



Assessment of PhD Research and Evaluation Program: Insights from the Graduate Tracer Study

Joje Mar P. Sanchez^{1,*}, Jo Ann M. Petancio¹, Marchee T. Picardal^{1,2}, Chery B. Fernandez¹, Helen B. Boholano¹, Remedios C. Bacus³, Michelle Mae J. Olvido¹, Venus M. Cortes¹

¹College of Teacher Education, Cebu, Cebu Normal University

²Institute for Research in Innovative Delivery, Cebu, Cebu Normal University

³Curriculum Development and Enhancements Office, Cebu, Cebu Normal University

Article Info

Article history:

Received Sep 08, 2024

Revised Sep 28, 2024

Accepted Oct 18, 2024

OnlineFirst Oct 29, 2024

Keywords:

Doctor of Philosophy
Research and evaluation
Tracer study

ABSTRACT

Purpose of the study: The study assessed the effectiveness of the PhD in Research and Evaluation (PhD RE) program in a state university in Central Visayas, Philippines by examining the career trajectories and competencies of its graduates from 2017 to 2024.

Methodology: The study utilized a mixed-methods approach, employing online surveys and open-ended questionnaires distributed through Google Forms. Descriptive statistics was used to analyzed quantitative data, while Braun and Clarke's thematic analysis was used for qualitative data.

Main Findings: The main findings indicate that PhD RE graduates excel in research, instruction, and leadership, with most achieving professional advancement. Employers provided positive feedback, highlighting the graduates' critical thinking, problem-solving, and research capabilities.

Novelty/Originality of this study: This study is novel in that it focuses on PhD graduates in Research and Evaluation and offers fresh perspectives on how the degree affects research competencies and career advancement. The study advances understanding on doctorate programs by outlining the need for more mentoring and interdisciplinary collaboration and making recommendations for curriculum enhancements.

This is an open access article under the [CC BY](https://creativecommons.org/licenses/by/4.0/) license



Corresponding Author:

Joje Mar P. Sanchez,
College of Teacher Education, Cebu Normal University,
Osmeña Blvd, Cebu City, 6000 Cebu, Filipina
Email: sanchezj@cnu.edu.ph

1. INTRODUCTION

Graduate education in teacher education is essential to improve the quality of leadership and instruction in the educational system [1]. It gives teachers innovative information, sharp analytical abilities, and the capacity to innovate inside and outside the classroom [2]-[3]. Graduate programs, particularly in education, are well-positioned to meet the changing demands of both teachers and students, creating a more dynamic and effective learning environment as the desire for educational reform and development grows globally, such as through the use of action research in the graduate teacher education [4]-[5]. Graduate education produces a generation of teachers skilled at handling various difficulties in the classroom of the twenty-first century. It also promotes systemic reforms in education systems around the globe [6].

Educational doctorate programs aim to raise the bar for teachers' abilities. These programs are required to produce professionals who can undertake ground-breaking research, apply data-driven solutions to problems in education, and be experts in their subjects [4], [7]. These programs' objectives include developing leaders who

can assess and enhance educational policies and procedures and emphasize academic success. Through demanding coursework, research, and fieldwork, doctoral programs guarantee that their graduates possess the necessary skills to contribute substantially to the international and local educational landscapes [8].

The Doctor of Philosophy in Education program of a state university, which focuses on research and evaluation (PhD RE), is evidence of the university's dedication to academic innovation and excellence. This program aims to produce graduates who can evaluate educational systems, conduct research proficiently, and contribute to creating policies and educational reforms. The program's objectives align with its outcomes, which include developing specialists through empirical study and assessments who can handle challenging academic issues. Graduates of this program should have a keen awareness of evaluation procedures, excellent research understanding, and critical thinking abilities, all of which make them significant assets to academic institutions, governmental agencies, and private businesses [9].

A tracer study on the program's graduates is needed to determine how well the program outcomes match its graduates' actual career trajectories and achievements [10]. A tracer study is crucial for assessing the program's applicability and influence on their professional lives. By tracking their professional journeys, accomplishments, and contributions to the field of education, universities can collect vital information that will guide future developments in curriculum design, instructional strategies, and student support services. In addition, this kind of analysis will point out the program's advantages and possible areas for improvement, ensuring that it continues to adapt to the changing needs of the educational field.

The tracer study's findings are crucial because they show how well the curriculum prepares graduates to be highly qualified academics and influential members of their fields of expertise [11]. These findings will act as feedback for the said state university, enabling it to improve its curricula, highlight its advantages, and fill up any deficiencies of knowledge or assistance. Furthermore, the collected data can aid in developing policies, guaranteeing that educational initiatives stay current and adaptable to regional and worldwide educational issues. The study's conclusions can also be used as a guide by other establishments hoping to improve their graduate education programs.

The graduate tracer study aimed to assess the effectiveness of the PhD RE program at a state university in Central Visayas, Philippines. It evaluated how well the program's outcomes align with the career achievements, professional growth, and contributions to their fields based on their graduates from 2017 to 2024. Specifically, it answered the following questions: 1). What are the personal characteristics of graduates based on their reasons for pursuing the program and the attributes they attained after graduation?; 2). What are the employment characteristics of the graduates regarding their connected institutions, current positions within those institutions, competencies attained relevant to their work, promotions received, and awards or distinctions achieved?; 3). What are the employers' feedback regarding the PhD graduates?; 4). What are the graduates' recommendations to improve the said program?

2. RESEARCH METHOD

The study used a descriptive quantitative and qualitative design to investigate the career paths, employment characteristics, and feedback from PhD RE alums from 2021-2024. This approach enabled the collection and analysis of quantitative data and in-depth qualitative insights from the graduates and employers. Ten of the twelve PhD RE program graduates in the university answered the survey and participated in the open-ended questionnaire. Nine of the graduates' employers also took part, giving a comprehensive picture of the graduates' contributions and performance at work.

Two primary instruments were utilized for data collection in this study as seen in Table 1.

Table 1. Instruments in the Study

Research Instrument	Source	Data Collection Method
Tracer study questionnaire	[12],[13],[14]	Online survey
Open-ended questionnaire	[14]	Online survey

The first was a tracer study questionnaire to capture the graduates' demographic profiles, personal characteristics, and employment attributes. This instrument was adapted from the tracer study models of Reusia et al. [12], Toledo et al. [13], and Sanchez et al. [14]. These sources provided a reliable framework for analyzing the career outcomes of graduates and assessing their professional integration. The second instrument was an open-ended questionnaire based on Sanchez et al. [14] to gather qualitative feedback from the graduates and employers. This tool was crucial for obtaining more profound insights into the program's perceived strengths and areas for improvement and specific feedback on the graduates' performance in real-world settings. Both instruments were administered online using Google Forms to ensure easy access and a streamlined data collection process.

Google Forms platform was used to run an online survey to collect data. The first step in the survey administration methodology was to identify the participants, both the graduates and their respective employers. First, a consent form containing a link to the Google Form questionnaire and an explanation of the study was emailed to the graduates. After consent, the participants were asked to answer the open-ended questions and the tracer research questionnaire. Following the collection of the graduates' responses, an identical email invitation with the open-ended questionnaire was forwarded to the graduates' employers. Follow-up emails were issued to ensure everyone participated and finished the survey within the allotted time. Utilizing an online platform preserved participant convenience while enabling quick and effective data collection.

Both descriptive and thematic analysis techniques were used to examine the data that had been gathered. Descriptive statistics, including frequency and percentage, were employed to summarize the graduates' occupational characteristics, demographic profiles, and other pertinent variables based on the quantitative data obtained from the tracer study questionnaire. This gave a comprehensive picture of the participants' professional paths. Braun and Clarke's thematic analysis approach [15] was used to analyze the qualitative data gathered from the open-ended questionnaires. This technique found essential themes and patterns in the feedback from companies and alums, providing valuable information about their experiences, accomplishments, and suggestions for enhancing the program. Using this two-pronged approach, the study offered comprehensive, context-specific findings and broad patterns regarding the effectiveness and impact of the PhD RE program.

3. RESULTS AND DISCUSSION

3.1. Personal Characteristics

The personal characteristics considered in this tracer study are their reason for pursuing their PhD RE program and the attributes they attained after pursuing such a program. According to Brailsford [16] and Wellington and Sikes [17], the reasons why individuals pursue a doctoral degree are manifold. Table 2 presents their reasons for applying and pursuing this doctorate program.

Table 2. Reasons for Graduates Pursuing the PhD RE Program

Reason	Percentage
Professional advancement	90%
Promotion and career advancement	60%
Strong passion for my profession	40%
Availability of course offering	40%
Status and prestige of the profession	30%
Educational verticalization	20%

Table 1 shows why alums sought PhD RE in the said university. Professional advancement was cited as the primary motivation, with most graduates saying they wanted to increase their experience and knowledge in their field. This suggests that most participants were primarily motivated to develop their careers and gain sophisticated abilities. A sizeable percentage also enrolled in the program for career progression and promotion, indicating a real need to secure better jobs or roles in their careers. These findings are consistent with previous research, which identified professional development and career advancement as reasons why candidates would pursue a doctorate [16],[18]-[19].

Many graduates were also motivated by a strong passion for their line of work, which demonstrated a strong dedication to research and teaching on a personal level. One identified stimulator for enrolling in a doctoral program is a person's inherent interest in their respective field [16]. For many, the course offering's accessibility was just as essential as its availability, indicating that their choice was influenced mainly by the program's accessibility at the time. A considerable portion of graduates stated that the prestige and reputation of their job served as a driving force, suggesting that getting a higher degree also gave them attention in their social and professional circles. Lastly, some graduates desired to match their academic credentials with the best available titles inside the education sector, demonstrating their motivation via educational verticalization. Motives may vary from one individual to another. However, personal development is a solid motivator for obtaining a doctoral degree [19].

The findings indicate that the practical requirement for professional development and career advancement is the main factor influencing the decision to pursue a PhD program. At the same time, program availability and personal passion are also significant considerations. Focusing less on status and educational verticalization emphasizes career rewards rather than symbolic achievements. These results have consequences for PhD programs, suggesting they should keep stressing their contribution to professional skill advancement and career mobility. Concurrently, guaranteeing the accessibility of those programs and acknowledging the enthusiasm and dedication of educators can serve as additional means of endorsing and drawing in prospective applicants.

As shown in Table 3, the graduates attained specific attributes after obtaining the PhD RE degree. Some attributes mentioned herein coincide with the four domains of doctoral value: career, skills, social, and personal values identified by Bryan and Guccione [20].

Table 3. Attained Attributes by Graduates

Attribute	Percentage
Less-supervised worker	90%
Researcher	90%
New knowledge generator	80%
Self-reliant and resilient	80%
Innovative agent of change	70%
Committed to excellence	60%
Informed judge on complex issues	60%
Quick thinker	50%
Risk-taker	40%

Table 3 lists the primary competencies PhD RE program graduates acquired, focusing on research and evaluation. As a result of the program, most graduates reported being able to operate with little supervision, demonstrating a high degree of independence and self-management. A personal value of earning a doctorate is the development of one's identity [20] and the impact on making them more reflective at work [17]. Similarly, other graduates emphasized how the program had helped them grow as researchers, showing their success in building robust research abilities and a thorough comprehension of inquiry-based methods. Some graduates also stated that they generated new information, proving their capacity to offer innovative concepts and solutions to education. Horta [21] mentions how post-doctoral researchers are producing more scientific outputs and breakthroughs. Many alumni reported that the program had helped them become more independent and resilient in addition to these intellectual skills, which enhanced their confidence and capacity to overcome obstacles in both academic and professional contexts. This concurs with the findings of Bryan and Guccione [20], which state that resilience is developed when obtaining a doctoral degree that is beset with challenges.

Moreover, many graduates identified as innovative and positive agents of change, highlighting their ability to spearhead change and introduce novel workplace strategies. Positive views on change impact education positively [33]. The graduates also demonstrated a solid dedication to excellence, which indicates their high expectations for themselves in their careers. A comparable proportion of graduates believed they had developed into knowledgeable judges who could examine and decide on complex cases in education and other fields. Some grads farther down the list described themselves as quick thinkers, showcasing their capacity to react to issues quickly and efficiently. Lastly, a smaller subset of graduates identified as risk-takers, suggesting that although this trait was less prevalent, it was nonetheless relevant to how some graduates viewed opportunities and difficulties. These findings prove that skills are valuable as a domain of doctoral value [20]. Graduates acquire various skills [17], whether transferable or project-based [20]. Furthermore, Rosenfield and Glassman [22] found that PhD graduates regard attaining their degree as highly beneficial.

The findings imply that the program promotes many crucial qualities, including resilience, independence, and research proficiency. Success in leadership and research positions in education requires these qualities. The curriculum trains graduates to meet and surpass professional standards, as evidenced by its focus on becoming an innovative change agent and a dedicated professional. While creativity and invention are fostered, graduates may have a more conservative attitude toward risk, given their comparatively lesser association with being risk-takers. These results suggest that the curriculum and structure of the program are very effective in producing well-rounded professionals who are prepared to impact the educational field significantly. Still, there might be space for additional encouragement of measured risk-taking, which might spur even more innovation in their particular domains.

3.2. Employment Characteristics

Crucial to any tracer study are the employment characteristics of the graduates, as these characteristics inform the impact of the PhD RE program on their teaching function and other tasks. A doctoral degree provides professional credibility and enhances career value [20]. The institution where the graduates are connected now can describe the graduates. The type of institutions where they are connected is presented in Table 4.

Table 4. Institutions of the PhD RE Graduates

Type of Institution	Percentage
State university	30%
Health-related institutions	30%
Public basic education	20%
Private higher education	10%
Department/ Ministry of Education	10%

Table 4 shows the distribution of PhD RE graduates focusing on research and evaluation among different schools. Many graduates have decided to pursue careers in public higher education, as seen by the large percentage of graduates working at state universities. This shows that the curriculum gives graduates the innovative abilities to support leadership, teaching, and academic research in state-run institutions. A similar proportion of graduates are employed by health-related organizations, demonstrating the transdisciplinary value of their training. This suggests that the graduates' research and evaluation competence can be applied in fields outside of education, especially in the healthcare industry, where thorough research and evaluative abilities are highly needed for program assessments and policy creation. A doctoral degree fosters project-based skills and knowledge [20], enabling them to take on significant roles in workplace ventures and endeavors.

A smaller cohort of graduates works in public basic education, influencing how curricula are created, how well teachers are trained, and how well students perform in elementary and secondary institutions. This demonstrates how the graduates have an impact at the basic levels of schooling, where their advanced knowledge can lead to notable advancements. A few graduates work in private universities, illustrating the program's adaptability in preparing students for jobs in various educational environments. The fact that some graduates work in the Department or Ministry of Education highlights their influence over academic policy and reform since their knowledge of assessment and research is essential for creating initiatives and plans supported by data. Doctoral degrees significantly impact teachers as professionals and, indirectly, their students [19].

According to the results, the curriculum effectively prepares graduates for a wide range of professional positions in the public and private sectors and specialized industries like government and healthcare. The graduates' abilities are widely applicable, as seen by their substantial representation in state universities and health-related institutions, and their direct contribution to educational reform and development comes from those working in public education and government responsibilities. These results suggest that the PhD RE program gives its alums the adaptability and competence required to succeed in various professional settings and positively impact changes in education and related sectors. A PhD increases graduates' professional awareness and satisfaction [17] while providing them with knowledge and experience in specific fields or sectors [20].

Just like the institution where graduates work, the current teaching position can also inform about their employment description. The current positions of the graduates are posited in Table 5.

Table 5. Current Positions of PhD RE Graduates

Position	Percentage
Associate Professor	20%
Research Chair	20%
Master Teacher	20%
Nurse V	10%
Assistant Schools Division Superintendent	10%
Others (Health-related Clerk in Canada)	10%
None (Pursuing Law)	10%

Table 5 presents a comprehensive range of professional jobs the PhD RE alums hold. Significant numbers of the graduates have gone on to hold prestigious academic posts, including research chairs and associate professorships, proving that the curriculum adequately equipped them for leadership roles in higher education and research. These jobs reflect their contributions to academia since they are engaged in research, teaching, and scholarly project leadership. Doctoral degree holders are increasingly integrated into scholarly communities as their research productivity grows [21]. A different cohort of graduates holds Master Teacher roles, indicating their noteworthy impact on public education. In this capacity, they assist in creating instructional strategies, enhancing curriculum, and providing mentorship to fellow educators. This demonstrates how the program prepares its graduates to be elementary and secondary education leaders. While doctoral-level teachers recognize the value of their degree individually, it has also impacted their school community [19].

Additionally, a few alumni have chosen to work in specialized professions outside of education, like nursing, illustrating the program's adaptability and usefulness in various fields. This suggests that the program's research and assessment abilities are helpful in the healthcare industry, where leadership and evidence-based methods are essential. One alumnus is employed in Canada as a health-related clerk to demonstrate the diversity

of the program's alumni. Significant administrative positions, such as Assistant Schools Division Superintendent, are held by a lower percentage of alums, demonstrating the program's capacity to train people for educational management and policymaking leadership roles. A third alumnus is pursuing a career in law, suggesting that the curriculum has furnished a robust groundwork for venturing into varied career trajectories beyond academia and research. A doctoral degree opens up new career opportunities while expanding one's network and social circle [20].

According to the findings, graduates of the PhD RE program can pursue career transitions into other professions like law and assume leadership responsibilities in various sectors, including education and health. The variety of jobs demonstrates how well the curriculum develops a broad skill set that equips graduates with multiple career options. The results suggest that the curriculum encourages the flexibility graduates need to succeed in multidisciplinary and global environments and support careers in academia and research.

As shown in Table 6, the PhD RE graduates also obtain essential and functional competencies in their current work.

Table 6. Attained Competencies Functional in the Current Work

Competency	Percentage
Critical thinking skills	90%
Problem-solving skills	90%
Research writing skills	80%
Communication skills	70%
Human relation skills	60%
Intercultural and international communication	30%

The necessary competencies in research and evaluation that the PhD RE degree graduates found helpful in their current employment are highlighted in Table 6. Critical thinking and problem-solving are the most often mentioned capabilities; most graduates consider them essential to their professional positions. This shows that the curriculum successfully develops the capacity to comprehend complicated problems, reach well-informed conclusions, and tackle difficulties with a systematic and organized attitude. Many alums also cited research writing abilities as crucial to their employment, demonstrating how well the curriculum prepared them for academic or workplace research activities. This ability is essential for people working in educational institutions or other industries where generating high-caliber research outputs is needed. These results concur with Bryan and Guccione [20], who identified “report writing, abstract cognitive skills, and critical thinking” as some of the skills honed among doctoral graduates. Furthermore, Jalongo [23] emphasizes how doctoral candidates engage in scholarly writing and collaborate with others to become prolific researchers.

Communication abilities were also highly regarded, highlighting the significance of expressing ideas succinctly and effectively orally and in writing. This demonstrates how the curriculum helps graduates become more adept at communicating complex ideas, working with others, and presenting research to various audiences. Constructing arguments and writing reports are also among the skills that Bryan and Guccione [20] identified to contribute further to doctoral value. Additionally, many graduates listed human relations abilities as advantageous, indicating that their professional performance largely depends on their capacity for effective interpersonal communication and teamwork. This is especially crucial for positions requiring management of connections inside and outside organizations, teamwork, and leadership. However, fewer graduates believed that intercultural and international communication was helpful in their current positions. Despite being less often mentioned, this competency emphasizes the value of cross-cultural awareness and the capacity for successful communication in a diverse, international workplace.

The findings suggest that graduates of the PhD RE program are effectively prepared with a robust set of competencies that they may use in various professional settings. The program's emphasis on preparing students for professions requiring analytical rigor and evidence-based decision-making is reflected in the focus on research writing, critical thinking, and problem-solving skills. Furthermore, the significance of human relations and communication skills indicates that the curriculum can produce well-rounded professionals who can successfully negotiate interpersonal dynamics. Intercultural communication is a relevant competency, suggesting that some graduates are employed in multinational or international settings and emphasizing the universal application of the skills. These results imply that the curriculum equips graduates with the essential skills required for success in academic and multidisciplinary domains.

Promotion and opportunity for position designation are some positive impacts of graduating with a PhD RE degree. Table 7 presents the extent to which promotion or designation was given to them.

Table 7. Promotion/Designation of PhD RE Graduates after Graduation

Promoted or Designated?	Percentage
Yes	70%
No	30%

Following degree completion, the PhD RE graduates are shown in Table 7 with their promotion or designation status. Most alums obtained new designations or promotions, demonstrating the program's strong influence on their ability to develop in their careers. This shows that the skills and credentials acquired during the PhD program are highly regarded in their respective sectors, allowing them to advance into more senior roles or take on greater company responsibilities. Career advancement is a motivator for pursuing doctoral studies [18] and one of the advantages of earning a doctorate [17]. However, numerous reasons could be involved in the reduced percentage of graduates who needed to see changes in their designation or promotion. Before finishing the program, some of these graduates held higher-level employment, which reduced their urgent need for additional promotion. Others might need to work in their existing positions for a certain amount of time or years before they can be promoted, depending on company standards or career advancement frameworks.

The findings suggest that many graduates' career paths are improved by the PhD RE program, setting them up for higher positions in academia, education, or related fields. The program's focus on leadership, critical thinking, and research makes them more qualified for higher positions. However, rather than a lack of credentials or abilities, external variables like current seniority or time-based promotion criteria are at work for those who have yet to be promoted. For most of its graduates, the program is essential to their professional development; others may gain gradually due to organizational or structural mandates.

Specific awards and distinctions were given to the graduates during their PhD RE education and even beyond graduation. The categories of awards are presented in Table 8.

Table 8. Awards and Distinctions of the PhD RE Graduates

Award/Designation	Percentage
Excellence in Research and Publications	90%
Excellence in Instruction/Teaching	80%
Excellence in Innovations and Inventions	50%
Excellence in Extension Services	40%
Excellence in Academic Leadership	20%

Table 8 shows the distribution of honors and distinctions among the PhD RE graduates across different fields of specialization. Most graduates are recognized in the most important category: the distinction in publishing and research. This highlights the program's strong emphasis on academic writing, critical thinking, and research skills, all crucial elements of the PhD RE curriculum. Graduates have demonstrated a definite ability to produce research of a high caliber respected in academic circles, demonstrating the program's efficacy in encouraging scholarly productivity. Being a prolific researcher, as manifested in the increase of intellectual outputs, happens postdoctoral [21].

Similarly, high standards of instruction and teaching come next, underscoring the graduates' essential contributions to the field of education. Numerous grads have received recognition for their educational contributions, demonstrating their capacity to use innovative pedagogical techniques and enhance student learning. Kowalczyk-Waledziak et al, report that teachers with doctoral degrees positively impact students' learning outcomes [19]. This suggests that the curriculum gives graduates the skills necessary to succeed in teaching positions and prepares them for research, improving the caliber of education in their respective institutions.

With the respect and status of a doctoral degree, graduates gain social value [20] and, as a result, recognition among their peers. Notable recognition has also been given to innovations and inventions, with half of the graduates receiving distinctions in this field. This illustrates how the program encourages innovative approaches to problem-solving and the translation of scientific discoveries into useful inventions. Graduates who have excelled in this area probably add to the development of new models, technologies, or instructional methods that improve education. Though rare, awards for excellence in extension services acknowledge graduates' contributions to the community and use of their knowledge outside of the classroom. This award highlights their contributions to the advancement of society, frequently via cooperative initiatives that deal with pressing problems. Lastly, a lesser percentage of the graduates have received recognition for their outstanding work in academic leadership. This implies that even if many graduates do not prioritize leadership, a small percentage have assumed essential leadership positions in educational institutions. These people impact academic programs, policy, and the future of education more broadly. This could be attributed to the doctoral value dimension of skills value, which requires graduates to acquire skills, competencies, and behaviors that can be transferred or applied in any field or discipline [20].

These findings imply that the PhD RE program prioritizes strengthening research skills, providing excellent instruction, and encouraging creativity. The accomplishments of graduates in these fields show how well the program prepares well-rounded individuals who make significant contributions to the community and academia. However, the lower percentages in leadership and extension services point to areas that require greater attention to motivate more graduates to take up leadership roles and community-based initiatives. Overall, the curriculum yields graduates with diverse talents highly sought after in various professional settings.

3.3. Employer Feedback

The employers provided feedback on the quality of the PhD RE graduates. Three themes about this feedback emerged from the analysis: (1) Outstanding and dependable performance, (2) Leadership and management skills, and (3) Extensive expertise and technical proficiency.

Theme 1- Outstanding and Dependable Performance

Numerous employers emphasized the graduates' outstanding performance, highlighting their initiative and dependability. Graduates are honored for fulfilling and surpassing expectations in their positions. This degree of achievement shows that the PhD RE program contributed to the alums' know-how to flourish in their fields by using what they have learned in practice and research. Some mentioned:

“The graduate shows good performance, is dependable, and consistently takes the initiative in every task.” (Employer 3)

“We consider them outstanding in their role; they are always willing to go above and beyond what is expected.” (Employer 7)

The PhD graduates exhibit strong work ethic and dependability—qualities highly valued in professional environments. Their capacity for initiative reflects independence and leadership potential, likely nurtured by the program's focus on critical thinking and research. The outstanding performance of these graduates elevates the prestige of the PhD RE program, showcasing its success in producing top-tier experts. Institutions often design courses and programs to equip graduates with critical competencies for the workforce and society [24], [32]. In the case of the PhD RE program, the exceptional work of its graduates further reinforces its reputation for cultivating expert professionals.

Theme 2- Leadership and Management Skills

Employers observed that graduates can take on more responsibility inside their organizations due to their outstanding leadership and management skills. Along with subject matter competence, the curriculum has imparted team management and leadership skills, essential in organizational and educational environments. This is consistent with the findings of Parcasio et al. [25] that a doctorate program can contribute to developing professional competencies, including management and leadership. Some of the statements that support this are as follows:

“They exhibit good leadership and management skills, effectively directing projects and people.” (Employer 1)

“The graduate has shown impressive leadership capabilities, often taking charge of complex situations and ensuring successful outcomes.” (Employer 8)

The graduates' leadership abilities demonstrate the program's emphasis on producing well-rounded individuals who can assume essential responsibilities in both academic and non-academic settings. Their capacity to manage projects and lead teams proves that the curriculum successfully develops intellectual and practical leadership skills [34]. Because of their ability to meet the requirements of more senior roles, graduates are in high demand within their fields.

Theme 3- Extensive expertise and technical proficiency

Employers' comments also frequently highlight the graduates' solid foundation of subject-matter knowledge and proficiency. Graduates are commonly seen as highly knowledgeable and essential for people working in fields like teaching and research, where having specialized knowledge and content mastery are crucial.

“The graduate is very knowledgeable in their field, offering invaluable insights to the institution.” (Employer 4)

“They demonstrate excellent expertise in their area, and their knowledge continues to grow through ongoing research.” (Employer 9)

This theme reflects the rigorous academic standards of the PhD RE program, which guarantees that graduates can address real-world problems with their expertise and be skilled researchers. Feedback indicates that graduates can navigate their profession confidently and contribute consistently to research and education developments. The companies highly value the graduates' competence, clearly showing the program's focus on

critical inquiry and topic mastery. Lastly, this indicates that the PhD RE Program is successful in achieving their field [26].

3.4. Graduates' Recommendations

The doctorate graduates provided feedback on how the PhD RE could be improved to cater to the current needs of the students and trends in society. These feedbacks were analyzed, and the following themes arose: (1) Enhancing research opportunities and collaboration, (2) Curriculum balance and research focus, (3) Mentoring and research development, (4) Incorporating technology and data science, and (5) Clear dissertation guidelines and early research proposal.

Theme 1- Enhancing Research Opportunities and Collaboration

Many graduates recommended emphasizing more experiential learning opportunities, community-based research, and multidisciplinary teamwork. They stressed the significance of practical applications and collaborating across disciplines to make a difference in society. This shows that the graduates want PhD RE program to provide them with more hands-on, collaborative research experiences so they may use what they have learned in various contexts. Some of their statements are as follows:

“More community-based research, more on collaborative work that creates impact in society.” (Participant 1)

“Offer opportunities for students to work on interdisciplinary research projects across fields like public health, social work, and technology.” (Participant 10)

These recommendations show how important it is to include more practical research in the curriculum so that students can work together on cross-disciplinary projects. Collaborative research opens up new avenues for student assessment. It makes it possible for evaluations to be more accurate to real-life challenges by creating assessment activities that resemble those done by researchers and practitioners [27]. These improvements could increase the program's applicability to current issues and promote better knowledge of how research can advance society. Increasing community engagement and collaboration would improve the practical aspect of the curriculum, equipping students with the ability to make meaningful contributions to diverse sectors.

Theme 2- Curriculum Balance and Research Focus

Graduates also made a significant remark regarding the curriculum's balance between research and evaluation. Some program alumni expressed the opinion that the "evaluation" component was underemphasized and recommended that more courses on evaluation studies be added to the curriculum to meet the research aspect's level of rigor.

“In my curriculum, there was only one course for evaluation, and that is it. For me, it was not enough to give justice to the ‘Evaluation’ part of my program.” (Participant 4)

“Strike a balance between research and evaluation. PhD R&E graduates should be well-versed in evaluation studies as well.” (Participant 5)

According to this feedback, the curriculum might benefit from a more thorough emphasis on evaluation to guarantee that graduates are equally skilled in research and evaluation techniques. According to Wanzer [28], evaluation differs from research in terms of purpose, audience, providing recommendations, dissemination, and generalization of results. Therefore, extending to the evaluation area would better prepare students for positions requiring in-depth evaluation abilities, making them more adaptable and well-rounded professionals. Enhancing the curriculum's assessment element will improve the program's overall quality and bring it closer to the goals it was designed to achieve.

Theme 3- Monitoring and Research Development

Throughout the program, graduates said that they needed more mentoring, especially in the early phases of developing their studies. They proposed that early mentorship could assist students in identifying their research niche and gaining competence in a particular field, ultimately resulting in a more robust and focused dissertation.

“Make mentoring part of the program. It should start early, helping students conceptualize and develop their research niche.” (Participant 4)

“Mentoring should guide students to explore research interests and conduct small-scale research related to their dissertation.” (Participant 2)

This suggestion suggests that graduates would profit from a more controlled mentoring program that could help them as they pursue their studies. Early assistance may result in more specific knowledge, which would aid students in identifying a focused area of research and raise the standard of their dissertations while allowing flexibility to accommodate their changing needs and requests [29]. Increasing the program's mentoring structure may boost research output and strengthen participants' self-assurance when investigating.

Theme 4- Incorporating Technology and Data Science

A few alum graduates integrated cutting-edge technology into the course for data interpretation and analysis. To help graduates handle big, complicated datasets more skillfully, they suggested including training in artificial intelligence, machine learning, and data visualization.

“Use the latest technology to analyze and interpret data in instruction.” (Participant 3)

“Incorporate training in data visualization, machine learning, and artificial intelligence to analyze large and complex datasets.” (Participant 9)

These recommendations reflect the increasing significance of technological competence in contemporary research. Big data science and technologies contribute to research development and innovations in various disciplines, including education and management science [30]. With this, advanced data analysis methods and technologies can be included in the curriculum to give graduates cutting-edge abilities that are increasingly important in academic and professional research environments. As a result, they would be more competitive in the employment market and able to handle complex data more effectively.

Theme 5- Clear Dissertation Guidelines and Early Research Proposal

Graduates also suggested that students be given an adviser immediately and should have a well-defined research topic for their dissertation when admitted. This would expedite the study process and provide direction early on.

“Upon admission to the program, a clear research proposal for the dissertation must be presented and an adviser assigned.” (Participant 5)

“This would lead to better research development and ensure students are well-prepared for their dissertation by the end of the program.” (Participant 10)

This recommendation implies that students may have a better focused and organized research journey if advisers were assigned at the program's start and explicit rules were provided. Early preparation and mentoring would enhance the dissertations' quality, supporting Saeed et al.'s findings [31]. It would also highlight good experiences among doctoral students as they learn while they think about their research, boosting interest and confidence in their field. With this, students are guaranteed to become ready to take on their research projects successfully.

4. CONCLUSION

The Doctor of Philosophy in Education in Research and Evaluation (PhD RE) graduates have proven exceptionally skilled in research, teaching, innovation, and leadership. Their participation in the program gave them research, problem-solving, and critical thinking abilities that helped them succeed in their careers. Employers regularly gave positive feedback and commended their professional knowledge, initiative, and leadership skills. The outcomes demonstrate how well the PhD RE program has prepared its graduates for senior positions in research and teaching overall.

The tracer study offered many valuable recommendations based on its findings. The program would be strengthened even more by adding more practical and community-based research, interdisciplinary partnerships, and a stronger focus on evaluation studies to the curriculum. Mentoring should be incorporated into the curriculum to assist students in identifying their research specialty early on. Furthermore, integrating cutting-edge technologies, especially in data analysis, and offering more precise instructions for dissertation preparation from the program's start will better equip students for the demands of research and obstacles in the workplace.

The study had several limitations, primarily concerning the sample size and the level of employer input, given the small number of graduates from the program. To address this, the state university should strengthen the PhD program by incorporating the recommendations of the graduates outlined in this tracer study. If the number of graduates remains low, a more comprehensive analysis of these graduates, including additional employer feedback, could be conducted. Additionally, a longitudinal study examining the long-term effects of the PhD RE program on graduates' careers might provide a deeper understanding of the program's impact over time.

ACKNOWLEDGEMENTS

The authors thank the university graduates and employers for participating in the study.

REFERENCES

- [1] F. Ö. M. Sevim, U. Akin, “The role of graduate education in professional development of teachers: is graduation enough?”, *Egitim ve Bilim*, vol. 46, 2021, doi: 10.15390/EB.2021.9593.
- [2] J. M. Shosh, C. R. Zales, “Graduate teacher education as inquiry: A case study”, *Teach Educ*, vol. 18, pp. 257-275, 2007, doi: 10.1080/10476210701535071.
- [3] S. Friesen, M. Jacobsen, “Collaborative design of professional graduate programs in education”, *Int J Design Learn*, vol. 12, pp. 64-76, 2021, doi: 10.14434/ijdl.v12i1.25778.

- [4] N. M. Trautmann, M. E. Krasny, "Integrating teaching and research: A new model for graduate education?", *BioScience*, vol. 56, pp. 159-165, 2006, doi: 10.1641/0006-3568(2006)056[0159:ITARAN]2.0.CO;2.
- [5] M. Vaughan, G. Burnaford, "Action research in graduate teacher education: A review of the literature 2000–2015", *Educ Action Res*, vol. 24, pp. 280-299, 2016, doi: 10.1080/09650792.2015.1062408.
- [6] S. J. Underwood, C. E. Austin, "Higher education graduate preparation programs: characteristics and trends", *J College Stud Dev*, vol. 57, pp. 326-332, 2016.
- [7] H. Byrnes, "Reconsidering graduate students' education as teachers: 'It takes a department!'", *Modern Lang J*, vol. 85, pp. 512-530, 2001, doi: 10.1111/0026-7902.00123
- [8] L. Cassuto, R. Weisbuch, *The new PhD: How to build a better graduate education*, Johns Hopkins University Press, 2021
- [9] J. S. Senekal, E. Munnik, J. M. Frantz, "A systematic review of doctoral graduate attributes: domains and definitions", *Front Educ*, vol. 7, doi: 10.3389/educ.2022.1009106.
- [10] T. S. Guiamalon, "Graduate education programs: its relation to graduates work competencies in the workplace", *Int E-J Adv Educ*, vol. 7, pp. 58-66, 2021, doi: 10.51508/intess.202123.
- [11] A. C. Gines, "Tracer study of PNU graduates," *Am Int J Contemp Res*, vol. 4, pp. 81-98, 2014.
- [12] D. H. R. Reusia, D. V. Rogayan, K. P. Andres, "Science education graduates of a state university from 2008-2018: a tracer study", *The Normal Lights*, vol. 14, 2020, doi: 10.56278/tnl.v14i1.1496.
- [13] Z. M. G. U. Toledo, M. F. M. Sualibio, Z. P. Boral, Q. O. Asuncion, R. R. Belecina, "A tracer study of the PNU graduates of the BSMT and BSE Math programs from 1985-2010", *The Normal Lights*, vol. 7, pp. 79-96, 2013
- [14] J. M. P. Sanchez, R. C. Abella, M. N. Q. Cadosales, M. M. J. Olvido, H. B. Boholano, "Exploring the professional development pathways of graduates from the master's programs in education: inputs for curricular enhancement", *Jurnal Pendidikan Progresif*, vol. 13, pp. 817-832, 2023, doi: 10.23960/jpp.v13.i2.202351.
- [15] V. Braun, V. Clarke, "Using thematic analysis in psychology", *Qual Res Psychol*, vol. 3, pp. 77-101, 2006, doi: 10.1191/1478088706qp063oa.
- [16] I. Brailsford, "Motives and aspirations for doctoral study: Career, personal, and inter-personal factors in the decision to embark on a history PhD", *Int J Doctor Stud*, vol. 5, pp. 15-27, 2010, doi: 10.28945/710.
- [17] J. Wellington, P. Sikes, "A doctorate in a tight compartment': Why do students choose a professional doctorate and what impact does it have on their personal and professional lives? ", *Stud High Educ*, vol. 31, pp. 723-734, 2006, doi: 10.1080/03075070601004358.
- [18] C. Guerin, A. Jayatilaka, D. Ranasinghe, "Why start a higher degree by research? An exploratory factor analysis of motivations to undertake doctoral studies", *High Educ Res Dev*, vol. 34, pp. 89-104, 2015, doi: 10.1080/07294360.2014.934663.
- [19] M. Kowalczyk-Walędziak, A. Lopes, I. Menezes, N. Tormenta, "Teachers pursuing a doctoral degree: Motivations and perceived impact", *Educ Res*, vol. 59, pp. 335-352, 2017, doi: 10.1080/00131881.2017.1345287.
- [20] B. Bryan, K. Guccione, "Was it worth it? A qualitative exploration into graduate perceptions of doctoral value", *High Educ Res Dev*, vol. 37, pp. 1124-1140, 2018, doi: 10.1080/07294360.2018.1479378.
- [21] H. Horta, "Holding a post-doctoral position before becoming a faculty member: does it bring benefits for the scholarly enterprise? ", *High Educ*, vol. 58, pp. 689-721, 2009, doi: 10.1007/s10734-009-9221-1.
- [22] P. Rosenfeld, K. S. Glassman, "Why pursue a doctorate? findings from a study of doctorally prepared RNs in an integrated healthcare system", *JONA J Nurs Admin*, vol. 54, pp. 286-291, 2024, doi: 10.1097/naa.0000000000001425.
- [23] M. R. Jalongo, "Scholarly publication during doctoral candidature: obstacles, benefits, and strategies for success", *Early Child Educ J*, vol. 1, 2024, doi: 10.1007/s10643-024-01724-7.
- [24] R. B. Paixão, M. A. D. Souza, "Impact of programs on competency, career, and income on management graduates", *RAUSP Manage J*, vol. 53, pp. 441-458, 2018, doi: 10.1108/rausp-04-2018-004.
- [25] I. G. Parcasio, R. B. Dolendo, B. A. Langaoen, P. A. Lubrica, "Pathways to a succesful career: unveiling the postgraduate journey—a tracer study", *Soc Sci Hum Educ J*, vol. 5, pp. 129-143, 2024, doi: 10.25273/she.v5i1.19223.
- [26] Commission on Higher Education, "CHED Memorandum Order No. 15, series of 2019".
- [27] P. M. Gilmour, "Enhancing research collaboration within a large university department", *Innov Educ Teach Int*, vol. 61, pp. 622-635, 2024, doi: 10.1080/14703297.2023.2209064.
- [28] D. L. Wanzer, "What is evaluation?: perspectives of how evaluation differs (or not) from research", *Am J Eval*, vol. 42, pp. 28-46, 2021, doi: 10.1177/1098214020920710.
- [29] R. D. Brown, R. L. Geesa, K. R. McConnel, "Creating, implementing, and redefining a conceptual framework for mentoring pathways for education doctorate students", *High Learn Res Comm*, vol. 10, pp. 20-37, 2020, doi: 10.0.73.182/hlrc.v10i2.1188.
- [30] Z. Xu, N. Tang, C. Xu, X. Cheng, "Data science: connotation, methods, technologies, and development", *Data Sci Manage*, vol. 1, pp. 32-37, 2021, doi: 10.1016/j.dsm.2021.02.002.
- [31] M. A. Saeed, A. A. M. Ah-Ahdal, H. S. Al Qunayeer, "Integrating research proposal writing into a postgraduate research method course: what does it tell us?", *Int J Res Method Educ*, vol. 44, pp. 303-318, 2021, doi: 10.1080/1743727X.2020.1777963.
- [32] E. Ariani, B. Patrick, M. Karimi, "Evaluation of using Odua Weston Jambi Hotel services: the influence of internship student service quality on consumer satisfaction", *J Eval Educ*, vol. 5, pp. 61-67, 2024, doi: 10.37251/jee.v5i2.929.
- [33] A. Ramadhanti, "Literature study: application of positive psychology to the field of education in Indonesia", *J Eval Educ*, vol. 4, pp. 62-67, 2023, doi: 10.37251/jee.v4i2.312.
- [34] I. A. Jama, "The effect of school leadership on student's academic achievement: case study Bosaso secondary schools in Puntland", *J Eval Educ*, vol. 4, pp. 36-39, 2023, doi: 10.37251/jee.v4i1.291.