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Enhancing teachers' research skills: A project Research Capability Program (ReCaP)

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Abstract

This study aims to develop teachers' skills in conducting research and to improve their instructional practices. Philippine Normal University Visayas (PNUV) conducted a Research Capability Project (ReCaP) as participatory action research to its 48 faculty members. This paper discusses the first part of the three cycles in ReCaP, which consisted of three sessions: Conducting Action Research, Writing Research Proposal, and Research Proposal Presentation. The researcher used a questionnaire to evaluate the ReCaP and determine the participants' views in conducting research online. The researcher also analyzed the recorded videos of the webinar to assess the degree of participant involvement. As observed, participants were less active during the first session, but they were more active in the second session. During the third session, seven groups of participants presented their collaborative research proposals. Most of the proposed studies focused on leading the school, developing teachers' teaching capacity, and helping learners cope in a virtual environment. Regarding their views, most of the participants said that the program ignited their passion for research. Furthermore, they commended the speakers for their selfless guidance during the proposal presentation. Lastly, participants were more likely to attend the next phase of the program.

Introduction

Research is one of the four-fold functions of the Higher Education Institutions (HEIs) in the Philippines. Based on the Commission on Higher Education (CHED) Memorandum Order No. 25, Series of 1998, research is one of the criteria for university status, center of excellence, autonomous or deregulated status, institutional quality, and opening of graduate study programs (Meneses & Moreno, 2019). The 1987 Philippine Constitution, Article XIV, section 10 stipulates that the state shall give priority to research developments, invention, and innovation. This mandate is supported by the CHED through the advancement of learning and research by formulating and recommending plans, policies, priorities, and programs. Following the mandate of the CHED, the Philippine HEIs crafted policies that include research as one of their top priorities requiring their faculty to pursue research within their field to improve their instructional practices and to help boost the economy of the country.

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In any academic area, research is the cornerstone of knowledge development and advancement (Independent Expert Group on the Universities and the 2030 Agenda, 2022). Faculty members, through their research projects, significantly influence the intellectual environment of the university. Research skills and abilities of faculty member are crucial for their professional development, and these skills and abilities are vital for the university's general growth and reputation (McQuiggan, 2012). According to US Department of Education (2017), university faculty with research skills are better able to conduct in-depth research and add to the corpus of knowledge in their subjects. Similarly, faculty members find novel insights, refute accepted beliefs, and generate creative ideas through original research (Tremblay et al., 2017) and they contribute to the intellectual debate by publishing their research in recognized publications and giving presentations at conferences, and enhancing the academic discourse in their subjects (Guptill, 2016).

The ability of a faculty member to provide high-quality instruction is directly impacted by their research skills (Abouelenein, 2016). Faculty members can stay current on the most recent advancements and cutting-edge techniques in their professions by participating in research activities (US Department of Education, 2017). They may use current material and teaching techniques because of this understanding, ensuring that pupils receive the most accurate and pertinent instruction possible. Active researchers frequently incorporate case studies, real-world examples, and research-based projects into their classes to help students develop their analytical and critical thinking abilities (Atkinson et al., 2000).

University professors act as teachers and examples for prospective researchers. They can involve neophyte faculty researchers and students in their projects and give them vital hands-on experience and guidance by actively participating in research (Morales, 2014). In this case both faculty researchers and students gain knowledge of research methodology, data analysis methods, and critical evaluation strategies while working with instructors who have great research skills. Faculty researchers' and students' research skills are improved as a result of this exposure, which also motivates them to pursue academic and research professions. Additionally, professors who conduct their own research are better qualified to assist students in their own independent research projects, offering vital support all along the way.

Faculty who are engaged in research make a substantial contribution to the university's capacity to attract outside funds and resources (Mohrman et al., 2008). Many research initiatives require a sizable financial investment, and the academic members involved experience and track record are frequently crucial to the success of grant applications (Pequegnat et al., 2011). Governmental organizations, foundations, and private organizations are more inclined to sponsor universities with a high research reputation, which can be used to improve infrastructure, launch research centers, and offer student scholarships. Additionally, research partnerships with businesses and other organizations can lead to joint initiatives and raise the university's profile and reputation (Marsh et al., 2008).

The prestige of a university is closely correlated with the faculty's achievements in research. Researchers who succeed advance not only their own careers but also the stature of the organization they work for (Buela-Casal et al., 2007). A university's research output, which includes publications, citations, and collaborations, is frequently cited as a gauge of its scholarly influence and standing internationally. In addition to drawing top personnel, including teachers and students, the presence of eminent researchers increases the university's competitive advantage in luring research funds, alliances, and collaborations.

For university faculty members to pursue knowledge, provide excellent instruction, and advance the institution, research skills are essential. Faculty can develop their fields, mentor students, get financing, and improve the university's reputation by participating in research activities. Faculty members play a crucial role in influencing the academic landscape and fostering a lively intellectual community inside the university by consistently improving their research abilities and actively engaging in scholarly efforts. The value of research abilities for academics in general and university faculty in particular is of the essence in this paper.

Philippine HEIs have clearly stipulated in their research policy the monetary incentives (Aithal, 2018), academic ranking promotion and recognition for faculty who produce and publish research. Fundings are available to augment the faculty's expenses in conducting and publishing research; likewise, international research funding agencies like United States Agency for International Development (USAID), Japan International Cooperation Agency (JICA), United Nations Educational, Scientific and Cultural Organization (UNESCO), etc. and national funding agencies like the CHED, Department of Science and Technology (DOST), Department of Education (DepEd), and others are regularly announcing their call for research funding.

However, with policy, funding opportunities and the national mandate on research and innovation, the Philippines still ranks low in research compared to other

ASIAN countries (Narbarte & Balila, 2018). According to Japan International Cooperation Agency Nomura Research Institute (2015) many SUCs put more emphasis on instruction rather than research; and in some SUCs, faculty members do not know how to make a research proposal (CHED Memorandum Order No. 52 [CMO No 52], 2016). A lot of doctorate graduates employed in Philippine HEIs do not produce high impact research. HEIs must have research faculty teams; and faculty with doctorate degrees must predominantly conduct research (Jalote, 2021).

The improvement of the research capabilities of the faculty, staff and graduate students are challenges that the Philippine HEIs face in the different areas of research and these need to be addressed. There is a need to instill the culture of love for research among the faculty, staff and graduate students. Also, there is a need to upgrade physical resources and research infrastructure, build up, retrain and retain a sustainable stream of a new generation of researchers to increase research productivity, and research quality impact (CMO No 52, 2016).

Through research, HEIs could contribute to the development of the region in which they are located. They are the sources of academic knowledge, providers of academic education, and regional system builders (Caniëls & van den Bosch, 2011). HEIs have the potential to spur a regional transition towards sustainability via the channels of teaching, research and outreach (Radinger-Peer & Pflitsch, 2017).

One of the strategies to boost the faculty's research skills is to conduct Research Capability Program (ReCaP). This is a program designed by the Graduate Studies of Philippine Normal University Visayas (PNUV) to help faculty in the teacher education to conduct online action research. This program was organized to capacitate the university's researchers to continue with their research amidst COVID-19 pandemic, and to address the universal functions of the higher education institution in the country.

As the National Center for Teacher Education (NCTE), the Philippine Normal University (PNU) is mandated to share research expertise and competence in education with other Teacher Education Institutions (TEIs) in the country. According to Borg and Alshumaimeri (2012), teacher institutions should include a research focus as one of the roles of educators in the field of teaching. Hence, research training programs are offered for PNU faculty and for other faculty members of TEIs.

On the other hand, Pambuena and Bernarte (2018); Basilio and Bueno (2019) conducted studies describing the research skills, attitudes and capability of teachers in the Philippines and proposed a research capability program. Also, Salazar-Clemeña and lmonte-Acosta (2007) surveyed the research culture of HEIs in the Philippines and found that none of the areas in research culture in their universities were apparently perceived as strong by the members of the faculty. Similarly, Quitoras and Abuso (2021) developed a study on the best practices of (HEIs) for the development of research culture in the Philippines and showed that research capability training was one of the best practices in developing HEIs research culture. Likewise, Aithal (2018) showed in her research how to boost faculty research performance in HEI's and recommended a framework for capability program. Though there are considerable studies conducted that describe the research skills of the HEI's faculty members, there is no published participatory action research documenting the effectiveness in enhancing the teachers' research skills through research capability program.

It is with the above premise that a Research Capability Program (ReCaP) as participatory action research of Philippine Normal University Visayas was conceptualized. According to Dacles et al., (2019) research capability programs were found as major contributory factors to research culture. This is also supported in Narbarte and Balila (2018) that factors motivating faculty to be involved in research are capability building programs and the support of the administration (Salazar-Clemeña & Almonte-Acosta, 2007). Thus, school administrators, most especially those assigned in research areas must create programs like ReCaP, that motivate and boost the faculty to produce research.

This ReCaP aimed to assist and to build the faculty members as researchers; to produce high impact/quality research in teacher education; and to mentor faculty members and researchers to become competent researchers and research mentors. Specifically, it aims to: develop participants' skills in conducting research in the new normal and to improve their instructional practices; determine the degree of involvement of the participants; and evaluate the ReCaP and determine the participants' views in conducting research online.

Methodology

This study used educational participatory action research (McIntyre, 2008) employing capability approach. Freire (Frediani, 2019) posited that people who are the focus of research should have the universal right to participate in the production of knowledge. Moreover, participants of the project were engaged in all aspects of the project, so that the participants were considered as equal partners with the researchers (Boyle, 2012), hence, a participatory action research.

This participatory-action research focused only on the first cycle of the program: Conducting Action Research, Writing Research Proposal, and Research Critiquing.

Participants

The participants of this participatory action research were the 48 faculty members of Philippine Normal University Visayas.

Research Instrument

This action research used an Observation Checklist, Program Evaluation Instrument and Participants' Reflections.

The researchers used an observation checklist to determine the extent of participation during the training. Three raters used the observation checklist to rate the participants degree of participation through the process of reviewing the recorded webinar. They rated the extent of participation of the participants in terms of: Asking question/clarification to the resource speakers; Responding to the questions of the resource speakers; Sharing insights and thoughts about research during the training; Presenting a researchable topic during the training; Presenting research proposal during the training; Doing an assigned task; Reporting an assigned task to the training; Attending the training on time.

To evaluate the effectiveness of the program, the participants evaluated the program using an evaluation instrument. This instrument contained 3 major areas: The Content of the Webinar; the Resource Speakers; and the Technical Aspect of the Program.

Lastly, the researchers asked the participants to write their reflections pertaining to the ReCaP. In their reflection, participants highlighted stronger and weaker points of the program, similarly, participants pointed out their learning and how this learning can be applied in their field. Lastly, participants recommended topics for future ReCaP.

Data Collection

Pre implementation

The office of the Faculty of Graduate Studies in Teacher Education Research (FGSTER) headed by the Associate Dean initially crafted a concept paper for the ReCap. It was submitted to the Dean for Academics for proper endorsement to the Finance Officer for the allocation of the budget.

When the concept paper was approved, a consultative meeting from the administration and participants was conducted.

Consultation included the preferred mode of attendance by the participants—virtual participation from their home, and virtual participation within the campus. The PNU administration allocated financial assistance for data subscription to those participants who attended virtually from their home, and food allowance to those who attended within the campus.

The office of FGSTER presented the suggested resource speakers, based on their research backgrounds and publications as criterions for the selection, to the administration and to the participants.

The schedule was done on Wednesdays since Wednesdays are considered as flexible learning days for the university, and none of the faculty members have heavy obligations to their students. Program sessions were held November 25, December 2, and December 9, 2020, at 9:00 to 11:30 in the morning. Letters of invitation to the resource speakers and to the participants were sent through Gmail.

Topics for the program were also considered as per suggestions from the resource speakers. A program of activities was crafted.

– Session 1 November 25, 2020—Enhancing Action Research Capabilities.

– Session 2. December 2, 2020—Research and Research Proposal Writing.

– Session 3. December 9, 2020—Presentation and Critiquing of the Research proposal of the Participants.

During implementation

This was the stage where the training was properly conducted.

1. First session:

After the preliminaries of the program and the introduction of the resource speakers, the first session commenced. The speaker emphasized conducting action research in the new normal using the Plan-Do-Study-Act (PDSA) model (Sagun & Prudente, 2023). The resource speaker ended the discussion by asking the participants to think of a title and make an outline of an action plan they would want to research on.

2. Second session:

The second session started with the introduction of the resource speaker. The topic dealt with Research and Research Proposal Writing. The resource speaker tasked the participants to write a research/action research proposal based on the problem they had identified in the first session.

3. Third session:

The third session dealt with the presentation and critiquing of the research/action research proposal. There were seven groups who presented their proposals. These research proposals were evaluated and redefined by the proponents with the guidance of the resource speakers.

Post implementation

After the three sessions, the researchers requested the participants to evaluate the program using Google Form and to write their reflections about the ReCaP. The data were consolidated and analyzed by the researchers. The researchers then reported the results of the evaluation of the program to all the participants through email.

Data Analysis

To analyze the gathered data the following statistical analysis were used:

Mean and Standard Deviation were used to determine the extent of participation of the participants and to determine the effectiveness of the program. Using the observation-checklist, three raters rated the audio-video recording of the program. Agreement of the three raters was established using Kendall's coefficient of concordance or Kendall's W online calculator. On the other hand, thematic analysis was used to determine the common themes that emerged from the reflection of the participants.

Results and Discussion

Quantitative Analysis on the Participants Participation of the Program

The main purpose of this action research is to enhance the research skills of the participants. Specifically, it determined the extent of the participants' involvement and the effectiveness of the ReCaP. This section discusses the results of the program.

According to the findings of Table 1, all participants were active (M = 3.04, SD = 0.984) during the program. However, they were less active (M = 1.92, SD = 0.583) in the first session and Moderately Active (M = 3.46, SD = 0.598; & M = 3.75, SD = 0.526) in the second and third sessions. Results show that participants were moderately active in responding to the questions of the resource speakers (M = 3.67, SD = 0.577); Presenting a researchable topic during the training (M = 3.56, SD = 1.072); and Presenting research proposal during the training (M = 3.44, SD = 1.261). This result is backed-up by a statement of the participants when he/she said "The BEST...all participants were super active and participative;" "More active participation and involvement of faculty."

The results show that the participants in the ReCaP were actively engaged in the program. Their active engagement might be because of their interest in research and might be because of the ability of the resource speakers in dealing with the topics. Though the ReCaP was conducted in a virtual environment, most of the participants were still able to participate in-spite of their intermittent internet connections.

When the agreement of the three raters' observation of the participants was considered, Kendall's W computation reveals that there is a strong agreement among the three raters (Kendall's = 0.7424) in terms of their observation on the participants' extent of participation during the ReCaP, as shown in Table 2. This means that the veracity on the claims of the raters that the participants were actively engaged during the program is valid.

Likewise, the observations of the raters are supported in the results found in Table 3 on the effectiveness of the program as evaluated by the participants. Generally, the program got excellent evaluation results from the participants (M = 4.95, SD = 0.092). This means that the ReCaP was helpful in the enhancement of the participants' skills in research. The content of the webinar, the resource speakers, the technical aspect of the program were excellently planned and executed.

Table 2 Agreement of the three raters

Kendall's W	*df*	*p* value	Description
0.7424	7	.0291	Strong Agreement

Table 1 Extent of participation of the participants by three raters

Categories	Sessions			Mean	*SD*
	1st	2nd	3rd		
1. Asking questions/clarification to the resource speakers.	2.00	2.67	3.00	2.56	0.510
2. Responding to the questions of the resource speakers.	3.00	4.00	4.00	3.67	0.577
3. Sharing insights and thoughts about research during the training.	1.67	3.00	3.00	2.56	0.768
4. Presenting a researchable topic during the training.	2.33	4.00	4.33	3.56	1.072
5. Presenting research proposal during the training.	2.00	4.00	4.33	3.44	1.261
6. Doing an assigned task.	1.00	3.00	3.67	2.56	1.389
7. Reporting an assigned task to the training.	1.67	3.00	3.67	2.78	1.018
8. Attending the training on time.	1.67	4.00	4.00	3.22	1.345
Overall Category	1.92 (SD = 0.583)	3.46 (SD = 0.598)	3.75 (SD = 0.526)	3.04	0.984

Note: Scale: 4.20–5.00 (Very Active); 3.40–4.19 (Moderately Active); 2.60–3.39 (Active); 1.80–2.59 (Less Active); 1.00–1.79 (Least Active).

Table 3 Effectiveness of the Program as Evaluated by the Participants

Categories	Mean	*SD*
Content of the webinar		
1. Facilitating in gaining more knowledge and importance of the topic	5.00	0.000
2. Topic was relevant and timely	5.00	0.000
3. Met expectations/objectives	5.00	0.000
Resource Speaker		
1. Presented the objectives clearly	5.00	0.000
2. Used an engaging/interactive style	5.00	0.000
3. Displayed high level of expertise	4.94	0.245
Technical Aspect		
1. Online platform was suitable for the activity	4.94	0.000
2. Material/s were helpful	5.00	0.475
3. Equipment/Facilities	4.89	0.377
4. Started and ended on time	4.83	0.338
Overall Category	4.95	0.092

Note: Scale: 4.20–5.00 (Excellent); 3.40–4.19 (Very Good); 2.60–3.39 (Good); 1.80–2.59 (Needs Improvement); 1.00–1.79 (Poor).

Themes from the Participants Reflections

The claims on the effectiveness of the action research conducted were made clear when the following themes emerged from the reflections of the participants. Their reflections were: Speakers' ability and manner in approaching research topics; Learning how to write research proposal through mentoring; Challenges on intermittent internet connection; Involvement of the participants during the program; Research topics for the next cycle of ReCap; and ReCaP: An Opportunity for learning Research.

One of the best components to train HEI faculty is to invite resource speakers who are experts in the field of research. When the resource speakers of the training have in-depth knowledge of the topic, participants will most likely learn and be engaged in the program. This is very evident in the ReCap conducted by the PNU Visayas. Participants viewed the resource speakers as accommodating and approachable, and willing to share their expertise in conducting basic and action research. Some of the views of the participants were: "The concept and knowledge provided by the resource speakers are very insightful." "The Love of speakers to share their expertise…." "One can really sense the willingness of the resource speakers to share their knowledge." "I have learned a lot from the two great speakers when it comes to making research study."

Mentoring an adult learner in HEIs can be a challenging task (Hultquist, 2015). However, the speakers' willingness to share their knowledge and expertise and the participants' open-mindedness solved the mentoring problem. Participants will most likely learn when there is a mentor-mentee relationship. They said that the highlight of the program was on "Giving of comments and suggestions during the presentation of the research proposals; "The presentation of outputs and the target of publishing research works."

However, there were problems due to intermittent internet connections, resulting in leaving the classroom during mid discussions. The participants commented on "Unstable net connection of the participants during the presentation of research proposals;" "On my side, the poor connectivity is really hindering me to fully absorb everything."

Because of ReCaP, participants were motivated to write and present proposals. Most of the research proposals presented dealt mostly on the teaching and learning in the new normal. Participants see opportunities to learn in recap. Their reflections are: "I gained much and was enlightened more about research." "It awakened my passion for doing research work." "It ignites the love for research and to gain results to be of help to concerned participants."

Lastly, most participants recommended these topics for the next ReCap: Questionnaire construction, Data management, Qualitative Research, and Publication Writing.

Conclusion and Recommendation

The purpose of this paper is to explore the effectiveness of the Research Capability Program (ReCap) in enhancing the research skills of the faculty. Results shows that the capability program was effective and was able to enhance the research skills of the faculty. Likewise, based on the observation of the program, it was noted that during the initial sessions of the program, the participants were not that participative; however, towards the end of the program, the participants did their best.

Furthermore, the Research Capability Program (ReCaP) of Philippine Normal University Visayas has brought a lot of insights. First, to have an effective program, there is a need to involve the participants in the planning stage. Second, the choice of the resource speakers must be considered because though research undertakings are not a novelty to the PNU Visayas faculty, their interest and passion in research have somewhat waned. It only needs experts to spur their passion to write research proposals. Lastly, through this program, seven research proposals were collaboratively crafted. Hence, ReCaP can be a source of knowledge creation.

Conflict of Interest

The author declares that there is no conflict of interest.

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