A teacher training program on designing participatory educational action research proposal

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ARTICLE INFO

DOI:10.46223/HCMCOUJS.soci.en.12.1.2214.2022

Received: March 19th, 2022

Revised: May 05th, 2022

Accepted: May 16th, 2022

Keywords:

in-service teachers; participatory action research; professional development; training

ABSTRACT

This study aimed to develop, implement, and evaluate a teacher training program on designing participatory educational action research projects. The program consisted of training teachers to conceptualize an action research problem and design a methodology specific to their proposed topic. Starting with a professional needs assessment on Action Research (AR) as the basis for the planned teacher training opportunity, the teachers underwent training and mentoring sessions to develop a group AR proposal as the outcome of the program and as evidence of their professional growth. At the end of the program, five action research proposals were developed and presented, which include: (1) the design and evaluation of an Information and Communications Technology (ICT) mentoring program for basic education teachers; (2) improving students' conceptual understanding on selected Social Psychology topics through Case-Based Approach; (3) integrating Canvas during an online departmental examination of board course programs; (4) facilitating career choice of Senior High School students through a career guidance program; and, (5) enhancing pre-service elementary teachers' pedagogical knowledge for online teaching through instructor modeling. Four of these five proposals were rated acceptable and approved for implementation by a panel of reviewers. The details concerning the strengths and areas for improvement of each proposal are individually reported in the results section. In conclusion, training as a professional development model has the potential to effectively gauge teachers to develop and design educational action research proposals.

1. Introduction

There are several factors that may likely affect student learning, with quality teachers being one of the critical elements for student success (Green, Eady, & Andersen, 2018). In this regard, teacher development programs have become a part of the school improvement agenda over the years (Garcés & Granada, 2016; Powell, Terrell, Furey, & Scott-Evans, 2003). The ultimate goals of these teacher development programs are to support teachers' continuous professional growth and eventually translate into improved student learning outcomes and overall school effectiveness (Darling-Hammond, Hyler, & Gardner, 2017; Holloway, 2006)

However, Dean (2006) argued that, even before, most of these professional programs have used top-down delivery models. These models are characterized by the identification and delivery of knowledge to teachers, and then they are then expected to apply the same in their respective classrooms. In this regard, these models are viewed to be demotivating and unrelated to teachers'

needs and interests (Wyatt & Ager, 2017). Thus, the effect of these programs on teachers' professional growth may be sacrificed. Gravani (2012) summarized the literature on an effective teacher development program and argued that it should take into account the following: (a) voluntary participation, (b) mutual respect, (c) collaboration, (d) action and reflection, (e) critical reflection, and (f) self-direction. Unless professional development programs are not designed accordingly to these principles or models, the goals of developing teachers into lifelong learners and improving educational outcomes may remain distant.

One professional development model which characterizes most if not all of these principles is Participatory Action Research (PAR). McTaggart (1997) explains that the dual functions of PAR are to intervene in the situation being researched and transform the researchers into agents of their own changes. It requires reseacher/s to work 'with' teachers as 'partners.' Thus, superseding the conventional research practice whereby teachers are treated as 'objects' (Skovsmose & Borba, 2004). In other words, this professional development model situates teachers as learners, places teachers at the center of research-into-practice, and emphasizes reflective inquiry (Manfra, 2019). Further, the participatory and democratic characteristics of action research take into account both action and reflection and bridge the gap between theory and practice in the pursuit of resolving practical issues (Reason & Bradbury, 2008).

For these reasons, this participatory method has long been recognized as suitable and receiving increasing attention in the educational domain (Hine, 2013). In fact, numerous studies employ PAR in education (e.g., Cullen, Akerson, & Hanson, 2010; Eilks & Markic, 2011; Feierabend & Eilks, 2011; Miedijensky & Sasson, 2020) may justify this claim. Further, reform efforts have been evident in different countries to promote the culture of action research, such as its adoption in university-based teacher education programs as a course (Lattimer, 2012), as a core subject in the graduate teacher education curriculum (Hine, 2013), and as a topic for the professional upgrading of in-service teachers (Hathorn & Dillon, 2018; Paredes-Chi & Castillo-Burguete, 2018).

In the Philippines, reform efforts towards promoting action research have attuned with the global contour. These include but are not limited to the following: (a) including AR as a major or a content course in pre-service teacher education programs (CHED, 2017a, 2017b; Jugar & Cortes, 2022), (b) organizing professional development opportunities on AR methodology by experts from universities and colleges and by some professional networks (Cortes, Pineda, & Geverola, 2021a), and (c) establishing research management guidelines to facilitate research initiatives from national to school levels and improve mechanisms for funding, partnerships, and capacity building programs for basic education teachers (DepEd, 2017).

However, the outcomes of these educational reforms are poorly documented, but the inventories of Filipino teachers' challenges in doing AR are widely available in the literature instead. In other words, the teachers are still facing a plethora of challenges in doing AR despite the programs and initiatives at hand. These challenges can be broadly categorized into two extrinsic and intrinsic factors or teacher-level and school-level barriers. The intrinsic or teacher-level barriers include teachers' negative perceptions and attitudes towards AR, mistrust of colleagues' capacity to do AR, resistance to critiques, and lack of knowledge (Cortes & Reyes, 2021). In particular, the knowledge referred to are the AR components, namely: identifying the research problem, developing an action plan, gathering, analyzing, and presenting data, applying technological tools, integrating ethics, and reflecting on research results (Cortes, 2019; Cortes et al., 2021a; Morales et al., 2016). Meanwhile, the extrinsic or school-level barriers include lack of time because they have heavy teaching loads. The teachers also disclosed that they lack resources and are not receiving school support in terms of finances, motivation, and recognition (Cortes et al., 2021a; Ulla, Barrera, & Acompanado, 2017).

With the goals of systematically documenting a teacher training program on designing PAR proposals, addressing common teacher-level barriers in AR mentioned above, resolving practical issues in classrooms and schools faced by teachers, and developing teachers into action researchers, this teacher training program was developed, implemented, and evaluated. The design and evaluation features of an effective training proposed by Arthur, Bennett, Edens, and Bell (2003) served as the guiding framework for developing and evaluating this teacher training program. They identified several designs and evaluation features associated with the effectiveness of training and development. These features are those in which trainers and researchers have a reasonable degree of control, namely: conducting a training needs assessment, matching between skills or tasks and training delivery methods, and establishing training evaluation criteria.

As the framework suggests, the professional development model used is training, but the purpose was transformative (i.e., transforming teachers into agents of their own changes). Kennedy (2014) argued that this is acceptable because there are skills that are best learned or refreshed through more transmissive approaches (e.g., training) to learning. In the case of this teacher training program, the teachers still needed to learn the process of designing action research projects before becoming independent researchers of their own practice. With respect to the program evaluation as indicated in the framework, the teachers' proposed participatory action research project quality was selected as the parameter of interest.

2. Methodology

2.1. Participants

This training program on designing participatory educational action research projects took place in a private educational institution in Northernmost Cebu, offering basic to tertiary education. There were 20 teachers from this institution whose distribution of professional profiles is reflected in Figure 1, who participated in this training program. These teachers were grouped according to their interests. In other words, the AR projects they conceptualized and proposed at the end of the training were grounded on their common interest. This led to the formation of five groups. None of these teachers from any group reported that they had attended previous training on developing AR proposals. In effect, the school has no proposed, completed, and published AR up to date.

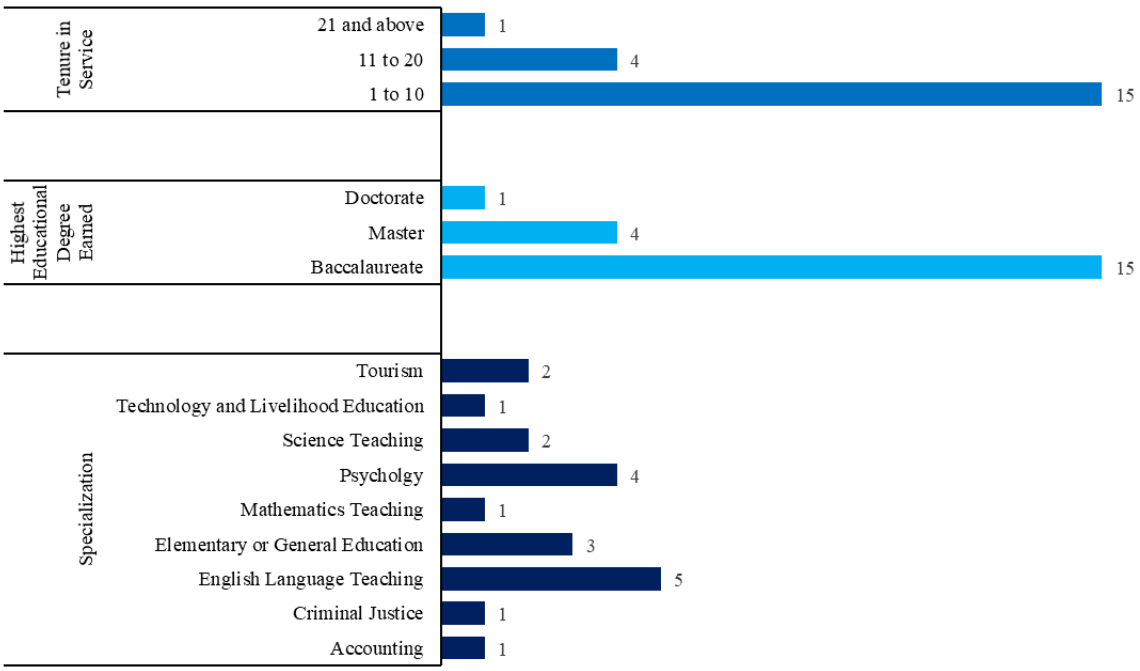

Figure 1. Profile of teacher participants in the study

With regards to upholding ethics or protecting the rights of the teacher-participants in this research and teacher training project, an informed consent stating the purpose and background of the study, procedures, risks and discomfort, confidentiality, and benefits was given and explained to them. They were informed that they could only participate upon agreement to the terms stipulated in the consent. It was also reiterated to them that their participation was entirely voluntary. They could withdraw their participation anytime without incurring penalties or losses on their end.

2.2. Development and implementation of the teacher training program

The training program commenced with the diagnosis of teachers' professional profiles and needs with respect to AR. For this reason, a pre-test was done to evaluate teachers' self-perceived level of competence in AR using an adapted scale from Cortes, Pineda, and Geverola (2020). The scale evaluates six essential AR skills: selecting an AR topic, planning an AR project, analyzing and presenting AR data, integrating ethics, integrating technology, and reflecting on and communicating results. The data obtained from the pre-test, as shown in Figure 2, revealed that all AR skills assessed were identified as areas of difficulty for teachers, thus, indicating all were critical areas for teacher development. These results then informed the proposed training guide, which was eventually translated into the training plan shown in Table 1.

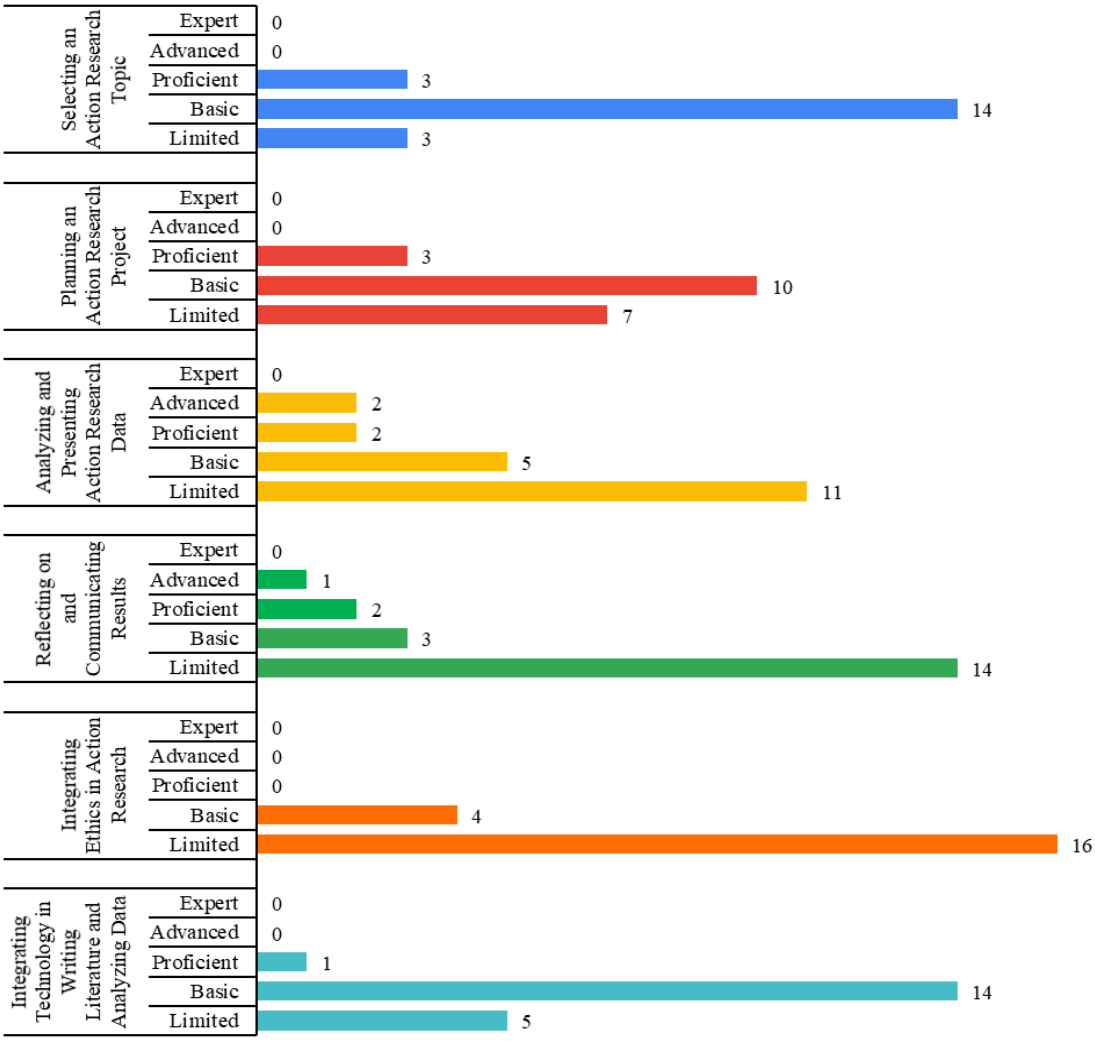

Figure 2. Distribution of teachers when grouped according to their perceived level of competence in six AR competencies before the training

Table 1

Training plan

Session No.	Topic	Session Objectives	Activities or Practice Exercises	Cumulative Output/s	Allocated Time
1	Introduction to AR	1. Trace the history of AR before it became prominent in the educational context; 2. Classify the different types of AR; 3. Review the different models of AR; and, 4. Identify the difference between AR and traditional educational research	1. Classifying six AR articles according to purpose and the paradigm it is anchored on 2. Developing a model reflecting the process of AR according to teachers' understanding	1. Teachers' perceptions of the purpose and paradigmatic orientation of all six articles 2. Teachers-made models of AR process	04 hours
2	Selecting a topic for research and laying the foundations of a research paper	1. Propose a working title and eventually develop a tentative research question(s); and, 2. Write an introduction of the proposed research topic	1. Critiquing or reflecting on the titles of the previously introduced AR articles to teachers during the first session 2. Writing a paragraph on a certain topic with strict adherence to proper citation by synthesizing findings from six related articles 3. Outlining major ideas discussed in the introduction of a particular AR article	1. Tentative AR title 2. Rationale 3. Tentative research questions	04 hours
3 and 4	Continuation of training and workshop on selecting a topic for research and laying the foundations of a research paper	1. Propose an action plan for the proposed AR topics 2. Write the theoretical anchor of the proposed action research and eventually develop a conceptual framework reflecting the intended constructs to be addressed; and, 3. Finalize the research question(s) according to the approved conceptual framework of the study	1. Writing the review of related literature of teachers' proposed AR project that contains the theoretical framework, related studies, and other relevant literature 2. Developing the conceptual framework 3. Finalizing the research questions 4. Proposing an action plan that details the important steps, innovations, interventions, and strategies that teachers intend to work on in their AR	1. Review of related literature 2. Conceptual framework 3. Final research question/s 4. Proposed action plan	08 hours
5 and 6	Action Research Methodology	1. Complete the methodology section of the proposed AR,	1. Selecting the research design and sampling design	1. Methodology 2. Final list of	08 hours

Session No.	Topic	Session Objectives	Activities or Practice Exercises	Cumulative Output/s	Allocated Time
		which includes the sample of participants, research design, data collection procedure, and data analysis	2. Selecting the data gathering methods and research instrument/s 3. Planning the data analysis 4. Performing data analysis on some hypothetical quantitative and qualitative data set 5. Finalizing the list of references according to the studies cited in the proposal	references	
7	Preparing the Timeline of Activities and Cost Estimates	1. Develop a work schedule (GANTT chart) to effectively implement and monitor the action research project, including the tasks and activities to be performed, roles and responsibilities of team members, and milestones and deadlines to be met; and, 2. Develop a realistic, itemized budget linked to the project's specific objectives and the project activities	1. Preparing the timeline of activities and cost estimates	1. GANNT Chart of research activities 2. Proposed budgetary requirements	04 hours
8	Presentation and Critiquing of AR Proposals	1. Present the proposed AR projects by a group	1. Presentation and critiquing of AR proposals	1. Final group AR project	04 hours

Source: The researcher's data analysis

As seen in the training plan, the training was divided into eight sessions, of which each session was done for four hours. The activities included in each session were seminar workshops and mentoring on the different topics and tasks reflected in the plan. These tasks can be practice exercises or activities related to the expected output of a particular session. The roles of the mentors of each group, who are also the resource persons, during this stage of the training are to provide scaffolding and facilitate the completion of these required outputs. These four mentors have active engagements in AR. They conducted teacher training and published AR articles from different reputable journals. Three have doctorate degrees, while one has a master's degree. When all the outputs from all sessions were combined, a group AR proposal was produced. It will be their decision whether to implement their proposed AR project, but a separate teacher training program will be designed for their project implementation. Table 2 shows the summary of the groups' research title, questions, action plan, data sources, and data analysis.

Table 2

Proposed research title, questions, action plan, data sources, and data analysis

Project No.	Research Title	Research Objective/ Questions	Action Plan	Data Sources	Data Analysis
1	Design and evaluation of an ICT mentoring program for basic education teachers	• What are the basic education teachers' perceived levels of ICT skills on different software applications before and after a mentoring program? • What are the experiences of the mentors and mentees on the ICT mentoring program?	Mentoring program on 11 software applications with educational relevance: Office applications, multimedia tools, assessment tools, system, online storage, scanning, communication tools, learning management system, publishing tools, internet privacy, and collaboration tools	Researchers-made scale evaluating teachers' perceived level of ICT skills, focus-group interviews, training artifacts, and reflective journals	Descriptive statistics and thematic analysis
2	Improving students' conceptual understanding of selected Social Psychology topics through a Case-Based Approach	• Are there changes in students' misconceptions regarding prejudice and discrimination, violence and aggression, and prosocial behaviors after employing the Case-Based Teaching Approach? • What are the experiences of students and teachers under the Cased-Based Teaching Approach?	Integrating Case-Based Teaching Approach on selected Social Psychology topics	Researchers-made case-based questionnaire evaluating the students' conceptions of prejudice and discrimination, violence and aggression, and prosocial behaviors, semi-structured interviews, anecdotal records, and reflective journals	Thematic analysis and frequency count for commonly held misconceptions
3	Integrating CANVAS during the online departmental examination of board course programs	• To create a secured online examination system during the Covid-19 pandemic for board course programs • To document students' and teachers' experiences in using CANVAS	Utilizing the features of CANVAS (e.g., reshuffling of test questions, establishing time limits, and setting access codes to restrict students from viewing the exam before and after) in the online departmental examination	Unstructured interviews, reflective journals, anecdotal records, and other relevant documents	Thematic analysis
4	Facilitating career choice of Senior High School (SHS) students through a career guidance	• To implement a career guidance program for SHS students to facilitate their career choice in college • To document students' and guidance	Implementing two career guidance programs for SHS students (i.e., Guidance in Action and Program Advising) to help students develop confidence, self-esteem, and motivation and provide support for	satisfaction survey concerning the proposed career guidance program and semi-structured interviews	Thematic analysis

Project No.	Research Title	Research Objective/ Questions	Action Plan	Data Sources	Data Analysis
	program	counselors' experiences with the proposed career guidance program	continuous learning and upskilling		
5	Enhancing pre-service elementary teachers' pedagogical knowledge for online teaching through instructor modeling	• To enhance pre-service teacher pedagogical knowledge on 11 common pedagogical practices in online teaching through expert or instructor modeling • To document students' and teacher's experiences concerning the use of modeling to teach the common online pedagogical practices	Modeling of common pedagogical practices in online teaching by an expert or instructor	Researchers-made pedagogical knowledge scale, semi-structured interviews, and reflective journals	Descriptive statistics (i.e., mean and standard deviation), dependent samples *t*-test, and thematic analysis

Source: The researcher's data analysis

2.3. Evaluation of the teacher training program

The post-test regarding teachers' perceived skills in conducting AR will only be done once the teachers will be finished implementing and sharing the results of their respective AR projects. Hence, the basis for evaluating training effectiveness during that phase of the teacher training program was the quality of teachers' proposals as evidence of their knowledge on AR. Using the criteria and scoring template for the AR proposal released by the Philippine Department of Education (DepEd, 2016), the quality of teachers' proposed AR projects were evaluated. This scoring rubric was developed to evaluate the AR proposal of eligible teachers submitting for funding. The Department recognized the importance of funding high quality research to help them deliver their services with quality. The criteria of this scoring rubric include the following: (1) rationale of the AR with sub-criteria on context (15 points) and proposed intervention, innovation, and strategy (15 points), (2) research question/s (30 points), (3) research methods with sub-criteria on the description of participants, sources of data (10 points), data gathering procedure (10 points), and plan of data analysis (10 points), (4) work plan and timelines (05 points), and (5) cost estimates (05 points). Each criterion has a different score allocation, and the AR proposal should get a minimum average score of 70% in each criterion for a proposal to be considered acceptable and approved. This indicates that each proposal should have a minimum average and overall score of 70% from the invited raters. There were three raters who evaluated all five AR proposals, whose professional profiles are reflected in Table 3. Aside from the scores they gave, they were also asked to justify their ratings through written comments and interviews. These evaluators are composed of one doctorate degree holder and two graduate students in education with different research interests. One focused on the application of action in research in resolving practical issues in education and teacher training on designing AR projects. He has published several research projects relating to AR in different peer-reviewed journals. The other two evaluators are interested particularly in science education and educational research in general. They were able to publish several research articles also in journals with reputable indexing status.

Table 3

Reviewer's professional profiles

Reviewer	Highest Educational Qualification	Research Interests	Volume of Publications
A	Ph.D.	Action Research, Science Education, Instrument Development, and Validation	12
B	Ph.D. Student	Science Education, Conceptual Understanding, Conceptual Change, and Educational Research	2
C	Ph.D. Student	Science Education, Biology Teaching, Technological Pedagogical Content Knowledge, and Educational Research	4

Source: The researcher's data analysis

3. Result and discussion

This portion presents the results of the reviewers' evaluation of the quality of action research proposals developed by the teachers who participated in the teacher training program in designing AR projects. Table 4 shows the results of the evaluation of the quality of proposed AR projects by the reviewers. From the results, it is evident that four of five AR proposals were able to meet the standards based on the guidelines set by DepEd for appraising action research proposals (DepEd, 2017). The next subsections present the details of each AR proposal and its corresponding attributes.

Table 4

Reviewers' evaluation of the quality of five proposed AR projects

Main Criteria	Sub-criteria	Average Score Per Criterion of Five Proposed AR Projects				
		Project 1	**Project 2**	**Project 3**	**Project 4**	**Project 5**
The rationale of the Research (30 points)	Context (15)	13.67	13	13	11.67	13.00
	Proposed Intervention, and Strategy (15)	13.00	10.33	11.67	10.33	10.33
Research Questions (30 points)		25.00	23.33	18.33	20	20
Research Methods (30 points)	Participants and/or other Sources of Data and Information (10 points)	6.67	6.67	8.33	6.67	6.67
	Data Gathering Method(s) and Research Instruments (10 points)	8.33	9.33	6.67	6.67	7.67
	Data Analysis Plan (10 points)	10.00	7.67	6.67	6.67	7.67
Work Plan and Timelines (05 points)		4.33	3.67	4.33	0	3.67
Cost Estimates (05 points)		4.33	3.67	4.33	0	3.67
Total		**85.33***	**77.67***	**73.33***	**62.01**	**72.67***

Note. Total scores with * means the AR proposal is acceptable based on DepEd Guidelines

Source: The researcher's data analysis

3.1. Quality of action research proposal of teachers from group 1

Group 1 was composed of two elementary teachers and secondary teachers teaching different subject matters but are interested in ICT integration in classes. The authors draw on knowledge of technology integration through existing studies of integrating ICT in the lesson plans to facilitate active learning and gauge engagement, interest, creativity, and performance in the classrooms. It was also emphasized in their rationale that despite its positive effects, ICT integration continue to become a challenge due to factors such as the attitude and beliefs of teachers, insufficient time and access including absence of organizational support. Professional development program initiatives were presented as solutions to the gap, which highlight the relevance of community of practice, STAR-online, and TLO having a group of experts collaborate with design, conduct, and evaluation efforts. Barriers to ICT integration have been recognized to persist despite several professional (PD) programs and thus emphasized the need to have a unique and sustainable PD process such as a mentoring program that would establish a one-on-one mentor-mentee relationship by professional experts capable of catering to individual needs of teachers in their journey towards successful integration of ICT. In this regard, they proposed an AR project aimed at designing a professional development program to mentor their colleagues in the basic education department on 11 software applications ranging from Office applications to collaboration tools. Table 2 indicates the complete list of key skills or applications they proposed to mentor among their peers. Overall, this proposal obtained 85.33 points indicating acceptable or approved based on the DepEd guidelines. This proposal was also submitted to the Philippine Education Assistance Committee (PEAC), an organization that addresses the needs of the private education sector in the country, and was selected as one of the two research grant winners in the Visayan Region. In other words, the implementation of this project will be externally funded, worth Php 150,000.00 by the aforecited organization.

The strengths of this proposal, as evidenced in the mean rating obtained, rest on the description of its context (13.67), proposed intervention (13.00), research questions (25.00), and data analysis plan (10.00). Thus, some desirable comments under these components were given by the reviewers. For one, they argued that the introduction reflects an explicit review of the related literature that supports the rationale for conducting a professional development program on ICT for teachers. In addition, the problem of interest is timely, given the shift from face-to-face to distance learning. The teachers are expected to acquire relevant ICT skills to deliver their roles even with the new teaching modality. Hence, the proposed intervention is both practical and essential. Two, the research questions examine the effect of teachers' ICT skills and the experiences of the mentors and teachers in an ICT mentoring program. According to Reviewer A, the second question may generate reflective accounts of teachers on the proposed action plan, thus, paving the reflective and cyclical attributes of AR to be realized. In other words, regardless of whether the mentoring program is effective or not, mentors' and mentees' experiences will be put into narrative accounts that could inform or provide a basis for the future action plan. Three, the methodology was able to get above average rating in the three sub-criteria (see Table 3), which have acquired an average 10 points in the data analysis, the highest points possible for this sub-criterion. This means the proposal explicitly details the data sources and analysis, which are appropriately planned for the nature of data required to answer the research questions. For this study, a mixed-method sequential design wherein quantitative data involved pre and post-training ICT skills of teachers and the qualitative component include in-depth accounts of the mentoring experiences of the teachers. The action plan and cost estimates were also rated highly each at 4.33, consistent with other criteria.

The reviewers also provided several comments that need to be addressed in the study. In

particular, these include: (a) an in-depth description of the profile of teachers with respect to ICT skills leading to the recommendation of the proposed mentoring program, (b) comprehensive details of mentoring being the selected PD model as to how it could better facilitate in developing teachers' ICT skills over the other models, (c) description of the inclusion criteria for selecting mentors, and (d) report of scale validity and reliability after it will undergo validation process. The researchers concurrently developed the scale while proposing the project.

3.2. Quality of action research proposal of teachers from group 2

Group 2 was composed of all psychology instructors teaching in the higher education department of the institution. Their proposed AR focused on improving students' conceptual understanding on selected social psychology topics through a case-based teaching approach. It was given a mean rating of 77.67 points by the panel of reviewers, meaning it is also acceptable and is given consideration for funding by the institution.

The proposal was graded with high scores in the description of the research context (13.00), statement of research questions (23.33), and description of data gathering method(s) and research instruments (9.33). In view of this, the following comments were given by the reviewers. Reviewer A commended the framing of research questions because the first question is aligned to the study context and is grounded on learning theory, while the second question elicits teachers' actions and reflections in the process of implementing a case-based teaching approach. In particular, this question is an inquiry on what are the strengths and limitations of the intervention. The results may be used for recommendations or improvement of the action plan if the need arises. Meanwhile, the AR proposal presents a wide array of data sources that could monitor the conceptual evolution of students regarding prejudice and discrimination, violence and aggression, and prosocial behaviors. Looking at the method for gathering data, the researchers used exploratory QUAL→quan research design to incorporate CBTA to selected topics of Social Psychology to engage students in real-case scenarios in solving problems to target misconceptions and develop conceptual understanding through the use of higher-order thinking skills. This study particularly puts inquiry into the heart of framing the research questions of the study but needs to improve on the rationale and establish the gap that the study intends to address.

However, while research context received a desirable score. Reviewer B explained that the proposal failed to propose a novel solution. Reviewer B remarked: *The rationale mentioned that the intervention proposed, the Case-based Teaching Approach (CBTA), is widely used in teaching various fields. In fact, it is stated that it is effective in improving conceptual understanding. How is this study different from those that came before?* In this regard, he argued that there is a need to discuss how CBTA may be integrated or utilized to facilitate students' conceptual understanding of selected social psychology topics. Reviewers A and C also agreed on this. In the same manner, the reviewers perceived that there is still a need to improve the methodology, although it got a high score. Reviewer A recommended the explicit presentation of details concerning the process of selecting the participants, development, and validation of the researchers-made scale, and data analysis technique/s. Finally, the reviewers had a consensus on suggesting the improvement of proposing a realistic work plan and cost estimates.

3.3. Quality of action research proposal of teachers from group 3

Group 3 had three college faculty members interested in creating a secured online course departmental examination for the board programs offered by their institution (e.g., some courses in criminal justice education). Hence, their study puts forth the current problem faced by the institution in online learning, particularly in administering departmental exams in which an intervention was proposed to incorporate the use of CANVAS to secure online class summative

tests and departmental assessments. This study came out to be timely, relevant, and fit to the current need, which is evident on the high points obtained in their rationale, particularly in their proposed intervention. CANVAS has the capacity to reshuffle test questions, establish time limits, and set access codes to restrict students in viewing the questions before and after implementing the examination. This proposal obtained a total score of 77.67 points which also indicates that it is acceptable based on DepEd guidelines. It has high scores in proposed intervention (11.67), participants description and/or other data and information sources (8.33), work plan (4.33), and cost estimates (4.33). Presently, the proposal is being given full consideration for internal funding.

As argued by the reviewers, the proposal has several strengths. First, Reviewer A commented that the rationale justifies well the importance of implementing secured examinations in response to potential cheating that may happen with online assessments. He said, "*These research proponents acknowledged that the integrity of assessment and evaluation should remain intact even with conducting them online. They believed that integrating CANVAS may resolve issues concerning different forms of cheating*." Second, the proposal adopted the Plan, Do and Check, Act AR framework that eventually guides the presentation of the methodology. Consequently, the methodology section reflects a detailed and organized plan of data sources, gathering methods, and analysis plan.

However, several suggestions were also provided by the reviewers to improve the proposal. Reviewer B and Reviewer C commented that it only provided brief details concerning the grounds for selecting CANVAS as a learning management system. In addition, both reviewers argued that the proposal should have explicitly discussed how it may be implemented as an intervention or as an action plan, apart from the fact that it has the potential features essential in preventing cheating during the online examination. It was also recommended to add a paragraph that describes the context of the action research leading to the recommendation of CANVAS. Also, Reviewer B recommended the identification of constructs that could be the basis when conducting semi-structured interviews on student experiences with taking the exam using the aforementioned LMS. Finally, they need to improve the instrumentation and validation of needed tools for the conduct of their study.

3.4. Quality of action research proposal of teachers from group 4

Group 4 was composed of teachers with various specializations and were interested in facilitating the career choice of Senior High School (SHS) students through a career guidance program. This program is developed by the school, but no reports of effectiveness have been explored yet because it is still premature. The researchers expect that it may take two to four years or so before their study will be completed because assessing the impact of a program may take some time. However, this proposal failed to reach the cut-off rating to be considered acceptable for funding based on the guidelines. The score it obtained is 62.01.

When their overall score is broken down, the highest scores involved the context of the study (11.67) and proposed intervention (10.33). The lowest points fall along with the criteria on the work plan and cost estimates (0). What made this study a potential was the nature of its purpose as evaluation research of the existing career guidance program for SHS students in the institution. Being in its premature stage, the said program still needs to be worked out. Thus, the researchers did not account for the work plan and cost estimates of the study, considering the time frame and resources which still needs to be established. The AR proposal was still in the process of continuous improvement.

In this regard, the reviewers have proposed the following suggestions to improve the proposal. For one, it is recommended to clearly define the goal of the study. Second, the theoretical

framework should serve as their guide in choosing constructs of interest and eventually in writing research questions. In their proposal, Chaos Theory was mentioned as the theoretical ground, but it does appear to serve its purpose. It does not explicitly discuss the construct/s of the theory. Third, it is suggested to detail the action plan, particularly on how their "Guidance in Action" and "Program Advising" be implemented. Finally, there is a need to present the work plan and timelines and cost estimates of the proposal.

3.5. Quality of action research proposal of teachers from group 5

Group 5 was from the faculty of education. Their proposed action research gives attention to the problem faced by the teacher education program with their pre-service teachers considering that the current situation calls for a certain pedagogical knowledge, especially in the new normal system of education. Hence, the project aimed at modeling some pedagogy online to enhance pre-service elementary teachers' pedagogical knowledge and practices. These teachers thought that this could be the best option in teaching different teaching pedagogies with the current educational setup. Their proposal got a mean score of 72.67, meaning acceptable. It got a high score in terms of description of the context (13.00), proposed data gathering methods (7.67), and data analysis plan (7.67).

One of the strengths of the paper is its relevance to time. Reviewer A noted: *There is a need to look for an alternative option to teach pedagogy despite the teaching-learning modality caused by the health crisis whereby face-to-face classes are restricted. Modeling these pedagogies may be the feasible yet a best option. Hence, the study is timely*. Second, the intentions are explicitly stated and are very good. These intentions are to help pre-service learn pedagogy which supposedly should be taught through practicum or immersion. Finally, the research methodology of the proposal reflects alignment with the research questions particularly on the data to be obtained and the data analysis plan.

However, there were also areas of concern that the reviewers agreed to recommend for the improvement of the proposal. These are the following: (a) detailed discussion regarding what and how "learning through modeling" should be implemented, (b) providing a rich background concerning the actual scenario in the context, (c) using appropriate verb tenses, and (c) testing the validity and reliability of the researchers-made scale.

4. Discussions

Participatory action research as a model was found to be effective in engaging teachers in terms of developing skills of putting research into practice, sharing and exchanging ideas with colleagues, and making collaborative efforts to adapt to changes, thus becoming agents of their own change. This approach is anchored on a participatory world-view bringing together action and reflection in participation with others to apply practical solutions to issues of pressing concern to people, putting theory into practice and, in general, allowing the thriving of individuals and the societies (Morales, 2016). Therefore, the teacher training program was able to help teachers develop skills in crafting AR proposals, as evident in the following aspects stated in the subsequent discussions.

Through facilitating the teachers in outlining the flow of ideas in making the rationale, it allowed them to create a framework to arrange their thoughts and create an organized work. Teachers were guided as to what content must be incorporated in making the background of the study. By explaining to them the importance and how to make the conceptual framework, trainees were able to make sense of the study framework as the structure that would guide them to achieve the overall goal of their study. This is consistent with Darling-Hammond et al. (2017), who contend that an effective teacher development program is content focus and incorporates active learning

wherein teachers get hands-on experience and collaborate in their learning through sharing of ideas (Darling-Hammond et al., 2017).

Engaging teachers in making their study framework through a group workshop enable them to exchange ideas and share their works with the audience at the same time receiving direct feedback from the seminar trainer. Teachers learn best from one another when they receive constructive criticism through feed-backing and advising (Ellis, 2009). As evident in their AR proposals, they were able to transfer their knowledge and skills through the quality of their papers, the coherence of ideas in their work, the inclusion of necessary details in the plan, and the techniques of designing data collection and data analysis.

The training design of this program allows for group dynamics, team effort and interactive sharing of ideas, real-time feed-backing, and critiquing of outputs with the presence of an expert trainer that served as a good avenue for developing skills and competence of teachers in coming up with good quality action research proposals. The group interaction during the training workshop, the sharing of outputs after each session, and the corrections made during the group presentations were the strategies deemed effective in delivering a successful teacher training program in this study. This is in relation to Morales (2016), who made clear the common underlying concept of action research and participatory action research involve active participation, open-ended objective,s and high levels of commitment from the researcher and the participants to the research problem with emphasis on active learning. As research approaches, individual teacher employees and not only researchers or leaders of an organization are important in designing collaboratively and participating actively in the research process (Cortes et al., 2021a; Cortes et al., 2021b; Morales, 2016).

The team composition also plays an important part in coming up with a functional action research proposal. For example, in Group 1, the team composed of varied majors of specialization composed of two elementary teachers, one college English teacher, and one accountant teacher. With their varied experiences, they were able to show a common interest in integrating technology in teaching. Group 2, on the other hand, is composed of three Psychology teachers and one English teacher who came up with a case-based method as an intervention program in teaching Psychology. Group 3 was made up of teachers from criminal justice education, tourism, and hotel and restaurant management who have an inclination toward a system for a secured examination in the online learning management or school LMS through CANVAS. For Group 4, the team came up with a program for facilitating career choice among senior high school learners made up of one guidance teacher, two science teachers, and one English teacher who was also the director for student affairs. Further, Group 5 composed of teachers of the teacher education program with majors in math, English, technology, and livelihood and general education who come up with a modeling-based approach as an intervention in online learning. The varied groupings enable interaction among different disciplines, thus making the training multidisciplinary, which makes the eight sessions more interesting and engaging as different groups have their own unique topic or interest.

The pace of the training also contributes to the effectiveness of the program, wherein each topic was appropriately laid out and delivered, the objectives of the training were carried out on time, and the possible problems that may arise were anticipated and accounted for. The duration of the training session gives teachers enough time to learn, reflect, practice and implement the new techniques in writing and apply them to crafting their proposals. In relation to Darling-Hammond et al. (2017), strong teacher development initiatives involve longer period of interaction ranging from weeks to months or academic years rather than short workshops.

The teacher training program conducted was also part of the initiatives of a higher educational institution to capacitate teachers in conceptualizing action research ideas in their

subject or specialization. The current need for action research spurs out from the immediate attention of making research a priority area of concern. Organizational support and the system approach also contributed to the successful implementation of the aforementioned training as well as the choice of expert trainers to handle the training process; the length of the training and the institutional involvement allow an avenue for a successful implementation of participator educational action research. The training program was not also confined to eight training sessions conducted but continued to be a work on progress since even after the training was conducted, teachers were followed up and constantly monitored during the actual implementation of their AR in their respective areas of interest for the improvement of their outputs. The close monitoring of the AR projects and the constant follow-through of their progress aims to help the teacher researchers to finish and eventually be able to properly disseminate and share their possible results and findings up until they publish their work.

5. Conclusion and recommendations

Participatory action research was found to be an effective teacher development framework for teachers to develop and design action research proposals. A successful training program is participatory in the sense that teachers are active participants and collaboratively working on their own change process. When teachers are properly guided and actively engaged, they felt supported and become able to bring out their confidence to share each others' ideas and eventually sustain a motivation to come up with a quality AR proposal, as evident in their outputs. Teachers are able to make sense of the training conducted as shown in the outputs of the training based on their individual AR projects. Although not all aspects of the AR criteria have been perfectly met by the teacher researchers but their motivation to pursue their AR became properly sustained and accounted for, which would serve as the driving force for them to continuously improve their work. In conclusion, the training has the potential to effectively gauge teachers to develop and design AR proposals. Thus, its implementation in the Philippine setting may be considered and incorporated into future teacher development programs. The training could be maximized to its full potential by increasing the length of time of the seminar/workshop and improving the participation of teachers through an incentive system to sustain their motivation to conduct AR in their stations.

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