

Effectiveness and Impact of Online Capacity-Building on Action Research

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Abstract

This study analyses the online capacity-building activities on action research as the banner extension programme of the graduate programmes in educational management and leadership of a public higher education institution in the Province of Sorsogon, Philippines. Specifically, this paper describes the effectiveness and impact of online capacity-building on action research. The case study design was used in this study, utilising document analysis to examine the effectiveness and impact of the three-year online extension programme to identify patterns and trends that may have contributed to the outcome of the case. From 2020 to 2022, 15 online capacity-building activities were implemented that were participated by 689 attendees. The effectiveness of the online programme was assessed based on the evaluation results for each online research capacity-building. Likewise, the impact was evaluated from the attendance rate, the number of action research paper publications, research paper presentations, and research awards. Additionally, local, national, and international partnerships established for the programme were considered to evaluate its impact. The programme was greatly enhanced by utilising an online learning platform, purposeful collaboration, and implementing action research as both a subject and a strategy. Along with the effectiveness and impact of the online research capacity-building programme, the new and enhanced three-year cycle may be proposed and implemented in collaboration with action researchers from various primary and higher education institutions.

Keywords: action research, effectiveness, extension programme, impact, online capacity-building, practice-based research, research capacity-building

1. Introduction

New policies, standards, and guidelines for teacher education programmes were released by the regulatory body for public and private higher education institutions in the Philippines in 2017. The examination of the student teaching programme, from the earlier curriculums to the teacher education curriculums of 1999, highlights the vital importance placed on conducting action research as part of the internship requirement. Upon reviewing the university's course syllabi and student teaching handbook, it was found that teaching interns are assessed based on two main components: their successful completion of the necessary demonstration teaching amount and the submission of a comprehensive narrative report, which is also the student teachers' portfolio. This significant discovery highlighted the disparity between the expected minimum standards and the actual student teaching curriculum. It revealed that the internship course did not make it mandatory to conduct action research, thus creating a gap in the planned, implemented, evaluated, and learned curriculum aspects. Hence, most of the teaching interns from 1999 to 2017 who graduated from these programmes and are employed in the basic education sectors as professional teachers did not experience conducting the action research they needed.

The programmes focused on online capacity-building for public school teachers, precisely emphasising action research. The planning stage was accomplished by conducting needs analyses, which became one of the bases for preparing the project proposal. It has culminated by signing the memorandum of agreement with the linkages established for the project. The needs analysis has revealed that it is essential for teaching interns to conduct action research, even though it is not currently mandatory within their internship. It was also discovered that the competency level of teaching interns is at a novice stage and needs further training (Digo, 2020). Likewise, teacher-researchers need to be more proficient in technology application and knowledge of research ethics (Cortes, 2019). Morales et al. (2016) also found that Filipino teachers have moderate difficulty conducting research.

Dignos (2021) recommended working action research training to address the need to enhance teachers' action research competency. Therefore, a proposal was made to strengthen research capacity-building while elevating the participants' competency level in the action research field through a professional development programme. On February 24 and March 5, 2020, the capacity-building programme for supervising instructors was implemented for the first batch of trainees at the laboratory school of a public higher education institution, which 16 supervising instructors attended. It was started with in-person training sessions on "Conducting Classroom Action Research". The extension worker, a university professor, facilitated topics like Classroom Action Research, Developing a Focus, Methods of Observation in Classroom Research, Data Gathering, Analysing Classroom Research Data, and Reporting Classroom Research.

In 2020, the nation experienced a calamity due to the COVID-19 pandemic. This unfortunate situation brought about a suspension of nearly all residential activities in higher education institutions country-wide for almost three years. Hence, the research capacity-building on "Action Research: A Methodological Approach" migrated from a fully residential or in-campus research capacity-building to fully online learning. The second batch for the Year 2020 was the first to experience online-only sessions via webinars. Both the facilitators and the attendees partially transitioned from face-to-face sessions to online sessions using Zoom, Google Meet, Facebook, and Messenger as online platforms for the research capacity-building programmes. The second cycle in 2021 was more challenging due to being fully migrated from face-to-face to online learning, kick-started with the webinar on "Learning Theories for Pedagogical Action Research: A Critical Review." It was followed by these training sessions: (a) Critical Review of Social Behaviourism Theory, (b) Critical Review of Social Cognitive Theory, (c) Critical Review of Information-Processing Theory, (d) Critical Review of Social Constructivism Theory, and Critical Review of Connectivism Theory.

After learning significantly from overcoming the challenges of conducting webinars in the second cycle, the third cycle for the Year 2022 successfully implemented three sets of webinars. The first set focused on "Action Research Dissemination" with the following sub-topics: (a) Research Publication: In Pursuit of Publishable Research Articles and (b) Disseminating Action Research through Oral and Poster Presentations. Then, the second was set on "Data Analysis for Pedagogical Action Research" with these as subtopics: (a) Action Research as a Method, (b) Quantitative Data Analysis for Action Research, and (c) Qualitative Data Analysis for Action Research. Lastly, the third set highlighted a compelling topic, "Developing Theory-Based Educational Strategies and Interventions for Innovations." The sessions covered a wide range of critical subjects, ensuring a rich learning experience. From exploring Pedagogical Action research innovations to embracing the power of Dance and Play activities, participants were exposed to innovative teaching methods while exploring the benefits of Computer-Mediated Learning and the value of Writing-to-Learn in Mathematics. Overall, the webinars provided a comprehensive platform for educators to enhance their expertise and revolutionise their teaching approaches. Therefore, over three fiscal years, from 2020 to 2022, 15 online training sessions on capacity-building through action research have been successfully executed by extension workers, resource persons, and volunteers. Through a series of online research capacity-building activities from 2020 to 2022, the programme provided teachers with in-depth knowledge and understanding of action research while at the same time inspiring them to implement and disseminate action research projects to produce impactful results. This was the first in the institution's history that a fully online course was implemented as a platform for an extension programme of a public higher education institution. Fully online extension

programmes were developed and implemented at the graduate school of the public higher education institution in the province of Sorsogon. Hence, the need to evaluate its short- and long-term outcomes.

2. Literature Review

2.1. Research Capacity-building Programmes

Trostle, as quoted by Matus et al. (2018; 2019), defined research capacity-building as a process of enhancing research skills for individual and institutional development. Meanwhile, Holden et al. (2012) saw it as a process of developing sustainable abilities and skills that enabled individuals, teams, and organisations to perform high-quality research. In this paper, the research capacity-building implemented by a public higher education institution focused on developing action research competencies of individual teacher-attendees to plan, implement, and disseminate research outputs. Research capacity-building aims to enhance the quality and quantity of research while increasing the number of people who can engage in action research. Research capacity-building can be essential for advancing knowledge and solving focal problems, indirectly stimulating economic development and improving public policy.

Action research became the focus of this research capacity-building project because of its value as a catalyst to maximise human creativity in addressing global problems (Bradbury, 2019) and its role in teacher development (Leitch & Day, 2000). This project is similar to the study conducted by Catelli et al. (2000), which was also performed in the context of higher education institutions as an extension programme partnership. This partnership for research capacity-building is relevant and necessary to improve their action research competencies (Morales et al., 2016; Cortes, 2019; & Digo, 2020) since the competencies are significantly related to the research training they attended (Dignos, 2021). Hence, these reviews highlighted the need to conduct professional development training programmes through action research for teacher trainees. However, contextualisation was necessary for this study, given the differences in objectives, scope, participants, and problems encountered for each case.

The action research capacity-building programme was guided by the transformative learning theory for adults (Mezirow, 1997), which requires the appropriate selection of educational, social, and cultural practices to facilitate learning. However, the 2019 pandemic forcefully accelerated the need for organisational transformation and the use of technology as well (Dwivedi et al., 2020). This transformative learning process involves changing frames of reference through critical reflections on assumptions, confirming contested beliefs through dialogue, taking action on one's reflective insight, and critically assessing it. Meanwhile, the usage of transformative learning in non-formal learning, like the extension programme proposed, implemented, and evaluated in this study, was guided and elaborated by Alam (2022). Likewise, a recent iteration in the basic education sector (DepEd Order No. 16, s. 2017) emphasised consistent and continuous capacity-building activities for the teachers on action research.

This institutional need is an opportunity for a transformative extension programme. Therefore, action research involving the spiral steps of planning, executing, and fact-finding was proposed and implemented both as a process and a subject for capacity-building to improve the action research competencies. The transformative capacity-building for action research may be conducted online and be defined as the process of building the competencies needed to conduct action research using online tools and resources. In this context, the University of the Philippines Open University adopted online learning for the fourteen series of webinars, including extension programmes titled EDUKussion and MasterClass (Serrano et al., 2021). Furthermore, Video Scribe Whiteboard Animation techniques were used to develop tutorial media to improve students' ability to build classroom action research (Indriasih et al., 2019). A blended training programme on classroom action research and reflective teaching (Phaisannan & Bootchuy, 2021) and a bichronous learning course for servant leadership (Digo, 2021b) were also designed but were not implemented and evaluated due to the pandemic restriction.

The broad participation in the online webinars, the use of multimedia, and the potential of blended and bichronous platforms cumulatively guided the shift of its design and implementation from traditional platforms to online ones. The online platforms can effectively support learning outside the classroom (Sohail, 2022), suggesting that this online research capacity-building is viable for an extension programme

outside of the public higher education institution's context. Furthermore, various researchers have demonstrated the effectiveness of online research capacity-building. For example, Erickson et al. (2012) indicated that the participation of basic education teachers in online professional development increased their capacity to apply and implement classroom research-based practices. Likewise, Digo and Labor (2023) also reported that online colloquia improved the research dissemination skills of basic education teachers enrolled in graduate studies. However, Kumar et al. (2022) argued that there is a need to enhance research skills so that value-adding can be done to their research outputs. Hence, in the online extension programme implemented, both the short-term effectiveness and long-term impact may be described as inputs for the next cycle of the extension programme.

This paper aims to present a comprehensive analysis of an online capacity-building programme on action research, its effectiveness and its impact as an online extension programme of a public higher education institution in the Province of Sorsogon, Philippines.

3. Research Method

3.1. Research Design

The effectiveness and impact of the completed online extension programme on action research were investigated using a case study design. This study employed document analysis to gather data on the process and outcomes of the online extension programme. This design offers opportunities for a thorough analysis of the case to accurately describe the influential factors that contributed to the success of the capacity-building project.

3.2. Research Subjects

Human research participants were not involved in this case study because this paper focuses on analysing existing data in official documents to accomplish the objectives set for this study. However, confidentiality and anonymity of the data presentation were maintained when needed to observe ethicality regarding personal data. This study evaluated two types of documents:

- i. The extension accomplishment reports submitted to the public higher education institution on the three-year implementation of the programme.
- ii. The documents shared with the researcher relative to the participants' research completion, presentation, and publications.

3.3. Data Gathering Procedures

The data-gathering procedures started by identifying documents based on their relevance to the research questions, availability of data, and obtaining necessary permissions to access existing records and documents. Subsequently, a formal review and analysis were conducted on the documents based on identified vital concepts. Data transcription and organisation was also conducted to ensure that the data was properly labelled and organised for analysis.

3.4. Data Analysis

A systematic and rigorous examination of the content and structure of the documents was conducted to extract meaningful information and conclusions. Familiarisation, coding, data extraction, data organisation, and interpretation were performed to ensure accurate and reliable data.

4. Findings and Discussion

4.1. Profile of the Attendees in the Online Extension Programmes

This section presents the profile of the attendees in the online extension programmes. Basic information relative to the sex, institutional affiliation, and the total number of online attendees are presented. For the fiscal year (FY) 2020, the residential training was attended by 16 supervising instructors, 88% of whom were females from the laboratory high school of a state university in the Province of Sorsogon. However, the online sessions conducted were attended by 57 basic education teachers, whereby again, the majority were female (75%). The attendees' information is presented in Table 1. These initial data reveal the opportunity to engage more potential attendees using online platforms for the following programmes.

Table 1. Profile of Participants, 2020 Cycle

Capacity-Building Activity	Total	Sex		Institutional Affiliation of Attendees	
		Male	Female	Basic Ed	Higher Ed
Conducting Classroom Action Research	16	2	14	-	16
Action Research: A Methodological Approach	57	14	43	57	-
Total	73	16	57	57	16

For FY 2021, as shown in Table 2, this cycle was attended by 225, primarily females (82%) and basic education teachers (89%). However, there is a small percentage of higher education institutions (9%) and technical-vocational schools (2%). Of the five sessions offered in 2021, the Critical Review on Social Constructivism Theory recorded the highest number of attendees (29%), while the session on Critical Review on Information Procession Theory recorded the lowest (12%).

Table 2. Profile of Participants, 2021 Cycle

Training Sessions	Total	Sex		Institutional Affiliation		
		Male	Female	Basic Ed	Higher Ed	TESDA
Critical Review of Information-Processing Theory	27	6	21	26	-	1
Critical Review of Social Behaviourism Theory	42	8	34	34	8	1
Critical Review of Social Constructivism Theory	66	11	55	58	7	1
Critical Review of Connectivism Theory	51	9	42	44	6	1
Critical Review of Social Cognitive Theory	39	7	32	39	-	-
Total	225	41	184	201	21	4

The third set of webinars recorded 391 attendees, with most being females (71%) and the basic education department (74%). Meanwhile, there were some attendees from higher education institutions (23%), technical vocational schools (2%), and other non-government and government agencies (1%). The data for this information are presented in Table 3.

Table 3. Profile of Participants, 2022 Cycle

Training Sessions	Total	Sex		Institutional Affiliation		
		Male	Female	Basic Ed	Higher Ed	TESDA
Developing Theory-based Educational Strategies, Interventions of Innovations	165	46	119	103	60	1
Research Publication: In Pursuit of Publishable Research Articles	26	4	22	21	3	1
Critical Review of Social Constructivism Theory	45	12	33	35	8	1
Action Research as a Method	26	7	19	21	3	1

Training Sessions	Total	Sex		Institutional Affiliation		
		Male	Female	Basic Ed	Higher Ed	TESDA
Quantitative Data Analysis for Action Research	20	8	12	15	3	1
Qualitative Data Analysis for Action Research	39	13	26	3	5	-
Total	391	115	276	290	90	6

The demand and need for the online research capacity-building programme, as established by the profile of the attendees, comes from the basic, higher, and technical-vocational sectors. Therefore, opportunities may be explored to study the possibility of establishing this as the banner extension programme of the public graduate schools’ educational management, administration, and leadership programmes. Given the relevance of action research to the required practice-based thesis and dissertation as a graduation requirement for graduate students, this project is a viable flagship programme.

4.2. Effectiveness of the Capacity -Building on Action Research

The effectiveness of the training programme is shown in Table 4, which presents evaluations from attendees for the first and second years of implementation. Overall, three indicators on topics/theme, facilitator/speaker, and visual aids/PowerPoint presentations were rated as outstanding. Attendees rated audience/participant engagement and venue as very satisfactory for two consecutive years. However, the shift from residential or face-to-face platforms to fully online sessions was considered outstanding. This means that the online platform as the venue of the training sessions was acceptable to the attendees. This feedback gave the extension workers the confidence to plan and execute the 2023 cycle using the same online platform.

Table 4. Evaluation of the 2020 and 2021 Research Capacity-Building Programmes

Indicators	FY 2020		FY 2021		Overall Average Rating	Description Rating
	Ave. Rating	Description	Ave. Rating	Description		
Venue	4.05	VS	4.60	O	4.32	VS
Topics/Theme	4.40	VS	4.79	O	4.60	O
Facilitator/Speaker	4.40	VS	4.75	O	4.58	O
Audience/Participant Engagement	4.27	VS	4.74	O	4.51	VS
Visual Aids, PowerPoint Presentation	4.45	VS	4.77	O	4.61	O
Overall	4.31	VS	4.73	O	4.52	VS

Note: VS – Very satisfactory; O – Outstanding

Furthermore, for the 2021 cycle, Digo (2021a) found out that the attendees’ action research competencies joined the sessions at a basic level through the pre-test. However, after the training, their competency levels improved to proficient, proving the programme’s effectiveness. In addition, the 2021 attendees reported impressive accomplishments, including submitting one action research proposal, initiating five ongoing action research projects, and completing five action research papers. One of the attendees with a completed action research paper was awarded the best presenter and the second-best paper award in an international research forum.

Table 5. Evaluation of the 2022 Research Capacity-Building Programme

Topics	Areas of Evaluation*							Ave.	Interpretation
	1	2	3	4	5	6	7		
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
Publishing research articles in indexed journals	4.94	4.95	5.00	4.98	5.00	4.90	4.98	4.96	Outstanding
Research Oral Presentation	4.93	4.90	4.94	4.95	4.92	4.71	4.95	4.90	Outstanding
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	4.95	4.96	4.99	4.98	Outstanding

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

For 2022, all the capacity-building activities received an outstanding rating along the seven areas of evaluation, as shown in Table 5. In other words, the programme received an overall outstanding evaluation for two consecutive years. These are strong indications of customer satisfaction and the extension workers’ intent to continuously improve their engagement with the trainees or attendees. Moreover, in 2022, the two attendees with approved research proposals completed their action research project and were invited to participate in the research forum organised by the basic education sector. However, relative to the most critical outcomes for the Year 2023, only three paper presentations were accomplished, and no paper was published in international peer-reviewed and indexed journals by the participants. Regardless, an approved research proposal in the basic education sector was also reported by an attendee in June 2022.

4.3. Impact of the Capacity-Building Programme

Knowledge dissemination was conducted through face-to-face, online training, and oral paper presentations and publications. Catelli et al. (2000) proposed a new definition of research productivity for school-university partnerships and action research. However, the impact of this capacity-building on action research is described along with the following categories: people services, publications, paper presentations, awards, and places and partnerships.

The total number of participants who attended the research capacity-building consistently increased from the first to the third year of implementation. In the first cycle of the research capacity training, only 73 attended. Meanwhile, there were 170 and 689 attendees in 2021 and 2022, respectively. The ability of the programme to generate new attendees and retain them speaks of the research capacity training’s relevance and impact on the intended beneficiaries.

Table 6. Three-year Summary of the Attendees in the Programme

Indicator	FY 2020		FY 2021		FY 2022	
	Target	Accomplishment	Target	Accomplishment	Target	Accomplishment
No. of attendees in the action research capacity-building programme	50	73	50	225	50	391

Likewise, research dissemination through research publications and presentations is a valid measure of impact (Canavan et al., 2009) for the capacity-building programme. In the three years, the publication of the research outputs in terms of original research articles completion and two research publications were accomplished by the professor as the programme leader, researcher, and extension worker in this project. They were published in the following journals: Action Learning, Action Research Journal, and the ASEAN Journal of Open and Distance Learning. One of these publications was written in collaboration with a faculty from the University of the Philippines and was published in a research journal indexed in the ASEAN Citation Index (ACI). Additionally, one action research paper from the participants was also

published in the National Research Council of the Philippines journal, reinforcing the notion by Hoppe (2019) that action research papers can be published in higher-ranked journals.

However, as stated by Kumar et al. (2013), the main challenges of the execution were the shortage of time for data analysis and interpretation and the lack of facilitators experienced in research capacity-building. Moreover, the use of planning websites, writing scientific articles (Widarti et al., 2022), and the guidance of the seven-choice point for good action research (Bradbury, 2019) to ensure publication of action research articles were different from the local standards for both qualitative and quantitative researchers. Plus, each journal may have specific guidelines for their research to be publishable. On this concern, Hoppe (2019) recommended reflecting on the desired impact rather than trying to solely be published in high-impact and indexed journals, whereby impactful papers will surely make their way for publishing. Online research presentations of completed research projects can also enhance learning and motivation, offering more comprehensive learning experiences (Sánchez et al., 2023).

In this project, the attendees accomplished six online presentations. Meanwhile, the extension workers had five online presentations in various research forums, allowing them to demonstrate their learnings and enthusiasm to disseminate their research findings. Successively, two action research papers were accepted in December 2022 for the DepEd Division of Sorsogon Research Colloquium. These paper presentations were conducted at the following research forums:

- i. 5th Sorsogon Research, Development and Extension Conference, Sorsogon State University, Sorsogon City, Philippines – 2 papers.
- ii. 6th International Congress on Action Research, Action Research, Action Learning, De La Salle University, Manila, Philippines – 4 papers.
- iii. International Conference on Extension. The Polytechnic University of the Philippines, Manila, Philippines – 1 paper.
- iv. 5th International Congress on Action Research, Action Learning, De La Salle University, Manila, Philippines – 1 paper.
- v. 2nd Research, Education, Business, Science, and Arts International Conference. Asian Intellect – 1 paper.

Though action research was not considered part of the mainstream or dominant research methodology in the field, academic papers produced from this project were recognised with various awards in the following research forums:

- i. Best Extension Paper during the 5th Sorsogon Research, Development and Extension Conference, Sorsogon State University.
- ii. 2nd Best Extension Paper during the 4th Sorsogon Research, Development and Extension Conference, Sorsogon State University.
- iii. Best Online Paper Presenter Award during the 2nd Research, Education, Business, Science, and Arts International Conference. Asian Intellect.
- iv. 2nd Best Paper Award – 2nd Research, Education, Business, Science, and Arts International Conference. Asian Intellect.
- v. 2nd Best Conference Paper during the 2020 International Virtual Conference on Education for Sustainable Development.

For the next cycle of research capacity-building, the organisers can be assured that learning and motivation to present a completed research paper can extend to the attendees' willingness and commitment to go through the publication process. Amidst the inherent challenges, collaborations helped increase research capacity, which aligns with the study by Varshney et al. (2016). Hence, presentations, publishing, and recognition of the papers emerged through this online research capacity-building programme and established local, national, and international linkages for the programme, given the need for an international platform to disseminate research outputs against the standards of action research experts, the programme connected with the President of Action Learning and Action Research Association (ALARA) Limited and the Editor-in-Chief of Action Learning Action Research Journal (ALARj) for the mentoring and benchmarking activities of the extension worker.

This linkage also facilitated the membership of the programme leader to ALARA, which provided him with significant insights on the required quality and rigour of action research publication. Membership in the international community of action researchers and publishers may also contribute to future opportunities beneficial to the programme. Moreover, collaboration with faculty members from the University of the Philippines Visayas, University of the Philippines Diliman, Lucrecia R. Kasilag Senior High School, and DepEd Division of Sorsogon ensured the steady supply of resource persons and participants. Graduate students from graduate schools of a public higher education institution in the Province of Sorsogon also participated as resource persons, facilitators, or secretariat members. With the establishment of these collaborative engagements, the sustainability of online capacity-building on action research can be assured.

5. Conclusion

The three-year online capacity-building programme on action research was implemented as an alternative platform for the public educational management and leadership graduate programme's in-campus banner extension programme due to the COVID-19 pandemic. The three-year extension programme was found relevant and sustainable, supported by the participation of 689 attendees over three years. This total was accumulated from the implemented 15 online capacity-building activities spread over six semesters or three academic years. The programme's effectiveness was assessed based on the evaluation results for each online research capacity-building. Likewise, the impact was determined as significant through the 689 attendance record, three research paper publications, eleven research paper presentations, and five research awards. Additionally, one local, three national, and two international partnerships established for the programme were considered to be a successful evaluation of its impact. Deductively, the migration from residential or in-campus training to the relevant and available online learning platforms, the purposive collaboration that provided the programme with excellent resource persons and participants, and the use of action research as a relevant subject and efficient strategy contributed to the effectiveness and impact of the programme.

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References

- Alam, S. (2022). Mapping a sustainable future through conceptualization of transformative learning framework, education for sustainable development, critical reflection, and responsible citizenship: An exploration of pedagogies for twenty-first century learning. *The Electrochemical Society*, 107(1).
<https://doi.org/10.1149/10701.9827ecst>
- Bradbury, H. (2019). What is good action research: Quality choice points with a refreshed urgency. *Action Research*, 17(1), 14-18. <https://doi.org/10.1177/1476750319835607>
- Canavan, J., Gillen, A., & Shaw, A. (2009). Measuring research impact: Developing practical and cost-effective approaches. *Evidence & Policy*, 5(2), 167-177. <https://doi.org/10.1332/174426409X437919>
- Catelli, L. A., Padovano, K., & Costello, J. (2000). Action research in the context of a school-university partnership: Its value, problems, issues, and benefits. *Educational Action Research Journal*, 8(2), 225-242.
<https://doi.org/10.1080/09650790000200119>
- Cortes, S. T. (2019). Needs assessment on action research competencies of teacher-researchers in Surigao del Sur, Philippines. *Journal of Education Naresuan University*, 21(4), 1–19.
https://so06.tcithaijo.org/index.php/edujournal_nu/article/view/192512
- Digo, G. S. (2020). Competencies of teaching interns: Basis for a capacity building for State Colleges and Universities. *Journal of Multidisciplinary in Social Sciences*, 16(2), 31-38.
- Digo, G. S. (2021a). Effectiveness of a state university extension programme on pedagogical action research. *Action Learning, Action Research Journal*, 27(2), 49-64.

- Digo, G. S. (2021b). Servant leadership of graduate students: Basis for the development of online distance course. *ASEAN Journal of Open and Distance Learning*, 13(1), 104-118.
- Digo, G. S., & Labor, J. S. (2023). Effectiveness of online colloquia in improving the research dissemination skills of graduate students. *ASEAN Journal of Open and Distance Education*, 14(2), 42-43.
- Dignos, M. R. (2021). Profile and action research competence of elementary teachers. *International Journal of Advanced Multidisciplinary Studies*, 1(3), 118-133. <https://www.ijams-bbp.net/wp-content/uploads/2021/07/MARICEL-R-DIGNOS.pdf>
- Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., John S. Edwards, J., S. Gupta, B., Lal, B., Misra, S., Prashant, P., Raman, R., Rana, N. P., Sharma, S. K., & Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management*, 55. <https://doi.org/10.1016/j.ijinfomgt.2020.102211>
- Erickson, A. S. G., Noonan, P. M., & McCall, Z. (2012). Effectiveness of online professional development for rural special educators. *Rural Special Education Quarterly*, 31(1), 22–32. <https://doi.org/10.1177/875687051203100104>
- Holden, L., Pager, S., Golenko, X., & Ware, R. S. (2012). Validation of the research capacity and culture (RCC) tool: Measuring RCC at individual, team, and organisation levels. *Australian Journal of Primary Health*, 18(1), 62–7. <https://doi.org/10.1071/PY10081>
- Hoppe, M. (2019). Choosing an outlet for action research: Publication patterns in innovation journals. *Technology Innovation Management Review*, 9(4), 66-77.
- Indriasih, A., Prayitno, E., Haryati, Y., & Hartutik. (2019). The development of instructional multimedia using Whiteboard Animation techniques to improve students' ability in developing class action research. *ASEAN Journal of Open and Distance Learning*, 11(2), 71-77.
- Kumar, C., Rangappa, K. B., & Suchitra, S. (2022). Effectiveness of online capacity building programmes in wholistic development of faculties: An empirical analysis. *Asian Association of Open Universities Journal*, 17(2), 194-211. <https://doi.org/10.1108/AAOUJ-04-2022-0058>
- Kumar, A. M. V., Satyanarayana, S., Wilson, N., Zachariah, R., & Harries, A. D. (2013). Operational research capacity building in Asia: Innovations, successes and challenges of a training course. *Public Health Action*, 3(20), 186-188. <https://doi.org/10.5588/pha.13.0008>
- Leitch, R. & Day, C. (2000). Action research and reflective practice: Towards a holistic view. *Educational Action Research*, 8(1), 179-193. <https://doi.org/10.1080/09650790000200108>
- Matus, J., Walker, A., & Mickan, S. (2018). Research capacity building frameworks for allied health professional – a systematic review. *BMC Health Services Research*, 18(716), 1-11. <https://doi.org/10.1186/s12913-018-3518-7>
- Matus, J., Wenke, R., Hughes, I., & Mickan, S. (2019). Evaluation of the research capacity and culture of allied health in a large regional public health service. *Journal of Multidisciplinary Health Care*, (12), 83-96.
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 74, 5-12. (European Consortium of Liberal Arts and Sciences). <https://www.ecolas.eu/eng/wp-content/uploads/2015/10/Mezirow-Transformative-Learning.pdf>
- Morales, M. P. E., Abulon, E. L. R., Soriano, P. R., David, A. P., Hermosisima, Ma. V. C., & Gerundio, M. G. (2016). Examining teachers' conception of and needs on action research. *Issues in Educational Research*, 26(3), 464-489. <http://www.iier.org.au/iier26/morales-2.html>
- Phaisannan, T., & Bootchuy, T. (2021). Designing a blended training programme on classroom action research and reflective teaching using online professional learning community for Thai pre-service teachers. *ASEAN Journal of Open and Distance Learning*, 13(1), 16-30.
- Serrano, J. V., Belegal, J. A. C. & Petrasanta, L. P. (2021). Documenting the University of the Philippines Open University's Response to COVID-19 pandemic through fora and webinars. *ASEAN Journal of Open and Distance Learning, Special Issue 2020*, 24-36.

- Sánchez, R., K., Arbáizar Gómez, J. P., Isasi Sánchez, L., & Durán-Heras, A. (2023). Exploring a new oral presentation approach for online education through action research. In F. P. García Márquez, I. Segovia Ramírez, I., P. J. Bernalte Sánchez, & A. Muñoz del Río. (Eds.), *IoT and Data Science in Engineering Management. CIO 2022. Lecture Notes on Data Engineering and Communications Technologies*, (Vol. 160). Springer.
https://doi.org/10.1007/978-3-031-27915-7_77
- Sohail, M. (2022, June 30). *Online learning: What next for higher education after COVID-19?* World Economic Forum.
<https://www.weforum.org/agenda/2022/06/online-learning-higher-education-covid-9>
- Varshney, D., Atkins, S., Das, A., & Diwan, V. (2016). Understanding collaboration in a multi-national research capacity-building partnership: A qualitative study. *Health Research Policy and Systems*, 14(64), 2-10.
<https://doi.org/10.1186/s12961-016-0132-1>
- Widarti, H. R., Habiddin, N. C. E., Parlan, S., Syafruddi, A. B., Ardyanshah, A., & Rokhim, D. A. (2022). Development website of planning, writing, and publication of scientific articles based on Classroom Action Research (CAR) to increase teacher's pedagogical competence. In S. Wonorahardjo, S. Karmina, & Habiddin (Eds.), *Improving Assessment and Evaluation Strategies on Online Learning* (pp. 37-43). Routledge.
<https://doi.org/10.1201/9781003261346>