

Action Research-based Online Teaching in Oman: Teachers' Voices and Perspectives

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Abstract

The COVID-19-forced switch to online teaching has proven the traditional teaching models and practices unsuitable. Classroom-related issues require teachers to reflect and embrace innovative and practical approaches to cope with the challenges of online teaching. The current study examines the affordances and challenges of action research in online teaching. The study analyzed the responses of ($N=31$) university teachers in Oman regarding their experience and practice of action research-based online teaching. The study identified several factors that support or hinder action research-driven teaching and teachers' views on the efficacy of the teaching-research nexus. The study also drew on several implications for research-based effective teaching and teacher professional development.

Keywords: action research, professional development, EFL teaching, online teaching, reflection

1. Introduction

The abrupt adoption of online teaching by educational institutions following the pandemic has taken many teachers by surprise, especially the unprepared ones, and made teaching and learning a challenging practice for teachers and students alike. Although online teaching has been practiced by academic institutions internationally for more than two years, with a broader scope for acceptance by the parties involved in the educational process, many students and teachers still find it difficult to cope with the virtual reality of the COVID-19-triggered classrooms, which poses challenges for effective teaching and learning. The abruptness, unpredictability, and multiplicity of online teaching environments and technologies have challenged many aspects of traditional teaching. In this context, pedagogical action research has become imperative.

There is no consensus among researchers on the origins of action research. While some researchers (Kapenieks & Salite, 2012) trace its origins back to Dewey's philosophy in his publication *Democracy and Education* (Dewey, 1916), others (see Mills, 2014) believe that action research was conceived by Lewin (1946) and gained momentum with the rise of the teacher-as-researcher school in the 1950s of the twentieth century (Hammersley, 1993). According to this movement, teachers need to embrace a new role as researcher educationalists who can merge their theoretical knowledge with professional practices to achieve professional development (Hutchinson, 1988; Schon, 1983; Stenhouse, 1975) and improve the quality of their teaching practices.

For school teachers, conducting action research is a daunting responsibility, taking into consideration their academic and professional backgrounds. Conducting action research seems more appropriate to the profile of university teachers who are supposed to be more research-oriented in achieving professional development. Yet, higher education institutions, especially in Middle Eastern countries (McGee, 2008), seem to have a general tendency to adopt a simple approach to professional development by conducting conventional professional development activities such as short courses, training sessions, and workshops. With the need for higher education academic institutions to adopt a more robust approach to the professional development of their teachers and the disrupting impact of the transformation to online learning, it has become necessary for university teachers to adapt their research endeavours to the new situation and align them with the conditions imposed by the new learning environment.

Action research is especially fruitful in educational contexts with high levels of unpredictability, like language learning and online education. Lately, action research has emerged as an exemplary strategy for improving pedagogic practices in language learning (Burns, 2010; Nasrollahi, Krish & Noor, 2012). English as a second language (ESL)/English as a foreign language (EFL) teaching embraces a structured, generalized, and predictable teaching model which prolongs stagnant, uncreative practices that may not bear the desired fruits given the diversification in the academic background of the learners who come from different disciplines and the variation in their level of proficiency. This is true of educational institutions in a Middle Eastern Gulf country like Oman, where higher education academic institutions offer EFL courses that cluster students from different disciplines in the same classroom (Omar, 2021).

Furthermore, action research is an ideal strategy to improve teaching and learning in the online educational context due to the volatility of the criteria that govern teaching and learning in the electronic educational environment. The primary source of obstruction in online

education is the emergence of “unanticipated ways of accomplishing tasks within the distance-learning environment due to the decreased ability of the instructor to mentor student progress and increased student freedom to interpret how to accomplish course tasks” (Lamaster & Knop, 2004, pp. 406-407). Kapenieks and Salite (2012) view action research as a precious approach to investigating existing gaps and exploring possible opportunities in transformed learning environments that witness the introduction of “dramatic changes” (p. 111), like what happened when technology started to be used in education (e-learning).

The COVID-19-triggered online educational context faced a continuous trail of issues that impeded the educational process and required teachers to practice continuous reflection to establish practical and timely solutions to the issues they faced while administering the educational process in their classrooms. Following the experimentation of online education for over two years, it has become necessary to conduct studies that examine potential areas of improvement in different disciplines of the e-learning environment. A few months after the sudden switch to online education, the academic research scene was flooded with contributions that explored the new learning environment and identified an array of gaps and challenges facing the educational process (see for instance, Gacs, Goertler & Spasova, 2020; Lomika, 2020; Ross & DiSalvo, 2020; Salih & Omar, 2021a, among others). After the new experience of virtual learning became mainstream for all the parties involved in the educational process, it is essential to embrace a solid research model like action research to come up with new techniques that improve the quality of education in the medium and long term.

1.1 Action Research: Features and Affordances

Action research is a strategy teachers use to reflect on their teaching for professional development and improve the quality of education. This strategy allows teachers to challenge their pedagogic practices away from any general assumptions that may be dictated by the mainstream educational framework, including conventional pedagogic practices, intended learning outcomes, curricula, and others. In other words, teachers use action research to explore and question their “personal teaching context, while at the same time being one of the participants in it” (Burns, 2010, p. 2). This idea implies that action research does not embrace a standard solution to similar classroom situations. According to Wallace (1998), traditional strategies for professional development include conducting discussions with other teachers (peers) on problems related to class management and teaching experiences, participating in conferences, reading content from books or professional journals for some advice and ideas on professional development, professional bodies’ memberships, meetings and workshops with colleagues.

Burns (2018) remarked that conducting action research consists of two components: ‘actions’, which refer to the daily practices of teachers and the students’ interaction with them; and ‘research’, and this involves raising questions and gathering evidence about the results of the actions (teacher-student interaction). Action research functions in a cycle of collecting data, analyzing data, and reflecting on the results of data analysis for improvement or solving problems. These phases are more or less the same in all literature on action research with slight variation in their description. Mills (2014) discussed action research which benefits from the collaboration/partnership between all parties involved in the educational process including, teachers, school administration, and families, and introduced four steps of action research in which the researcher identifies the point of focus, collects data, analyzes the data and then develops an action plan. Burns (2018) elaborated more on the steps of action research by identifying the following five phases: planning (identifying a problem and setting a plan to solve the problem), acting (tangible steps to solve the problem), observing (gathering information on the problem), reflecting (analysis of the causes of the problem), and making a decision on an action to be adopted to address the problem.

Regardless of the number of phases required to conduct action research, teachers’ self-reflection is one pillar in its implementation. Stenhouse (1975) viewed the teacher as a reflective practitioner and a researcher, and, therefore, an extended professional. According to this view, teachers should review their practices and reflect on them critically for improvement while distancing themselves from prior pedagogic or personal assumptions that may prove to be misleading (Burns, 2010). According to Wallace (1998), unlike traditional practices for professional development such as reading in professional journals or attending conferences and workshops, “action research is a form of structured reflection” which is “problem-focused” (p. 15) and systematic. Action research is different from mainstream educational research in certain aspects. First, while educational research is conducted by an independent researcher on teachers’ pedagogic practices, action research is conducted by the teachers themselves on their own practices. Second, traditional research has broad implications as it is “concerned with what is universally true, or at least generalizable to other contexts” (Wallace, 1998, p. 17), while action research is context-based and more focused on special cases (Burns, 2018). As such, action research enhances the teachers’ ability to feel autonomous and motivated (Banegas et al., 2013). On the difference between traditional research and action research, Mills (2014) remarked:

Teacher researchers studying their own practices also differ from traditional educational researchers (studying something other than their own practices) because they are committed to taking action and effecting positive educational change in their own classrooms and schools based on their findings. Traditional educational researchers may not be able to impact the subjects of their studies because they are outside of their locus of control. (p. 5)

Action research carries within its practice the seeds of reforming or renewing the educational process (Burns, 2005; Mills, 2014). The fact that action research is contextualized makes its results unpredictable and not necessarily in harmony with “preconceptions about what works” (Burns, 2018, p. 5). Accordingly, action research results may lead to innovative practices that introduce new components to the curriculum (Burns, 2010). Giraud and Saulpic (2019) noted that teaching-based research has a constructive impact on course design which should not be inspired by epistemic considerations solely; it should also be guided by pedagogic input from the teachers. One of the

innovative applications of action research is practicing “the right kind of intercultural education” (McNiff, 2013, p. 206), which requires a transformation in the pedagogic practices of teachers (Salih & Omar, 2022b). Action research allows for transforming the educational process as it enables the instructor to complete an entire “cycle of observing, reflecting, planning, and acting” (Salih & Omar, 2022a, p. 264). Salih and Omar (2021b) conducted a successful empirical study on developing the learners’ intercultural communicative competence in online teaching using action research methods.

Teachers need to practice action research to explore areas that can be improved in their professional practice. These areas may have a general focus related to classroom management, such as motivating learners and increasing their autonomy, or a particular focus related to a specific discipline like exploring strategies that improve the learners’ speaking skills or teaching students how to write an argumentative essay. The targets of action research are two-fold: to improve the educational environment and address existing gaps therein by reflecting positively on students’ performance and results and to achieve teachers’ professional development. Mills (2014) observed that “the goal of teachers to be professional problem solvers committed to improving both their own practice and student outcomes provides a powerful reason to practice action research” (p. 22).

Wallace (1998) remarked that practicing action research starts with a “personal review” (p. 9) or inquiry by asking some questions (when, what, how, who, why, what action, what resources, what strategies, etc.). These questions aim to “objectify the situation... to think your way through a proactive plan of action (instead of merely reacting to problems as they rise)” (p. 10). The inquiry process is the phase of data collection using different methods such as classroom observation, surveys, interviews, reflective notes, and recordings (video/audio). The interviews can be conducted with students “individually and in focus groups, to identify the challenges” (Burns, 2018, p. 4). Oberg (1990) highlighted journal writing as a valuable strategy in achieving professional development as it helps teachers to conduct a critical analysis of the motives behind their actions and the impact of these actions on the educational process, intending to adopt creative practices that improve the results. The author referred to this strategy as the action research journal, conceptualizing the teacher as a traveler on a perpetual journey of observing, reflecting, and learning about their “educational relationship with students” (p. 219) who are viewed as participants with individualized traits and needs.

Accordingly, action research may benefit from a mixed research methodology: quantitative and qualitative (see Mills, 2014). While the use of the quantitative component in action research is discretionary, the qualitative component is inherent in the nature of this type of research as it requires collecting data from two sources: the teacher(s) and the learners, with the former source of data, i.e., the teacher, benefiting from qualitative reflective methods of data collection like diaries, journals and the like. Action research can be conducted individually by the concerned teacher or collaboratively with the involvement of other teachers or researchers (Banegas et al., 2013; Burns, 1999; Sagor, 1992). The fact that action research involves two sets of participants (teachers and learners) with a wide scope of variation in the methods of data collection and implementation phases makes it more complex than conventional research.

Burns (2010) provided an example of action research that was conducted by a language teacher about the unsatisfactory performance of students in their oral test. The author explained how the teacher-researcher collected her data by going through the phases of writing a diary, administering pre-test and post-test questionnaires, recording sample tests, conducting interviews with the students and asking them to write their reflections on the difficulties they faced in their tests. It is worth mentioning that an essential component in data collection is the bi-phasal approach which is based on pre-course/pre-test queries and post-course/post-test queries to test the effectiveness of the results among learners.

Following the sudden and unplanned complete transformation to online education, the level of unpredictability in educational issues intensified and accentuated the need for more contextualizing of the instruction process away from the logic of a “one-size-fits-all solution” (Salih & Omar, 2021a, p. 62). Action research offers an effective treatment for issues that may disrupt or negatively impact the educational process in the online classroom. Implementing action research in the online educational environment “offers opportunities for reaching out to participants, fostering development and change and disseminating information in faster and more far-reaching ways than ever before” (Embury, 2014, p. 569), thanks to the abundance of communication means which can be used by the participants throughout the implementation phase like online surveys, blogs, social media, email, and other platforms.

1.2 Action Research and Online Education

A limited number of studies researched the value of action research in the context of online education (Foth, 2006; Lamaster & Knop, 2004; McPherson & Nunes, 2004). McPherson and Nunes (2004) pointed out the shortage of action research studies or models which benefited researchers in the online learning environment. The authors provided a critical review of the action research models developed by researchers in the fields of education and social sciences, describing them as “Generic” (p. 16). They called for a clear emphasis on action research that addresses particular contexts related to administrative, policy, pedagogical, ethical, and other dimensions of the educational process. The researchers emphasized that although the online learning environment offers new opportunities for implementing action research, it is not free from obstacles and limitations pertaining to the slippery nature of “a highly connected yet deeply fragmented world” (p. 18). According to this view, the main source of challenge in conducting research online is the researchers’ exclusive concentration on issues related to teaching and learning while neglecting other issues related to course management.

The authors suggested an action research model that can be applied in the context of online education and provided a case study explaining how the model was implemented. They called the proposed model the Educational Management Action Research (EMAR) which was an example of a collaborative action research project implemented by a team of researchers and educators to effect positive

changes in an MA program. The research followed a cyclical approach to the phases of review, implementation, and evaluation leading to effective practices in the online educational environment. The model has a complex structure with four components:

1. The organizational context: related to the institution's management of the educational environment as a whole by enforcing philosophy and strategies that influence course design and the implementation of the educational process;
2. The pedagogic model: introduced by those responsible for designing courses and curricula;
3. The educational setting: related to designing the curricula for a specific course within the framework of the organizational context and the adopted pedagogic model;
4. The evaluation process: includes collecting, reflecting on, and interpreting data to evaluate the effectiveness of the educational process, which is considered the main component of the action research process.

In an article that addressed the need to improve the quality of distance learning, Lamaster and Knop (2004) researched the sources of challenges facing online instruction and learning by applying the action research model. The authors highlighted the hindrances associated with distance learning and stressed the instructors' need to test new pedagogic practices as the traditional ones are no longer valid for the new educational context. The teacher researchers identified several issues that undermined the quality of the educational process, including impersonality, interactivity, student unaccountability, and lack of independence, besides issues related to the students' technological knowledge. The data collected for the study included students' communications (surveys, email communication, individual and group interviews), students' work (assessments), teachers' journals, and interviews. The data were described, analyzed, and interpreted comparatively, and the results revealed the value of action research in identifying issues that influence the quality of the instruction process and introducing positive changes to the educational environment. The following excerpt highlights the importance of action research for improving instruction in online courses:

The process of actively researching online distance courses using action research methods decreases impersonality and enhances student interactivity. There is little doubt in the instructor's mind that the action research process, even for the shorter duration of one complete cycle, enabled her to effectively alter the course to create a better learning environment. (Lamaster & Knop, 2004, pp. 408-409)

Kapenieks and Salite (2012) researched the efficacy of action research in improving and sustaining electronic learning environments by enhancing the students' ability to cooperate in creating personalized knowledge. According to the authors, the electronic learning environment is highly demanding for learners who are required to be motivated, autonomous, flexible, adaptive, and creative. This can be achieved by implementing an action research model based on organizing the students in collaborative groups that complete different tasks in several task-completion research phases, which the researchers referred to as "learning acquisition cycles", each of which addresses a specific learning issue. The researchers tried to instill in the learners the ability to reflect on the knowledge they produced by asking them to follow a sequential task-completion pattern within their groups.

To illustrate, the students were required to add input to the ideas developed by their group members sequentially. The researchers referred to this as the "creation of living theory" (p. 116). The whole process was monitored and followed up by a researcher (consultant) who worked closely with the instructor during the three implementation phases. The tasks were completed using *Google Docs* and the research adopted mixed methods, which benefited from various research tools such as (pre- and post-) students' surveys, students' interviews, and course tutor interviews. The results showed noticeable progress in boosting students' interaction, interest, and active participation in knowledge acquisition and generation and that the students managed "to develop valuable habits of the mind" (p. 126).

The studies discussed above show that the implementation of action research to create the much-needed research-teaching nexus is an arduous project in view of the need for a hybrid research method, a cyclical approach to implementation, and the involvement of more than one type of participants. We can add to these requirements the complex nature of the learning environment that entails clustering the learners into groups and subgroups. Therefore, it is suggested that action research be implemented cooperatively with the involvement of a group of researchers or researchers and instructors. It can also be implemented by the instructor individually but selectively rather than across the board in all taught courses.

1.3 Action Research and Challenges

Collaborative implementation of action research, especially in teaching online courses, is indispensable for the research efforts to bear fruits. Bognar (2011) researched the difficulties encountered by teachers while conducting action research to improve the quality of the educational process and concluded that teachers face three types of hindrances in their endeavours to promote the educational process conducting action research. The first challenge lies in the need for assistance from more experienced teachers/advisors. This study observed that teachers need "a well organised support system that will scaffold their efforts, and the facilitators of research groups or collaborative communities have a crucial role in it" (p. 217). The idea behind having a supportive network with facilitators from the system serves to unleash the teachers' creativity while implementing their action research rather than to restrict their efforts with preconceived ideas about what works best in terms of pedagogical practices, covering and developing the curricula and merging theory with practice.

The second challenge is the lack of encouragement rendered to teachers by the learning community to initiate change through action research. There is a general preconception that learning communities motivate teachers to conduct action research which is conducive to

positive change. The study showed that learning communities may leave a demotivating impact on teacher researchers who wait for others to accomplish the tasks and share their practices instead of conducting their action research and exploring possible solutions to existing problems. The third challenge lies in recognizing the experiential nature of action research. There is recognition that action research requires several professional competencies, such as flexibility, self-criticism, motivation, perseverance, innovative thinking, and tolerance, among others. Nonetheless, teachers should not delay their action research efforts until they acquire and develop the required competencies. Rather, it is essential for them to start developing these competencies by proceeding with action research, which is viewed as a means to an end rather than the other way round. As such, action research is the point of departure in the process of improving the learning process and not the culmination of developing professional competencies, as may be generally assumed.

While Bognar (2011) addressed the challenges faced by teachers who are willing to conduct action research before the implementation phase, Zhou (2012) investigated such challenges throughout the implementation process. The researcher believed that the problems faced by teachers when conducting action research reflect their lack of professional experience as well as the inadequacy of the support rendered to them in terms of the time available to do research, lack of library sources, lack of theoretical and practical guidance, and others. Unlike the strategic solutions proposed by Bognar (2011) to surmount the challenges faced by teachers before conducting action research, the solutions suggested by Zhou (2012) are rather procedural and follow a prescriptive approach taking the form of advice instead of leading to structural changes in the educational and conceptual environment of the academic institutions. These solutions are feasible in the context they addressed, i.e., the school educational environment, but they do not address the issue in the larger context of higher education. Bognar's (2011) call for understanding and restructuring our approach to action research is more diagnostic of the issues facing action research in higher education.

Action research has been explored in pedagogic practices worldwide in various contexts, but very little is known about its relevance and value to online learning in Oman and how teachers in Omani Higher Education Institutions (HEIs) practice action research. This study explores the efficacy and significance of action research and reflection for effective teaching and learning in the context of EFL classrooms. By extending scholarship in this crucial area, the present study takes a closer look at how teachers in Omani HEIs perceive, understand, and practice action research-based online teaching as part of their reflective teaching. The study is significant given the limitation in the number and scope of studies that researched the value of action research for improving the quality of online education, especially in the ESL/EFL learning context. The study specifically aims to answer the following questions:

1. How do teachers perceive the relationship between teaching and research?
2. To what extent is action research relevant to the online teaching environment?
3. What challenges and affordances do teachers perceive for engagement in action research?

2. Method

This exploratory study adopts a qualitative method with minimal statistical analysis to examine data obtained from teachers' responses to a survey on their perceptions about action research and online teaching. The study's exploratory nature draws on the qualitative method that enables descriptive analysis of the participants' perceived experience and allows the generation of interpretation, analysis, and theoretical elaboration on the phenomenon.

2.1 Participants

Thirty-one teachers in Omani HEIs took part in this study by responding to the survey instrument. The ($N=31$) male and female participants have taught online classes since the beginning of the outbreak. This experience allowed them to be exposed to an unconventional teaching style and environment deemed significant for any reflective perspective. Moreover, the teachers' involvement in online teaching helped them report their perspectives on gains, challenges, and the need for professional or scholarly alignment.

2.2 Instrument and Procedures

The study examines teachers' practice and understanding of the relevance of the interplay of online teaching and action research. A Google Forms-based survey was designed and administered online to the participants ($N=31$). The data set analyzed included the teachers' responses to the survey. The qualitative method enables the participants to share their views using open-ended survey questions (Creswell, & Creswell, 2018; Kumar, 2011; Silverman, 2013). In the present study, the survey was designed to elicit the respondents' understanding and practice of action research-based teaching in online environments. The survey also contained items that focused on the opportunities and obstacles the participants experienced in their contexts, the existence of the teaching-research nexus, and the role of collaboration in action research.

2.3 Data Analysis

The respondents' answers were collected and analyzed to understand the significance of action research-driven teaching in unpredictable situations like COVID-19-triggered online teaching. Descriptive statistics were used to report frequency and percentage counts for each item. The insights gained from this study are hoped to inform compelling implications for self-initiated action research and institutional support for a solid collaborative research drive that engages teachers for reflection, revising, researching, changing, applying, and improving practices in Omani HEIs and beyond.

3. Results

This section presents the findings to shed more light on the issues raised in the study’s problem and questions. The teachers’ responses were categorized and thematically organized to serve the study’s objective of exploring their perceptions about the significance of the teaching-research nexus for teaching practice, action research, and online teaching, and the implications of the affordances and hindrances of the online teaching environment for action research. The results are presented in the tables below. The frequency counts and percentage for each item are provided to enable the presentation of the teachers’ responses to the survey items.

It can be seen from Table 3 that all the respondents (100%) agreed that planning is a crucial step in conducting quality research. This result indicates that teachers relate effective research to understanding the significance of planning. Table 1 summarizes the teachers’ views on the significance of establishing a connection between research and teaching.

Table 1. Percentage frequency of teachers’ views on the relationship between teaching and research

Items	SA	A	U	D	SD
1. Teaching and research should always entwine	13(43.3)	13(43.3)	3(10)	1(3.3)	-
2. Research is necessary only when there is a problem/an issue that needs to be addressed	2(6.5)	3(9.7)	5(16.1)	11(35.5)	10(32.3)
3. Research is necessary only when it is required by the institution for promotional purposes	-	-	2(6.7)	13(43.3)	15(50)
4. Participation in scholarly activities should be compulsory for faculty members	14(45.2)	11(35.5)	2(6.5)	3(9.7)	1(3.2)
5. I can apply my prior knowledge and training in my classes	16(51.6)	14(45.2)	1(3.2)	-	-
6. Teachers should always abide by the syllabus and curricular guidelines	5(16.1)	13(41.9)	4(12.9)	8(25.8)	1(3.2)
7. Changing my teaching based on the feedback I receive is enough and no need for conducting any research	1(3.2)	6(19.4)	1(3.2)	17(54.8)	6(19.4)
8. Through class-based research, I can address any gaps in the syllabus	7(22.6)	21(67.7)	3(9.7)	-	-
9. I always inform my students about their performance	7(54.8)	12(38.7)	1(3.2)	1(3.2)	-
10. I always think about my teaching and evaluate my performance	22(71)	8(25.8)	-	1(3.2)	-

Table 2. Relevance of practical research to teaching

Item(s)	N	%	Level of agreement
11. Connecting classroom issues to practical research	25	(80.6)	Very important
	6	(19.4)	Somewhat important
	-	-	Not too important
	-	-	Not important at all

Table 1 shows that in item 1, the majority of respondents (43.3%) and (43.3%) agreed and strongly agreed, respectively that research and teaching should always interlace. In their response to item 2, the teachers showed different opinions on the necessity of research in teaching. Most of the teachers (35.5%) and (32.3) disagreed and strongly disagreed that research should be initiated only when there is an issue or a problem that needs to be tackled. On the other hand, (6.5%) and (9.7%) agreed and strongly agreed, respectively, with the item, while (16.1%) were uncertain about their stand. As for item 3, Most teachers (43.3%) and (50%) disagreed and strongly disagreed with the idea that research is necessary only when it is required for promotional purposes. In their response to item 4, the majority of teachers (45.2%) and (53.5%) strongly agreed and agreed that research engagement should become a mandatory requirement for all faculty members. Concerning relating previous experience to classroom contexts, the majority of teachers (51.6%, 45.2%) agreed that they can apply their previous teaching experience and training to their classrooms. In their response to item 6, the respondents showed different responses regarding implementing the course syllabus in teaching. While (16.1%) strongly agreed and (41.9) agreed that teachers should stick to the syllabus in teaching, (25.8%) disagreed and (3.2%) strongly disagreed, and (12.9%) remained uncertain. Similarly, the respondents expressed different views about feedback-based adjustment and alignment in teaching and research (item 7). The majority of the respondents believed that feedback is not enough to inform teaching, and as such, research is also needed to help improve teaching and performance. In their response to item 8, most respondents agreed that class-based research is a tool that teachers can use to address any gap in the syllabus. In their response to item 9, the majority of the respondents confirmed that they communicated their feedback to students on their performance. The respondents’ responses to item 10 reveal that the majority employed reflection in evaluating their performance.

Furthermore, Table 2 shows that the majority of the respondents agreed that connecting classroom issues to practical research is of significance. This result conforms with the respondents’ responses to items 1,2,3, and 8 in Table 1.

Table 3. Research planning

Item(s)	N	%	Level of agreement
1. Early planning for research helps teachers in conducting quality research	31	100	Agree
	-	-	Not sure
	-	-	Disagree

The results in Table 4 indicate significant differences in the respondents' views about the practice of action research in online learning. It is worth mentioning that more than half of the respondents (67.7%) agreed that online teaching had the potential for research, while (19.4%) appeared uncertain and (12.9%) showed disagreement. In their response to item 14, (45.2%) of the respondents agreed that conducting online research was easier than on-site research, and (22.6%) disagreed. On the other hand, (32.3%) reported that they were uncertain about experiencing and conducting online research.

Table 4. Teachers' views on the relevance of action research to online teaching

Items	Agree	Not sure	Disagree
13. Online teaching creates opportunities for research	21(67.7)	6(19.4)	4(12.9)
14. Conducting online research is easier than the one-site one	14(45.2)	10(32.3)	7(22.6)
15. Findings of the research conducted by teachers should be implemented by the university	25(80.6)	6(19.4)	-
16. Online research provides rich data for researchers	23(74.2)	7(22.6)	1(3.2)
17. Online teaching requires no specific teaching methods	3(9.7)	6(19.4)	22(71)
18. Using online teaching platforms can inform you about the limitations of teaching theories and techniques	18(60)	10(33.3)	2(6.7)

The respondents' responses to item 15 reveal that the majority (80.6%) agreed on the necessity of university's support in implementing the findings of any research, while only (19.4%) appeared uncertain, similar to their responses to items 13 and 17. As for item 16, the respondents also showed different opinions on the amount and type of data online teaching can create and offer for research. In this regard, the majority (74.2%) agreed that they availed of the rich data online teaching offered, while (22.6%) were uncertain.

Table 5. Reflections on students' feedback

Item	SA	A	U	DA	SD
19. I am always satisfied with my students' performance	3(9.7)	10(32.3)	7(22.6)	8(25.8)	3(9.7)

The results also reveal that teachers had different views about the teaching methods used in online environments (item 17). While only (9.7%) agreed that teachers needed to embrace specific teaching methods for online teaching, the majority (71%) disagreed with the idea. On the other hand, (19.4%) remained uncertain. In their response to item 18, most respondents (60%) agreed that using online teaching platforms could reveal gaps and limitations of teaching approaches and theories. On the other hand, (33.3%) remained uncertain. This result contradicts the result of teachers' response to item 17.

Table 5 reveals that teachers had different perceptions about their students' performance. The respondents' mixed views on their satisfaction with students' performance indicate that students' performance is perceived differently by teachers, with some showing dissatisfaction and others being reluctant to comment on their perceptions towards their students' performance. It can be argued that teachers' views on their students' performance are better understood with the teaching context, the student-teacher interaction, and the mechanisms through which feedback is communicated.

Table 6. Affordances and challenges of action research

Items	SA	A	U	D	SD
20. The teaching setting offers opportunities to express my opinions and ideas	7(22.6)	14(45.2)	5(16.1)	4(12.9)	1(3.2)
21. The work environment encourages faculty members to share research ideas	10(33.3)	6(20)	5(16.7)	9(30)	-
22. Discussions in coordinated courses meetings are insightful	10(32.3)	16(51.6)	5(16.1)	-	-
23. I encounter resistance from my colleagues when I introduce new ideas	-	15(48.4)	8(25.8)	7(22.6)	1(3.2)
24. End of semester tutor report for course evaluation is useful to my research	12(38.7)	15(48.4)	2(6.5)	2(6.5)	-
25. The feedback I receive on my teaching makes me think of conducting research	13(41.9)	10(32.3)	5(16.1)	3(9.7)	-
26. Collaborative research is useful	21(70)	9(30)	-	-	-
27. My workplace motivates collaborative research	5(16.1)	13(41.9)	5(16.1)	4(12.9)	4(12.9)
28. I work harder in incentive-based research	13(41.9)	11(35.5)	4(12.9)	3(9.7)	-
29. I consider resources before doing any research	14(45.2)	9(29)	4(12.9)	4(12.9)	-
30. Rotating courses among teachers gives us better opportunities to improve teaching practices	13(41.9)	14(45.2)	2(6.5)	2(6.5)	-
31. I take positive feedback and I ignore criticism	3(10)	4(13)	2(6.7)	13(43.3)	8(26.7)
32. Students' feedback is sometimes subjective	8(25.8)	21(67.7)	2(6.5)	-	-
33. Students' subjective feedback is connected to their grades	5(16.1)	14(45.2)	4(12.9)	6(19.4)	2(6.5)
34. I seek my institution's help if something goes wrong in my class	6(19.4)	15(48.4)	5(16.1)	4(12.9)	1(3.2)

The results in Table 6 reveal that teachers had different views about the opportunities and hurdles associated with engaging in action research. In this regard, the majority of the respondents agreed that they were able to provide feedback in their teaching settings (item 20). In their response to item (21), most teachers agreed that the work environment encouraged sharing research ideas. On the other hand, (30%)

disagreed, and (16.7%) remained uncertain. The analysis of results in item 22 reveals that most respondents found meetings in coordinated courses an ideal opportunity for sharing ideas that might trigger action research projects. It is worth mentioning that (16.1%) of the respondents were uncertain in their responses to items 20 and 22. The respondents preferred to maintain a neutral position about how they evaluated their workplace concerning institutional response to teachers' feedback and support for action research initiatives.

In their response to item 23, the majority (48.4%) agreed that colleagues showed less enthusiasm for new ideas they introduced. However, (22.6%) disagreed, and (25.8%) were uncertain. Responding to item 24, the majority (38.7%) strongly agreed, and (84.4%) agreed that the reports tutors prepare end of the semester include reflective ideas for research. In their response to item 25, the respondents expressed different views about the impact of the feedback they received on their teaching and its relation to reflection and action research. It is interesting that (41.9%) strongly agreed and (32.3%) agreed that feedback on teaching made them reflect on action research, while (16.1%) remained uncertain and only (9.7%) disagreed. In their response to item 26, all respondents (100%) strongly supported collaborative research. However, the respondents' responses to item 27 reveal variation in views about support from the workplace for collaborative research. Although the respondents have shown support for collaborative research (item 26), they seemed to hold different opinions about the support their teaching settings provided. In this regard, (16.1%) strongly agreed and (41.9%) agreed that their workplace environment supported collaborative research, while (16.1%) remained uncertain. Other respondents (12.9%) strongly agreed and disagreed about the idea.

In their response to item 28, the respondents showed different views about their research work and incentives. The majority agreed that incentives motivated them to work harder on research. Others expressed disagreement and neutral views about the idea. The results also reveal that in item 29, the majority (45.2%) strongly agreed, and (29%) agreed that resources should be considered before planning any research. On the other hand, those who disagreed or remained uncertain held equal views (12.9%). As for item 30, the majority (over 80%) viewed the practice of course rotation among teachers as an opportunity for learning, effective teaching, and self-growth.

On the other hand, those who disagreed or remained uncertain maintained equal opinions (6.5%). In their response to item 31, the majority (70%) rejected the view that they would treat feedback partially by only considering positive feedback and ignoring the thought-to-be criticism, and (23%) agreed. The respondents' responses to item 32 reveal that the majority (over 90%) sometimes considered students' feedback subjective. As for item 33, the majority (over 60%) agreed that students' feedback subjectivity was connected to their grades. On the other hand, over (25%) disagreed, and (12.9%) remained uncertain. In their response to item 34, over (60%) confirmed that they would seek institutional support for any class issues. However, those who either disagreed or remained uncertain maintained the same view (16%). It is worth pointing out that the respondents tended to refrain from expressing their views about matters relating to their workplace and institutional support.

Table 7. Significance of institutional support for faculty involvement in research

Items	Very important	Somewhat important	Not too important	Not important at all
35. Establishing connections between teachers' research plans and the university's target number of publications by teachers	12(38.7)	14(45.2)	5(16.1)	-
36. Incentives for research-active faculty members	23(74.2)	7(22.6)	1(3.2)	-
37. Facilitating publishing for teachers	27(87.1)	3(9.7)	-	1(3.2)
38. Encouraging interdisciplinary research projects	22(71)	8(25.8)	1(3.2)	-
39. Promoting collaborative research among faculty members	25(80.6)	4(12.9)	1(3.2)	1(3.2)

Table 7 reveals the respondents' opinions on the significance of institutional support in motivating faculty research projects. In their response to item 35, (38.7%) viewed establishing connections between faculty members' research plans and the university's research goals as very important, while (45.2%) viewed that as necessary to some degree. On the other hand, a small minority of the respondents (16. %) viewed such a link as not too important. In their response to item 36, the majority (74.2%) viewed incentives for faculty members active in research as very important, while (22.6%) considered that somewhat important. The respondents' responses to item 37 reveal that the majority (87.1%) believed facilitating publishing for researchers was very important for faculty research activities. As for item 38, the majority (71%) viewed interdisciplinary research as very important, and (25.8%) as somewhat necessary. In their response to item 39, the majority (80.6%) viewed encouraging faculty members to involve in collaborative research projects as very important, and (12.9%) considered it essential to some extent. The differences in views among the respondents about collaborative research accord with the differences expressed in Table 6, item 27, but contradict their views expressed in their response to item 26.

4. Discussion

The present study examines teachers' perceptions and experience in action-based teaching in an online Omani higher education context. The results from this study point to several issues about the relevance and practice of action research-based teaching in the online teaching context and beyond as well as the opportunities and challenges associated with it. The present study implies a consensus among the respondents (26 out of 31) concerning the need for establishing a visible and vivid connection between research and teaching, particularly action research. This result highlights an important aspect of the changing trends in teaching by giving pedagogical action research a role in the teaching process to improve pedagogical practices for learning. This result accords with the findings of research that placed significance on action research (Burns, 2010; Nasrollahi et al., 2012) to improve teaching for effective learning, especially in classrooms that cater to

students from different disciplines and academic programmes grouped in one learning setting (Omar, 2021). In addition, the findings also reveal that the participants held different views about when, why, and how to conduct action research despite the general tendency among them to adopt action research-based teaching.

As stated earlier, the participants agreed on the importance of the connection between teaching and research but showed different views regarding practicing it. This result points to several concerns about the participants' practice of action research-based teaching. In this regard, an issue of concern is the way courses are taught, and the degree of liberty teachers enjoy to implement a course syllabus, evaluate their teaching and seek changes if needed. The practice of teaching a course and implementing its syllabus is expected to provide an opportunity for teachers to learn from their performance, reflect and seek solutions through action research for the certain phenomena they observe or issues that may arise. Teachers' view on sticking to the syllabus and curricular guidelines is expected to limit their ability to maneuver for action research. This view contradicts the participants' belief that action research can be an effective tool to address gaps in the syllabus. This finding confirms the need for developing a clearer understanding of action research by teachers as an effective tool for course review, syllabus evaluation, and improvement of practices (Burns, 2010). In addition, teachers' wide range of views on students' performance suggests the need for unified approaches to benefit from students' performance for action research.

The diverse views expressed by respondents regarding the implementation of action research reflect the fact that there is a need to spread the research culture among faculty members, and a supportive environment should be created to foster and enhance pedagogical action research. It can be argued that teachers' awareness of the significance of action research in addressing classroom issues is expected to motivate active engagement in seeking pedagogical solutions for classroom problems and any phenomenon associated with unpredictable situations. This view conforms with the findings of Lamaster and Knop (2004) concerning action research as an ideal strategy for addressing gaps in the syllabus and solving issues in classrooms or learning environments. Thus, teachers' preparedness to indulge in investigating classroom problems together with a supportive environment will ensure effective solutions and practices that suit the classroom and facilitate learning.

The findings also reveal variation in the participants' reaction to students' feedback on teaching and practice of reflection for action research and alignment of teaching. These results reveal a weaker connection between feedback teachers receive on their performance and their reflection on action research. In other words, the study did not find enough evidence to support teachers' practice of reflection for investigating classroom issues or improving teaching practices. In addition, the results indicate that the participants did not show any tendency to practice reflection and embrace action research due to the fact that students' performances and results did not encourage them to do so. Teachers' absence of positive reflection on students' performance to motivate action research for solving issues or reinforcing positive practices is deemed a weakening factor in any teaching context that aspires to excellence in learning (Mills, 2014).

Teachers' diverse views concerning relating feedback to reflection for research indicate a lack of strong connection between feedback, reflection, and actual practice of positive beliefs about different types of reflection and action research. An absence of agreement among the participants on the use of feedback for reflection and action research reveals a lack of continuous presence of action research practice in classroom practices. These findings confirm previous research results that showed the need for reflection in action and its significance because it can lead to action research. In their study, Salih and Omar (2022a) concluded that online teaching prompted teachers, who tend to be more reactive than proactive, to reflect and become aware of the fact that reflection has become essential for effective teaching and learning. Nevertheless, the most common modes of reflection practiced by teachers are reflections on action and reflections for action rather than reflections in action. Moreover, in many instances, reflection may occur without leading to action research. Thus, there is a need to relate reflective practices to action research to inform effective teaching.

The findings also reveal that the participants found in the switch to online teaching opportunities for conducting action research due to the accessible online data and resources. In addition, they revealed that the motive behind conducting action research was to address the limitations of teaching theories and techniques. These results confirm previous studies' findings that discussed the impact of COVID-19-triggered teaching and the use of online learning platforms (Salih & Omar, 2021a; 2022a). However, the affordances of online teaching for action research are also limited by specific challenges. The findings reveal that action research was challenged by poor responses from colleagues and a lack of institutional support. There was a general tendency among the participants to face resistance from colleagues when they attempted to introduce new ideas for research. In addition, the participants did not see enough institutional support for conducting research or implementing its outcomes. The common belief among the participants was that support, whether collegial or from the work environment, is significant for action research. These results accord with the findings of Burns, (2010, 2018), Giraud & Saulpic, (2019), Mills, (2014) about challenges that hinder action research.

Alignment of teaching must be based on carefully selected teaching methods that respond to students' needs and teaching contexts. On the other hand, teachers' awareness of the teaching context is significant. Teachers' beliefs about themselves as teachers, the teaching profession, and their students are essential in motivating action research-based online teaching and beyond. Teachers' beliefs are determining factors in teaching and research. Thus, consolidated teachers' beliefs about classroom practices and research can significantly foster action research among teachers. In addition, teacher-institution affiliation can be challenging if it is not managed well. The findings reveal a general tendency among the participants not to express their views about their workplace. They refrain from expressing their views on what their institutions should do to support them in conducting action research. The teachers' avoidance of expressing their views regarding institutions' support and management system can be interpreted as their understanding of such feedback as criticism of management which might invite unwanted conflict. Clear policies and effective communication can strengthen teacher-institution

affiliation. Institutional support and availability of a conducive work environment are among the key factors whose absence may hinder the teachers' bid and willingness to engage in action research, whether individually or collaboratively. Teachers also need to adopt continuous personal inquiry and keep a record of class practices and activities which can be used for reflective action research.

5. Conclusion

Action research has become one of the key features of the changing scenes in higher education institutions' practice. It is a fundamental requirement in effective teaching and preparing teachers and students for unexpected disruptions and emergencies such as the outbreak of the COVID-19 pandemic. Institutions of higher education are expected to outline clear policies and plans that enhance a solid teaching research nexus system that offers all teachers opportunities to share their expertise, collaborate, learn, reflect and engage for effective teaching. Collaborative action research is necessary for encouraging sharing of good research practices, especially interdisciplinary ones. The abrupt disruption of teaching at the onset of the coronavirus has shown the significance of preparations, planning, training, and establishment of a strong teaching and learning system that can handle any unexpected circumstances.

Action research is better encouraged among faculty members even in unusual circumstances such as the sudden switch to online learning. Moreover, understanding the affordances of online teaching for action research and the challenges that may arise is important for paving the way for teachers' engagement in action research. Institutional support for teachers to engage in action research is essential and should continue to transcend simple and superficial professional development sessions often conducted and mostly taken for granted by a broader segment of faculty members. Instead, serious support for engagement in action research is likely to provide teachers with better opportunities to improve teaching and negotiate affiliation to the institution.

Success in action research requires universities and all higher education institutions to view themselves as innovative learning hubs and not only teaching centers. Innovative learning environments view the potential of participants to learn, share experiences, discover, reflect and change. Thus, a new outlook and better understanding of our roles as higher education providers are necessary if we are to be players in setting the agenda of the new scenes in university education.

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