.org/10.21580/at.v12i1.5281

63. Procurato, J. F., Mar, E., Alamban, A. A., & Mark, J. (2024). The employability of criminology graduates from academic year 2019 to 2023: A tracer study. *EPRA International Journal of Multidisciplinary Research*, *10*(5), 320–333. https://doi.org/10.36713/epra16828

64. Putra, K., Saepudin, P., & Utami, N. G. M. K. (2022). Preferred competencies for tourism and hospitality graduates: Evidence from longitudinal tracer studies. *Journal of Technical Education and Training*, *14*(3), 94–104.

65. Quimilat, M. T. (2023). The diffusion of the interest in the academic disciplines as predictor for the Philippine industries. *The Normal Lights*, *15*(1), 51–75. https://doi.org/10.5 6278/tnl. v15i1.1747

66. Romadlon, F. N., & Arifin, M. (2021). Improving graduate profiles through tracer studies at university. *KnE Social Sciences*, *5*(7), 34–44. https://doi.org/10.18502/kss.v 5i7.9317

67. Roman, A. G., & Villanueva, R. U. (2023). Graduate employment rate of one state university of the Calabarzon region in Philippines: A retrospection. *International Journal of Evaluation and Research in Education (IJERE)*, *12*(2), 667–674. https://doi.org/10.11591/ijere.v12i2.24795

68. Romito, S., Vurro, C., & Benassi, M. (2023). The impact of stakeholder orientation on innovation: An empirical investigation on firm patenting activity. *Sinergie Italian Journal of Management*, *41*(2), 177–199. https://doi.org/10.7433/s121.2023.09

69. Sanchez, J. M. P., Abella, R. C., Nancy, M., Mae, M., & Boholano, H. B. (2023). Exploring the professional development pathways of graduates from the master's programs in education: A tracer study in a center of excellence. *Jurnal Pendidikan Progresif*, *13*(2), 817–832. https://doi.org/10.23960/jpp.v13.i2.202351

70. Sayson, C. J. O., Asilum, W. G., Pintacasi, J. E., Pepania, A. D., & Sumicad Jr., E. H. (2024). Tracer study of bachelor of science in accountancy graduates. *International Journal of Multidisciplinary*, *5*(2), 383–397. https://doi.org/10.11594/ijmaber.0 5.02.02

71. Senekal, J., & Munro, N. (2019). Lessons learnt from two decades of graduate tracer research: Recommendations for the South African context. *South African Journal of Higher Education*, *33*(2). https://doi.org/10.20853/33-2-2628

72. Senkrua, A. (2021). A review paper on skills mismatch in developed and developing countries. *International Journal of Sustainable Development & World Policy*, *10*(1), 8–24. https://doi.org/10.18488/journal.26.2021.101.8.24

73. Shahidan, A., & Ismail, R. (2021). A critical review of the literature on the concept of job mismatch and overeducation. *Journal of Economics and Sustainability*, *3*(1), 33–41. https://doi.org/10.32890/jes2021.3.1.4

74. Soriano, C. R. R., & Cabañes, J. V. A. (2020). Entrepreneurial solidarities: Social media collectives and filipino digital platform workers. *Social media + Society*, *6*(2), 205630512092648. https://doi.org/10.1177/2056305120926484

75. Stroj, A., Briški, M., Reberski, J. L., & Frangen, T. (2023). Regional analysis of tracer tests in the karstic basin of the gacka river (croatian dinaric karst). *Hydrology*, *10*(5), 106–106. https://doi.org/10.3390/hydrology10050106

76. Sueno, H., & Balala, B. M. (2022). Graduates' employability and skills acquisition: Tracer study of BSCS graduates of Notre Dame of Marbel University from 1994 – 2019 for curriculum enhancement. *EPH - International Journal of Science And Engineering*, *8*(8), 9–18. https://doi.org/10.53555/ephse.v8i8.1903

77. Sumiyati, S., & Jaya, F. (2023). Analysis of the relevance of skills and graduate performance (study at the economic education study program of the open university). *Edumaspul: Jurnal Pendidikan*, *7*(2), 5842–5852. https://doi.org/10. 334 87/e dumaspul. v7i2.7470

78. Supriyadi, S., Isnaeni, W., & Rusilowati, A. (2020). *The development of tracer study system for PEP alumni graduate school unnes by online based on the website*. Proceedings of the Proceedings of the 5th International Conference on Science, Education and Technology, ISET 2019. https://doi.org/10.4108/eai.29-6-2019.2290382

79. Tan-Lim, C. S. C., Javelosa, M. A. U., Sanchez, J. T., Dans, L. F., Rey, M. P., Elepano, A. G., Mesa, R. Y. H. D., & Dans, A. L. (2024). Impact of primary care system interventions on healthcare worker satisfaction and intention to stay in the Philippines: A follow-up study. *BMJ Open Quality*, *13*(2), e002788. https://doi.org/10.1136/bmjoq-2024-002788

80. Thirunavukarasu, G., Chandrasekaran, S., Subhash Betageri, V., & Long, J. (2020). Assessing learners' perceptions of graduate employability. *Sustainability*, *12*(2), 460. https://doi.org/10.3390/su12020460

81. Toquero, C. M. D., & Ulanday, D. M. P. (2021). University graduates' assessment of the relevance of the curriculum to the labor market in the philippines. *International Research in Education*, *9*(1), 19–37. https://doi.org/10.5296/ire.v9i1.17421

82. Tuononen, T., & Hyytinen, H. (2022). Towards a successful transition to work—Which employability factors contribute to early career success? *Journal of Education and Work*, *35*(6–7), 1–15. https://doi.org/10.1080/13639080.2022.2126969

83. Valdez, M. L., Paulo, J. B., Vizcarra, E. M., Torres, A. G., & Chloe, P. (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

84. Victoriano, H. T., Posadas, F. C., Migallos, S. F., Reyes, C. S., Campugan, C. E., & Salas, L. F. (2022). Graduate tracer study for the 12 academic programs in the graduate school of San Pedro college, Davao City, Philippines. *Asian Journal of Education and Social Studies*, *35*(1), 44–61. https://doi.org/10.9734/ajess/2022/v35i1747

85. Yektiningsih, E., Risnasari, N., & Tri Wijayanti, E. (2021). Association between personality traits toward culture shock among indonesian caregiver in japan under economic partnership agreement. *Journal Of Nursing Practice*, *5*(1), 146–154. https://doi.org/10.30994/jnp.v5i1.165