HIGH SCHOOL ADMINISTRATORS’ AND TEACHERS’ PERSPECTIVE OF EVALUATION CRITERIA FOR ACTION RESEARCH IN THE FIELD OF EDUCATION

ABSTRACT: Action research becomes an appropriate and effective professional development method and strategy to promote inquiry knowledge and solve the problem that leads to action or change. Teachers participating in action research could gain a better insight into themselves as teachers, be motivated to continuous professional growth, and boost their self-confidence as professionals. The main objective here is to examine high-school administrators’ and teachers’ perceptions of the necessity of evaluation criteria for pedagogical action research. This research surveyed 255 respondents, including 16 administrators and 239 teachers from high-schools in Binh Duong province, Vietnam, with the 11-item questionnaire. The main finding indicated that all high-school administrators and teachers participating fully agree that novelty, effectiveness, and applicability are necessary criteria to evaluate quality of pedagogical action research in Vietnam. Our study contributes to the general discussion about necessary and appropriate criteria for evaluating the quality of pedagogical action research in Vietnam.

província de Binh Duong, no Vietnã, com um questionário de 11 itens. A principal descoberta indicou que todos os administradores e professores do ensino médio participantes concordam plenamente que novidade, eficácia e aplicabilidade são critérios necessários para avaliar a qualidade da pesquisa-ação pedagógica no Vietnã. Nosso estudo contribui para a discussão geral sobre critérios necessários e adequados para avaliar a qualidade da pesquisa-ação pedagógica no Vietnã.


RESUMEN: La investigación-acción se convierte en un método y estrategia de desarrollo profesional apropiado y efectivo para promover la indagación del conocimiento y la solución del problema que lleva a la acción o al cambio. Los docentes que participen en la investigación-acción podrían obtener una mejor percepción de sí mismos como docentes, estar motivados para un crecimiento profesional continuo y aumentar su confianza en sí mismos como profesionales. El principal objetivo aquí es examinar las percepciones de los administradores y profesores de secundaria sobre la necesidad de criterios de evaluación para la investigación acción pedagógica. Esta investigación encuestó a 255 encuestados, incluidos 16 administradores y 239 maestros de escuelas secundarias en la provincia de Binh Duong, Vietnam, con el cuestionario de 11 elementos. El hallazgo principal indicó que todos los administradores y docentes de escuelas secundarias que participaron están totalmente de acuerdo en que la novedad, la eficacia y la aplicabilidad son criterios necesarios para evaluar la calidad de la investigación acción pedagógica en Vietnam. Nuestro estudio contribuye a la discusión general sobre los criterios necesarios y apropiados para evaluar la calidad de la investigación acción pedagógica en Vietnam.


Introduction

With The Fourth Industrial Revolution, which is the fusion of advances in specific technologies such as Internet of Things (IoT), artificial intelligence, human-machine interfaces (HMIs), genetic engineering and robotics, the convergent boundaries between humans and machines have been increased and it has strong effects on various fields in society. One of the sectors influenced is education, which must meet modern society's requirements, especially the continually changing economy. Education systems have a crucial responsibility in raising a generation with essential skills like critical thinking, active listening, complex problem solving, negotiation, and creativity to embark on a career requiring continuous personal development. The achievement of education could be evaluated by the quality of educators such as lecturers and teachers. Teacher development could be fostered by action research, enhancing their understanding of the practice and professional knowledge (FAZIO; MELVILLE, 2008; GOODNOUGH, 2001). According to Yates (2004), education research is the process of...
collecting accurate data and analyzing data related to the field of education. Besides, Lewin (1946) considered research to design the study, conducting and evaluating the findings.

Action research is a cyclical process of systematic inquiry and studying educational circumstances (JOHNSON, 2008) that could be conducted to examine teachers' professional practice (OBERG; MCCUTCHEON, 1987), dealing with educational issues including teaching strategies, school/classroom management, effective instruction, and educational assessment tools (CHEVALIER; BUCKLES, 2019; MERTLER, 2019; ULLA, 2018). Moreover, action research in education is methodically carried out to improve student learning outcomes by solving problems in academic settings such as offices, classrooms, laboratories where instruction and service occur (LARI et al., 2019). Teachers' professional practice includes knowledge transmission in which the teacher is a dispenser of knowledge and promote students' engagement in learning. Yigit and Bagceci (2017) also suggested that action research is a systematic method to produce new knowledge and scientific way to solve problems.

The main objective of doing action research is to determine concerns and problems of educators and the learning environment to make better decisions (SUBIA, 2018) and then propose new solutions based on the achieved results (ULLA; BARRERA; ACOMPANADO, 2017). Several researchers suggested that involving teachers in studying or doing research in their classrooms could improve their high-quality teaching and professional learning to cultivate professional knowledge (DARLING-HAMMOND, 1996; LIEBERMAN, 1995; OBERG; MCCUTCHEON, 1987). Action research becomes an appropriate and effective professional development method and strategy that would promotes inquiry knowledge acquired by investigation and solving problems leading to action or change (CASANOVA, 1989; ROSAEN; SCHRAM, 1997). Teachers participating in action research could gain a better insight into themselves as teachers, make the right decisions resulting in better behaviors (OBERG; MCCUTCHEON, 1987), motivation to continuous professional growth (BOYER et al., 2015; ROCK, 1997; SHALAWAY, 1990), and boost their self-confidence as professionals (LOMAX; EVANS, 2002; ROCK, 1997).

Several studies are reporting the conceptions of educators or teachers on the role and outcomes of action research. The findings in a previous study of Tindowen, Guzman, and Macanang (2019) showed that Filipino high school teachers fully agreed that action research was an effective and important tool to enhance teaching quality and students' learning process. This research found clear support for the findings of Halim, Meerah, and Buang (2010) and McIntosh (2010). Besides, teachers also defined the role of action research as a valuable way to develop instructional and professional knowledge to advance teachers' professional
development (TINDOWEN et al., 2019). The research data, including 52 teachers from National High School, Abelardo et al. (2019) revealed teachers' great challenges when conducting scientific research. Firstly, teachers in high school are too occupied with instructional practice and personal life to participate or conduct a study. Moreover, teachers think that the huge amount of work related to management and teaching could impact the process and quality of doing research. Secondly, teachers admit that they have inadequate knowledge specific to such a complex and difficult task as action research. The challenge that teachers mentioned is the insufficient training programs and seminars related to doing action research. These findings is directly in line with the study of Tindowen et al. (2019) who reported that teacher did not accumulate enough required skills and knowledge about doing action research, especially writing action research. One of the biggest challenges that teachers must face when conducting action research is looking for relevant findings from previous study to complete literature review of recent study.

Action research could not be judged with the standard used for other research approaches because it arises from a different epistemological background (MEYER, 2000). The rigor in critiquing the process and achieving results is a challenge of action research (ROWELL et al., 2015). Zuber-Skerrit and Fletcher (2007) indicated that important and accurate analysis of the research problem and applying appropriate methods when conducting action research to produce and contribute knowledge to theory and practice were quality criteria in action research. Besides, Feldman (2007) suggested that a good action research have to present meticulously the data collection procedure, the theory of study and take notice of the research's validity. Three preferred evaluation criteria for action researches were determined in a study of Barcelona (2020), including (i) contribution of action research to broadening educational theoretical understanding and practice: developing existing knowledge and dealing with the problematic situation in educational settings; (ii) requires actionability: achieved results provide effective actions to solve the defined problem and create positive changes in teaching and learning; (iii) reflexivity among action researchers: they have to involve and engage themselves in the research process to modify and improve their roles as educators to find out specific solutions to solve the pressing problems in educational settings.

Action research is considered a powerful tool for teachers' professional development (VAN, 2020). After interviewing thirty in-service teachers participating in the action research courses, Anh (2017) revealed that the course was informative and effective enough for teachers to expand their knowledge about action research and conducting quality action research. Moreover, this course satisfied teachers' demands to solve pedagogical problems in the teaching
process. The author also reported teachers' complaints about the action research courses, including textbooks with complicated contents, lack of materials involved in data collection and analysis procedures, lack of chances to practice under the guidance of trainers. In another study by Van (2020), with data from forty-nine teachers, the author reported that most of the interviewed participants applied action research to develop their professional development due to its benefits, although there were still several difficulties when conducting action researches such as insufficient knowledge and time. Action research and related training programs have been matters of concern for educators. Besides, the evaluation criteria for action research are an important research problem that Vietnamese educators always discuss and analyze to improve the quality of action research in the field of education. To the best of our knowledge, there is no scientific research on the criteria for pedagogical action research. The main aim of this study is to examine high school administrators' and teachers' perceptions of the necessity of evaluation criteria for pedagogical action research in education.

Method

Participants

Participants are from eleven high schools in Binh Duong province, Vietnam. All participants provided informed consent after receiving an explanation of the aim of the research. A survey questionnaire was distributed and introduced to 255 respondents, none of which were eliminated after returned and checked. The achieved data of this study included 16 administrators and 239 teachers. Participants who were trained in pedagogical action research accounted for 81.8%, of which high school teachers accounted for 75.6%. Participants who know pedagogical action research accounted for 91.7%, of which high school teachers accounted for 85.4%. Participants who conducted pedagogical action research accounted for 71.4%, of which high school teachers accounted for 66.0%.
Table 1 – The overview of survey participants (N = 255)

<table>
<thead>
<tr>
<th>Participants</th>
<th>High school administrators (n=16)</th>
<th>High school teachers (n=239)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained in pedagogical action research</td>
<td>Yes 6.2%</td>
<td>75.6%</td>
</tr>
<tr>
<td></td>
<td>No 0.0%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Have knowledge about pedagogical action research</td>
<td>Yes 6.3%</td>
<td>85.4%</td>
</tr>
<tr>
<td></td>
<td>No 0.0%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Conducted pedagogical action research</td>
<td>Yes 5.4%</td>
<td>66.0%</td>
</tr>
<tr>
<td></td>
<td>No 0.8%</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

Source: Devised by the authors

Measurement

The survey questionnaire was composed by 11 items which were divided into three factors: novelty, effectiveness, and applicability. With the achieved data, the value of Cronbach's alpha was 0.931, indicating that the scale is significant and reliable. The questionnaire is based on a 5-point Likert scale used for all items, ranging from one to five (1 = Not necessary; 2 = Necessary; 3 = Fairly necessary; 4 = Slightly necessary; 5 = Very necessary). An informed consent process was used to ensure participation. The contribution was taken on an entirely voluntary basis.

Result

The mean scores of eleven items about high school administrators' and teachers' perceptions of the necessity of evaluation criteria for action research in education are presented in Table 2. The mean score for all eleven items was 4.43 (SD = 0.99).

The mean score on the novelty was 4.44 (SD = 0.991). Among the three items of high school administrators' and teachers' perceptions of the necessity of evaluation criteria for the novelty, the indicator which had the highest score is Propose a solution to partially replace the existing solution, ensure that action research is based on a systematic process with accurate analysis and appropriate methodology (M = 4.72, SD = 0.78) and the indicator which had the lowest score is The new solution has recently been applied in other schools/colleges, and after researching, the authors has applied effectively for their schools/colleges (M = 4.14, SD = 1.12).

The mean score on the effectiveness was 4.26 (SD = 1.07). Among the five items of high school administrators' and teachers' perceptions of the necessity of evaluation criteria for
the effectiveness, the top three indicators, which are listed from the highest to the lowest average points, are as below: The new alternative solutions partially replaced the existing solution and have been applied in schools/colleges with great efficiency (M = 4.56, SD = 0.98), The new solutions have recently been applied in schools/colleges with great efficiency (M = 4.46, SD = 1.04), and The new alternative solutions partially replaced the existing solution and has been applied in fields with great efficiency (M = 4.16, SD = 1.07). The indicator with the lowest score is that the new alternative solutions have been implemented and applied in fields with great efficiency (M = 4.06, SD = 1.14).

The mean score on the applicability was 4.58 (SD = 0.92). Among the three items of high school administrators' and teachers' perceptions of the necessity of evaluation criteria for the applicability, the indicator which had the highest score is Provide solutions and recommendations that are applicable to practice and easy to implement for agencies, units, educational and training institutions (M = 4.63, SD = 0.88) and the indicator which had the lowest score is Provide scientific arguments for making guidelines and policies in agencies, units, educational and training institutions (M = 4.51, SD = 0.99).

**Table 2** – High school administrators' and teachers' perceptions of the necessity of evaluation criteria for action research

<table>
<thead>
<tr>
<th>EVALUATION CRITERIA</th>
<th>MEAN</th>
<th>SD</th>
<th>ORDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Novelty</td>
<td>4.44</td>
<td>0.991</td>
<td></td>
</tr>
<tr>
<td>1.1 Propose a new alternative solution and ensure that action research is based on a systematic process with accurate analysis and appropriate methodology.</td>
<td>4.45</td>
<td>1.075</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Propose a solution to partially replace the existing solution, ensure that action research is based on a systematic process with accurate analysis and appropriate methodology.</td>
<td>4.72</td>
<td>0.777</td>
<td>1</td>
</tr>
<tr>
<td>1.3 The new solution has recently been applied in other schools/colleges and after researching, the authors has applied effectively for their schools/colleges.</td>
<td>4.14</td>
<td>1.121</td>
<td>3</td>
</tr>
<tr>
<td>2 Effectiveness</td>
<td>4.26</td>
<td>1.069</td>
<td></td>
</tr>
<tr>
<td>2.1 The new alternative solutions have been implemented and applied in fields with great efficiency.</td>
<td>4.06</td>
<td>1.144</td>
<td>5</td>
</tr>
<tr>
<td>2.2 The new alternative solutions partially replaced the existing solution and has been applied in fields with great efficiency.</td>
<td>4.16</td>
<td>1.069</td>
<td>3</td>
</tr>
<tr>
<td>2.3 The new solutions have recently been applied in schools/colleges with great efficiency.</td>
<td>4.46</td>
<td>1.04</td>
<td>2</td>
</tr>
<tr>
<td>2.4 The new alternative solutions partially replaced the existing solution and has been applied in schools/colleges with great efficiency.</td>
<td>4.56</td>
<td>0.984</td>
<td>1</td>
</tr>
</tbody>
</table>
2.5 The new solutions have recently been applied in other schools/colleges and after researching, the authors have applied in their schools/colleges with great efficiency. 4.07 1.109 4

3 Applicability 4.58 0.923

3.1 Provide scientific arguments for making guidelines and policies in agencies, units, educational and training institutions. 4.51 0.988 3

3.2 Provide solutions and recommendations that are applicable to practice and easy to implement for agencies, units, educational and training institutions. 4.63 0.877 1

3.3 The new solutions have been applied in practice with great efficiency or can be applied effectively in a wide range of fields. 4.61 0.904 2

| Total score | 4.43 | 0.994 |

Source: Devised by the authors

Discussion

The main purpose of this study is to examine high school administrators' and teachers' perceptions of the necessity of evaluation criteria for action research in the field of education. The main finding indicated that both high school administrators and teachers agreed with mentioned evaluation criteria for pedagogical action research. All high school administrators and teachers participating in this survey totally agree that the novelty, effectiveness and applicability are the necessary criteria to evaluate the quality of pedagogical action research in Vietnam.

The evaluation scores of the survey showed that high school administrators and teachers considered the applicability as an important criterion of for pedagogical action research. Specifically, administrators and teachers indicated that quality action research could provide solutions and recommendations that are applicable to practice and easy to implement for agencies, units, educational and training institutions. Besides, one of the evaluation criteria for the applicability of pedagogical action research is that the new solutions have been applied in practice with great efficiency or can be applied effectively in a wide range of fields. These findings supported previous research conducted by Barcelona (2020), who suggested that achieved results from good action research could provide effective actions to solve a defined problem and create positive changes in the teaching and learning process. The main purpose when conducting action researches is to define problems of educators and learning environment to make better decisions (SUBIA, 2018) and then propose new solutions based on the achieved results (ULLA et al., 2017).

The analyzed data showed that novelty was one of the necessary criteria for evaluating quality of action research. Specifically, high school administrators and teachers thought that the achieved findings from good action research should propose a solution to partially replace the
existing solution, ensure that action research is based on a systematic process with accurate analysis and appropriate methodology. This result is directly in line with previous findings of Zuber-Skerrit and Fletcher (2007) who suggested that important and accurate analysis of the research problem, and applying appropriate methods when conducting action research to produce and contribute with knowledge to theory and practice were the quality criteria for evaluating action research. The accuracy have to be guaranteed when doing action research because action research is an iteration of cyclical processes, including data collection procedure about a challenging situation, reflecting and planning for further action to improve the current situation (STERN, 2013).

The achieved finding showed that high school administrators and teachers considered effectiveness as a necessary criterion for evaluating the quality of pedagogical action research. Specifically, the new alternative solutions achieved from action research must partially replace the existing solution and be applied in schools/colleges with great efficiency. The goals of educators and teachers when conducting action research methodically is not only to produce new knowledge, cultivate professional knowledge or improve professional practice but also to improve student learning outcomes by solving problems in academic settings such as offices, classrooms, laboratories where instruction and service occur (LARI et al., 2019).

The convenience sample is a significant drawback of our study because it cannot allow for generalization to the Vietnamese population. The current study's sample was collected among administrators and teachers from high schools in Binh Duong province in Vietnam.

Conclusion

Action research is a cyclical process of systematic inquiry and study of educational problems to examine teachers' professional practice, dealing with educational issues including teaching strategies, school management, effective instruction, and educational assessment tools. Involving teachers in studying or doing research in their own classrooms could improve their high-quality teaching and professional learning to cultivate professional knowledge. The authors conducted this study to examine high school administrators' and teachers' perceptions of the necessity of evaluation criteria for pedagogical action research. The main finding of the recent study indicates that high school administrators and teachers participating in this survey totally agree that novelty, effectiveness and applicability are the necessary criteria to evaluate the quality of pedagogical action research in Vietnam. Evaluation criteria for pedagogical action research in Vietnam should be further studied from a variety of angles and aspects to improve
the quality of action research in the field of education. Future research could aim to (i) examine and give supplementary criteria for evaluating pedagogical action research; and (ii) apply existing criteria to evaluate the quality of action research and then propose a new alternative solution.

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