

Effectiveness of Online Colloquia in Improving the Research Dissemination Skills of Graduate Students

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Abstract

One of the significant problems in the academe is the under-preparedness of graduate students for academic research dissemination. Hence, online research colloquia were designed, implemented, and evaluated along with their effectiveness in improving the research dissemination skills of graduate students. Action research was adopted for this study. A needs analysis was conducted through an online survey, revealing that most trainees are not yet thoroughly knowledgeable about the research process and dissemination strategies and techniques. To change this profile, online colloquia, functioning as an intervention strategy was implemented and participated by 21 graduate students from a professional doctorate program of a state university. Such intervention was in the form of a 12-hour online colloquia that ran for four consecutive Saturdays. The intervention resulted in opportunities to learn new approaches to research conceptualisation and dissemination, to collaborate with mentors in diversifying research dissemination strategies, and serve as a springboard for the university's graduate school to adopt this innovative intervention as a regular and annual event. Online colloquia were a necessary intervention that enabled students to incorporate research dissemination as an essential step in the research process.

Keywords: *graduate students, online colloquia, research dissemination, research publication*

1. Introduction

The lack of research dissemination skills among graduate students has led to many contemplations and institutional self-reflection about the scholarly competence, training needs, and innovative programs for graduate students on research dissemination (Trainor & Graue, 2014; Song et al., 2010). In the Philippines, the Commission on Higher Education (CHED) even issued a memorandum encouraging the country's public and private schools' capacity to train graduate students in teaching doctoral students to become equipped in various research dissemination activities (CHED, 2019). However, such policy has not been an imposed requirement across the country as master's and doctoral students can still graduate despite the lack of research dissemination outputs. Research dissemination remains a discretionary requirement and, as practiced, is interpreted as an oral defense of findings among thesis panel members and doctoral candidates. Hence, there is a need to problematise graduate students' knowledge, attitude, and skills about research dissemination as an essential part of the research process.

Policies, standards, and guidelines for higher education institutions in various state-run and private institutions led to many wake-up calls across state and private universities and colleges to include research dissemination courses in the bachelor, master's, and doctoral programs. In this context, Washington State University provides opportunities for research dissemination through publications and

presentations. Likewise, travel awards are provided for conference presentations beyond the university. In the case of the University of the Philippines Diliman, it has enabled a Research Dissemination Office to help the university publish research outputs, incentivise publications, and promote research dissemination (OVCRD, 2022). Likewise, Sorsogon State University, among other state colleges and universities in the country, included research publications and presentations as graduation requirements in graduate school. However, the overall dissemination and utilisation of research are still beset with leadership, management, access to dissemination tools, research resources, and researcher motivation issues (Clores, 2021, p. 330). Hence, colleges and universities are encouraged to explore various dissertation formats to improve the dissemination of research outputs (Smaldone, Heitkemper, Jackman, et al., 2019).

Research dissemination is not a new concept among higher education institutions. Past findings have shown that dissemination has been part of the effective communication of research outputs and utilisation in the Philippines (Fetalver, 2010). Indeed, practice-based or action research dissemination is integral to the action research process. Likewise, other practitioners and scholars can benefit from action research by disseminating innovations, lessons learned, and empirical research (Henriksen and Mishra, 2019). The significance of action research, aside from the traditional research impact occurring at the end of the project, is embedded in the participatory nature of action research, the collaborative roles of researchers, informants, and users, and its collective impact (Banks, Herrington & Carter, 2017). The research dissemination process enables researchers to critique, strengthen and expand arguments of frameworks and theories, thereby strengthening the academic fields.

2. Literature Review

Research dissemination is both a process and an output aimed at facilitating the research uptake for the benefit of the intended beneficiary that is accomplished through traditional and innovative academic publishing and conferences (Ross-Hellauer et al., 2020 & Wilson et al., 2010). The research dissemination process is compounded by the challenges brought about by technological innovations to the researcher in promoting and disseminating research. Likewise, according to Gastel and Day (2016), the decisions on where to submit the manuscript for publication may be decided by access, prestige, impact factor, frequency of publication, and the likelihood of acceptance. Furthermore, regarding paper presentations, abstracts describing the most vital research and abstract representing good work of lower priority due to peer review are asked to give oral and poster presentations, respectively. Eventually, the platforms and strategies for research dissemination are decided by the capacity of the researchers to meet the standards for a publishable paper and intended outcome.

There are different types and platforms for research dissemination. Cooper (2014) identified the types of research dissemination through face-to-face interaction and by engaging niched and general audiences in media outlets. Dissemination happens through online technological platforms, social media, and other intermediary organisations. These types come with their strengths and challenges, but all of them play essential roles in letting various kinds of audiences appreciate, learn, and use research outputs. Innovative research dissemination strategies of action researchers are used to advance knowledge, improve concrete situations, and expand behavior science methodology (Sommer, 2009). Google Scholar (Zientek et al., 2018) and social media dissemination platforms (Cooper, 2014) are some of the online strategies that have improved the exposure of academic research. Given the value of these research dissemination platforms, it is crucial to investigate the nature of these dissemination efforts and how these impact the researchers, research participants, and other stakeholders. A look into the varied nature and characteristics of the dissemination forms may help improve the research dissemination skills of action researchers.

Further, the research colloquium, a form of dissemination, remained a relevant, effective, and efficient pedagogical academic strategy for improving researchers' research writing and presentation skills. It may also be a writing seminar designed to address the lack of research training and mentorship for many junior investigators (Balon et al., 2011) and present completed or shared ongoing research works (University of Pretoria, 2014). The research conference is embedded in the programs' undergraduate, master's, and doctoral courses. Students participate as delegates, poster presenters, or oral presenters of completed research (Douglas et al., 2018; Nolan & Rocco, 2009). In the case of this study, the online

research colloquia were designed to allow the graduate students to develop academic oral and writing skills in preparing research articles for presentation in an international research forum or publication in an international peer-refereed and indexed journal.

Research dissemination marks the completion of the research process. This part of the process is the stage where the intended beneficiaries encounter and understand the contribution of the scientific paper, which may define the impact of the research. Research impact is an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment, or quality of life beyond academia (UK Research and Innovation, 2022). The University of York describes research impact in terms of its beneficial contribution to “health, prosperity, and well-being of people and society, culture, environment, and the economy”. Likewise, the Economic and Social Research Council (2022) refers to it as the demonstrable contribution that excellent research makes to academics, society, and the economy. These definitions provide the right direction for appropriate research dissemination to realise the greater purpose of the study in terms of its contribution outside of academia. In this context, the actual value of the knowledge generated by the research can only be determined through research dissemination.

The COVID-19 pandemic has provided higher education institutions opportunities to reflect on their learning pedagogies. Some universities immediately transformed their residential learning spaces into online learning platforms. Dhawan (2020) defined online learning as "learning experiences in synchronous or asynchronous environments using different devices with internet access" (p.7). Furthermore, the following platforms for online learning were identified: Google Hangouts, Skype, Adobe Connect, Microsoft Teams, and Zoom. Likewise, Francisco and Barcelona (2020) recommended Eliademy as a good web-based classroom for designing alternative learning tools for online classes, along with CourseSites, iTunes U, LatitudeLearning, Mycourse, Schoology, ATutor, Dokeos, and Moodle as alternative online learning tools. For ease of use, these online learning tools may be classified further as either open or closed source. Likewise, the concept of hyperflex from hybrid classrooms for innovative teaching and learning is a feasible option for online learning.

Furthermore, bichronous online learning (Martin, Polly & Ritzhaupt, 2020) was recommended as a strategy for a contextualised online distance learning course (Digo, 2021) by blending asynchronous and synchronous online learning. Furthermore, online courses may be classified as asynchronous, synchronous, Massive Open Online Courses (MOOC), hybrid, blended, HyFlex and multimodal. Given the numerous platforms for online learning, the multimodal platform was adopted for the online research colloquia by purposively blending Google Meet or Zoom platforms with Short Message Service (SMS), Messenger, Facebook, and others to the familiarity, preference, and characteristics of the learners. Furthermore, the purposive blending of online platforms may allow for innovations necessary to address the connectivity and other technical issues which may occur and must be addressed while on board during the online colloquia. In the Philippines, to ensure that instruction and other teaching-learning activities continue in higher education institutions amidst the COVID-19 pandemic, CHED, through CMO No. 4, s. 2020 identified online learning as one of the three flexible learning and teaching modes.

Hence, this study aimed to describe the online research colloquia's role in improving graduate students' research dissemination skills at a state university in the Bicol Region, Philippines. Specifically, this paper attempted to describe doctoral students' research process knowledge and skills and research dissemination skills, develop, and implement the proposed intervention, and describe the effectiveness of the online course.

3. Research Method

3.1. Research Design

The action research approach as a spiral reflective process involving disciplined inquiry and discussion that allows people to solve specific problems collaboratively (Hairon, 2017; Stringer, 2007) was adopted for this study. The action research cycle described by Stringer (2007) involving the continually spiraling stages, as shown in Figure 1, was adopted for this study: looking – a gathering of data to describe the

situation; thinking – exploring, analysing, interpreting, and explaining; and acting – planning, implementing, and evaluating sustainable solutions. Action research as a research method was also utilised by Nolan & Rocco (2019) to teach graduate students how to write for publication in refereed scholarly conferences and journals.

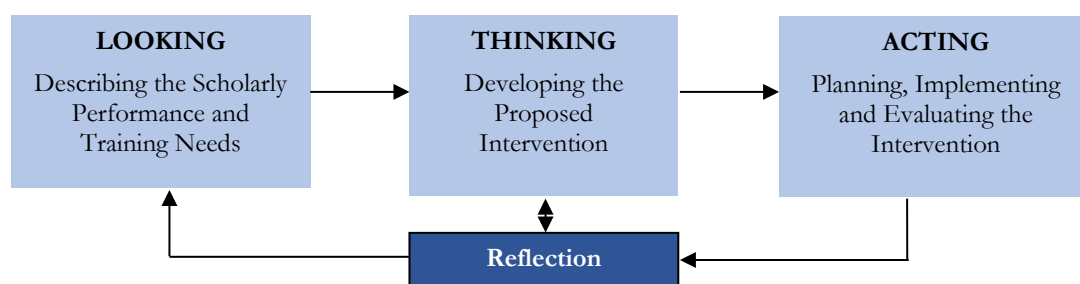


Figure 1. Conceptual Framework

3.2 Participants

Thirty-five (35) graduate students at a state university in Sorsogon City, Philippines, participated in the online survey to determine their research knowledge and practices and scholarly dissemination practices. However, 21 participants attended the online research colloquia. The profile of the participants are as follows: Gender (Male: 7, Female: 14); Institutional Affiliation (Department of Education (DepEd): 17, Technical Education and Skills Development Authority (TESDA): 1, State Universities and Colleges (SUC): 2, Philippine National Police (PNP): 1; Position (Teacher 1-3: 8, Master Teacher 1 – 4: 5, Head Teacher/TIC/School Head: 3, Instructor 1 to Asst. Prof. 4: 2, Senior TESDA Specialist: 1, Chief Investigator: 1, and Volunteer Teacher: 1).

These students are in the various stages of their graduate education. Two are enrolled in their dissertation, four have just taken the comprehensive examination, and the majority are taking regular academic courses. Likewise, eight graduate students participated in the interview. The participants were oriented and consented to their participation in this research. Informed consent was sought before the conduct of the interview.

3.3 Research Instruments

Researcher-made online questionnaires were developed using Google Forms. The questionnaire for academic performance was developed by adapting the appropriate and relevant indicators from the works of Jungnickel & Creswell (1994). Two professors validated it from a research university, and a dry run was conducted with five graduate students before it was used for data gathering. Likewise, resource speakers also designed a survey form for the needs analysis. Finally, the evaluation form was adapted from the National Educators Academy of the Philippines (NEAP) of the Department of Education (DepEd) to evaluate the effectiveness of the webinars.

3.4 Data Gathering Procedures

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3.5 Data Analysis

Survey data were analysed using average and rank wherever appropriate for the quantitative analysis. Furthermore, a thematic analysis of the reflection papers of the participants on their participation in the online research colloquium was done to understand the depth of insights about the value and purpose of the online colloquia.

4. Findings and Discussion

4.1. Research Process Knowledge and Practices

The researchers investigated the research process knowledge and practices among the graduate students in the university. The results of the training needs analysis as shown in Table 1 revealed that the research areas needing improvements are the following: designing and conducting positivist, interpretivist, and mixed methods research; oral and poster presentations; and writing a publishable research article. However, they are "very knowledgeable" on translating social issues to research needs and are "somewhat knowledgeable" on other topics. These findings are a revelation since the graduate students have already completed their thesis for their master's degree. Even with a theoretical and practical background in research, without a thorough knowledge of research conceptualisation and design, we worry about the nature of the research outputs of these students. In general, these findings on the status of their research process and practices reveal their overall under-preparedness for academic research work, which may help in producing high-impact research works that may define their expertise as practicing professionals or researchers.

Table 1. Research Process Knowledge and Practices

Training Needs	Ave.	Rank	Interpretation
1. Identifying sources for research ideas and topic	1.9	4	Somewhat knowledgeable
2. Translating social issues to research needs	2.9	1	Very knowledgeable
3. Determining research topic relevance	2.0	2.5	Somewhat knowledgeable
4. Reviewing related literature	2.0	2.5	Somewhat knowledgeable
5. Conceptualising theory-based research	1.6	8.5	Somewhat knowledgeable
6. Writing research topics as problems and objectives	1.8	5.5	Somewhat knowledgeable
7. Evaluating valuable research problems	1.7	7	Somewhat knowledgeable
8. Designing and conducting positivist research	1.4	13.5	Not knowledgeable
9. Designing and conducting interpretivist research	1.5	10	Not knowledgeable
10. Designing and conducting mixed method research	1.4	13.5	Not knowledgeable
11. Interpreting research data	1.8	5.5	Somewhat knowledgeable
12. Writing a publishable article from existing research findings	1.6	8.5	Somewhat knowledgeable
13. Presenting a paper orally at a conference	1.5	10	Not knowledgeable
14. Designing a PowerPoint and poster conference presentation	1.5	10	Not knowledgeable
Average	1.8	-	Somewhat knowledgeable

The result shows that the participants have insufficient research knowledge and practices. Such a finding revealed that graduate students have less know-how and experience in research creation and dissemination. This result is consistent with past studies that claimed low acquisition of research skills (Wagbara, 2022). Proficiency in methodological research skill is the ability to plan, develop the research design, and complete a research work including the analytical skill of using statistical tools for data analysis (Akuegwu and Nwi-ue, 2018). The researchers believe that graduate students need to develop the methodological and analytical research skills to improve their research dissemination skills. In addition, Agatep & Villalobos' (2020) study also agreed with these findings when they identified that the research capabilities in writing research proposals is one of the areas for improvement among the graduate students in their university. The data in their study indicates that the students are moderately or less capable in writing research proposals and in conceptualising a problem and applying the APA format. These training needs reflect current issues among graduate students, such as methodological issues, inadequacies, parochial focus, and failure to connect the literature reviews to international literature and research findings, which are the most common issues in the manuscripts submitted for publication (Boote & Belle, 2005).

4.2. Scholarly Dissemination Practices

The study also investigated the current research dissemination practices of graduate students. The survey results on the academic performance of the doctoral students in Table 2 revealed their preference to publish their research articles in non-refereed academic journals and their inability to publish in refereed

journals. Likewise, the presentation of research and non-research paper in national meetings and research forums is the least preferred mode for scholarly dissemination of research and non-research reports. These findings align with the respondents' profile, where 56% have not experienced oral and poster presentations, while 28% have research publications. Furthermore, these findings substantiated the findings that they are "not knowledgeable" about oral and poster presentations. Hence, they must improve their research paper presentation and article publication skills.

Table 2 indicates that the respondents have limited to no experience in research dissemination. The informants have selected publications in non-refereed journals and the publication of non-research materials because of probable hesitation to undergo review and scrutiny of work. Although there is consciousness about refereed conference presentation and journal publication at the national and international levels, the students have not attempted to pursue the track for personal and professional reasons. During the colloquia, the informants noted that they have not attempted to submit to refereed conferences and publications because they fear that they might get negative comments and they might be rejected from conference presentations and publications. This feeling of inadequacy may be one of the reasons why the country is trailing among its Southeast Asian neighbors in terms of publications in tiered journals (Guido & Orleans, 2022).

Table 2. Research Dissemination Practices

Indicators	Ave.	Rank	Interpretation*
1. Presentation of research paper at national or international research forums	1.6	5.0	Does not fully meet expectations
2. Presentation of non-research paper at national or international research forums	1.7	3.5	Does not fully meet expectations
3. Publication of research articles in refereed journals	1.7	3.5	Does not fully meet expectations
4. Publication of research articles in non-refereed journals	2.5	1	Does not fully meet expectations
5. Publication of non-research articles	1.8	2	Does not fully meet expectations
Average	1.8	-	Does not fully meet expectations

Notes: * 1 – (0) Does not meet expectations at all; 2 – (1) Does not fully meet expectations; 3 – (2) Fully meets expectations; 4 – (3 and above) Exceeds expectations.

4.3. The Intervention: Online Research Colloquia

The online colloquia, designed to enhance the student's research knowledge and dissemination practices, was used by the researchers as an intervention to the low level of research knowledge and dissemination skills among the students. The series of online research colloquia were implemented for four Saturdays from March 12 to April 2, 2022, for twelve (12) training hours. The series of online research colloquia were divided into two parts. The first set was a "Webinar on Research Publication: In Pursuit of Publishable Research Articles" implemented on March 12 and 19. The invited speaker is the Managing Editor of a WOS and Scopus indexed journal and the Editor-In-Chief of refereed journal publications based at the University of the Philippines. The second set was a "Webinar on Disseminating Research through Oral and Poster Presentations" implemented on March 26 and April 2 by a primary education teacher from the DepEd Division of Quezon City who is a multi-awarded research presenter in international research fora. In addition, the graduate students hosted and facilitated online platforms using Google Meet and Zoom. During the intervention, the team of experts evaluated the intervention to generate feedback for the improvement of the program. These online colloquia in the form of webinars as online extension programs were also implemented by the University of the Philippines during the pandemic as described by Serrano, Belegal and Petrasanta (2020). However, the purpose, design, and scope of scope of this online intervention is on capacitating the graduate students specifically on research dissemination.

From the results of the needs analysis, the program leader, resource persons, and participants agreed to include in the program the following topics: research conceptualisation and design, research oral and poster presentations, and research publication in indexed journals. For research conceptualisation, the online research colloquium included lessons on the nature of social science and education research, the types of research, and the need for theory in research. Regarding research design, the resource persons talked about the nature and process of designing research, the types of methods and procedures in conducting research, especially during the COVID-19 times, and the analytical approaches that come with the research designs. The resource person also talked about ethics in the conduct of research. Finally, the colloquia also served as a venue for the students to learn various forms of dissemination and the processes and procedures of publishing articles in indexed journals. The resource person challenged the participants to collaborate so they could do their research publications in indexed journals shortly. The students were reminded that their university expects them to produce research outputs in the form of practice-based research papers for oral or poster presentation in a targeted international research forum and, if possible, a research article in a refereed and indexed research journal. Hence, they were motivated to host, attend, and complete the scheduled pieces of training.

4.4. Effectiveness of the Online Research Colloquia

The researchers evaluated the effectiveness of the interventions. The survey revealed that the students found the online research colloquia "outstanding" as shown in Table 3. However, in the seven areas of evaluation, the delivery of content and provision of support materials received the two lowest average ratings because support materials were provided after the sessions. In addition, the students found research posters and oral presentations the most appealing. The results revealed that the participants found new learnings regarding the nature of social science and education research. The students claimed that the first session provided them with insights necessary for retooling. Further, the effectiveness of the online research colloquia may be attributed to the following impact on the participants along with the following findings as presented in their reflection papers:

- Challenged accepted. They are now aiming to finish the course along with the dissemination of their research output. Likewise, they have got to publish their research works in indexed journals despite the limitations that are imposed by the pandemic in conducting research. As stated by R10: *"At first, I enrolled in the doctoral program for promotion purposes only, but when I heard and learned from the resource speakers, I got inspired to publish and finish the course."*
- Research voice was found. They are willing to explore their research voices as qualitative action researchers. According to R9: *"I want to tell and write stories, and I am starting to find where to focus my research skills development... qualitative action research."*
- Possession of a positive attitude for research. The students have realised that they hold the right attitude of being practice-based researchers. The comment of one of the participants may have summarised it all: *"The strongest point of this webinar is that it made us grow as action researchers."* (R3)

Hence, there is a perceived improvement in the goal of the students. The students realised they were in the graduate program to earn units for promotion, complete and disseminate their action research, develop other research projects, and finish their programs. Furthermore, the alignment of the significant insights gained from the research colloquia, along with the new policies, standards, and requirements for graduate education stipulated in CHED CMO No. 15, s. 2019 makes them competitive graduate students, given the unique demands brought about by the globalisation and internationalisation of higher education.

Table 3. Evaluation of the Online Research Colloquia

Topics	Areas of Evaluation							Average	Interpretation*
	1	2	3	4	5	6	7		
1. From conceptualisation to publication: From what-ifs to what is	4.93	4.97	5.00	5.00	4.99	4.80	4.97	4.95	Outstanding
2. Publishing research articles in indexed journals	4.94	4.95	5.00	4.98	5.00	4.90	4.98	4.96	Outstanding
3. Research Oral Presentation	4.93	4.90	4.94	4.95	4.92	4.71	4.95	4.90	Outstanding
4. Research Poster Presentation	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	Outstanding
Average	4.95	4.96	4.99	4.98	4.80	4.85	4.98	4.95	Outstanding

Note: *1 – Session, 2 – Facilitator, 3 – Program Management, 4 – Attainment of Objectives, 5 – Delivery of Content, 6 – Provision of Support Materials, 7 – Program Management Team

The use of online spaces to deliver learning has plus and minuses. On the one hand, online learning spaces are valuable because learners from various locations may be engaged in a shared online learning space in a real-time scenario. However, issues abound on the utility of internet-based learning spaces. The weak and unstable internet connectivity and unpredictable loss of power supply became significant threats to the online colloquia. The interviewee highlighted this when they remarked, "as a student in a far-flung area, stable internet connectivity was my main concern." (I4). Likewise, "unstable internet connection and unscheduled power interruptions should be given emphasis..." (I1). Kamble et al. (2021) also found that "internet connectivity, accessibility and comfort, the effectiveness of the online learning environment, course content, and interactions between students and instructors" are significant issues for online distance learning. The problems of using online spaces for this activity have been diffused by the ingenuity of the organisers and the participants. A buddy system was introduced so that each organiser/facilitator is given a partner who can take over the role in cases of interruptions. The assignment of multiple hosts from different geographical sites during the Zoom meetings and Google Meet so that the online platform will remain uninterrupted even if one or several hosts are cut-offs from the power supply or internet connection. Furthermore, group chats established through various social media and communication tools like Facebook, Messenger, and Short Message Service (SMS) allowed the hosts and facilitators to share solutions to technical difficulties during online sessions. These were identified as good practices by the participants and were replicated in their online classes. Furthermore, inclusive e-collaborations are opportunities for online learning. However, the lack of opportunities for the synchronous workshop, presentation, and critiquing, lack of technical assistance, and low engagement of participants exacerbated the challenges experienced by the participants. According to an interviewee, "additional online sessions for write shop and presentations of outputs could be added..." (I3). Similarly, improved digital and technical skills may be developed as learners engage collaboratively in online distance learning.

Relative to the desired outcome of the online research colloquia, very few participants submitted their action research papers in an international research forum for oral or poster presentations. The absence of completed academic writing and lack of financial support were the top two reasons presented by the interviewees. Likewise, presenters with accepted research papers did not participate due to a lack of confidence, short notice of acceptance before the payment deadline, and financial difficulty. Furthermore, no research article was submitted for research publication in an international peer-reviewed and indexed journal. The participants attributed these to their "lack of confidence in the quality of our research work, and I think I need to learn more..." (I10). Likewise, "many paper works given to teachers, and they do not have enough time to make and publish their research" (I7). According to Leshchenko et al. (2020), the author's methodological system was most effective for developing research competence among doctoral and graduate students. The interviewees also revealed that they could not prepare because of a lack of confidence and work-related distractions resulting in a lack of time for manuscript writing.

The new cycle of action research colloquia may provide the chance to address the opportunities for improvements presented by the participants. It may be an online or hybrid research colloquium but focuses on research preparation, presentation, and publication rigors. More importantly, it may shift from the linear to systems research transmission model to maximise the research uptake and knowledge

utilisation (OECD, 2022). Furthermore, this activity may be integrated as the training component of the search for the best theses and dissertations in graduate school, along with enhancing the graduate school's research support to improve graduate students' academic performance (Digo, 2022). For a better outcome and a more compelling online research colloquium, it will be a workshop-intensive activity that will be conducted in collaboration with experts from several research universities in the Philippines with a successful track record in their action research projects. Finally, the need to address the research dissemination skills of the graduate students and the proof of concept on the effectiveness of the online research colloquia along with the interventions for the identified areas for improvement, may be adopted as a regular annual activity at the school of graduate studies of the university.

5. Conclusion

The graduate students are under-prepared regarding their research process knowledge and skills. Specifically, they must improve their research dissemination skills in oral and poster presentations and article publication in refereed journals. Hence, online research colloquia were designed, implemented, and evaluated to enhance the student's research knowledge and dissemination practices. As a result, the online research colloquia were effective interventions, as revealed by the evaluation of the participants. This study provides a glimpse of the current state of research knowledge and skills of graduate students. The current need to produce research and communicate findings must be emphasised, especially since graduate students are expected to provide theoretical and actual contributions to their fields. In doing so, they must be able to reach their peers and other public. Virtual learning events through oral colloquia may be tapped to continuously provide better research knowledge and skills to graduate research students. Since most graduate students are not fully prepared to venture into dissemination because of the lack of understanding in the training needs assessment, educational institutions must ensure that learning spaces are maximised to help boost confidence and skills in research. The study's results indicate a hopeful future for graduate students to participate in academic conferences and publish in peer-reviewed and indexed journals. Their educational institutions must nourish these. Online spaces for learning have proven their role in connecting learners and teachers despite the issues with access in the Philippines. Higher educational institutions, the Philippine government, and private corporations must be able to provide meaningful solutions to the country's connectivity issue.

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