

The difficulties that face schoolteachers in conducting educational research and ways to overcome them

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This study aimed to identify the difficulties that face school teachers in conducting educational research and ways to overcome them. It also aims to explore the impact of some variables, such as academic qualification and years of experience, on these difficulties. To this end, a descriptive approach was adopted and a questionnaire was designed and administered to 502 male and female teachers. The first section of the questionnaire examined the difficulties in four dimensions, namely cognitive, administrative, technical, and personal issues; the second investigated some proposed ways to overcome such difficulties. The study concluded that the level of difficulties in the various areas was high. The highest was for personal difficulties, while the highest level in the section that tackled ways followed to overcome difficulties was for the item that stated, "reducing the professional burdens placed on teachers in exchange for the motivation provided to conduct educational research." One of the crucial recommendations of the study is to develop pre-service teacher education programs that prepare teachers' capabilities for conducting educational research.

Introduction

One of the most important features of the twenty-first century is conducting educational research, which is an essential branch of scientific research. It refers to providing a thorough and clear study to clarify a pedagogical or educational problem and find radical solutions to it. Depending on the nature of the problem and the environmental factors, many methods and approaches may be used in such studies. Therefore, the need for conducting educational research today is greater than ever, and there is a pressing need for teachers to conduct such research and consider themselves as researchers and producers of knowledge to bring about the desired change. In order to achieve the best upbringing for the individuals who constitute the intellectual capital of society, educational research provides key insights for human development processes. Research is a tool for improving and developing the methods of education and working to increase its efficiency and level in order to meet the needs of continuous educational renewal.

It is common knowledge that teachers face many professional problems and obstacles that limit their production and performance, so they tend to examine their performance in teaching and seek to solve problems by studying them and conducting educational research to reach solutions and thus increase their ability to work and produce. These include good management of the burdens placed on teachers. Hence, recent trends have aimed to improve and develop the concept of preparing "general education teachers", as they constitute the basic foundation for an educational system to face its problems, by being a teacher, thinker, professional, and researcher (AlLamai, 2019). Therefore, it has become necessary for teachers to conduct educational research, because they have access to the educational reality and are more able to experience the problems occurring in the practice of the education (Bakhit & AlQaoud, 2012, 2012).

In this context, Clark et al. (2020) highlighted that the purpose of conducting educational research is to produce knowledge regarding crucial subjects that are vital to teachers, administrators, students, schools, and other educational stakeholders. It is also considered an extension of the critical thinking and self-reflection that the teacher uses daily in the classroom to improve professional practices, because conducting research is not only a scientific way to produce knowledge but also a systematic way to solve problems (Yigit & Bagceci, 2017). The importance of conducting educational research is to optimise the educational process for students, who represent the intellectual capital in the knowledge society (Nassar, 2015). Educational research is therefore defined as a methodology of scientific thought designed to assimilate, predict, and control the educational phenomenon to improve educational practices and find solutions to educational problems (Elsayed & Moussa, 2019).

Educational research seeks to build an objective perception of the reality of educational-learning processes, address the problems, and guide the activities. It is concerned with studying all matters related to teachers, learners, the curriculum, and educational administration. Gardner (2002) pointed out that society is constantly striving to conduct high-quality research to create a strong and effective educational system. Moreover, educational research seeks to apply scientific methods in the field of education, which are the main source of educational knowledge to find solutions to problems. This leads to increasing the ability of educational institutions to prepare outputs for building and developing society. In order for educational research to fulfill these requirements, it must have the necessary elements to play this important role in building society (Moraes & Guariente, 2016).

Lamanauskas, Augienė and Makarskaitė-Petkevičienė (2020) indicated that the research activity carried out by teachers is one of the important parts of their professional performance, as it enables them to better research and understand the teaching situation. It is also important because it makes learners more understandable, recognises their abilities, and is useful for applying research results to improve the quality of education. On the one hand, Henson (1996) believed that teachers' research studies help them develop new knowledge that is relevant to their classes, improve teaching opportunities, promote reflective thinking, and increase the cognitive load of teaching methods. They also make them face their responsibilities in developing themselves and enhancing their openness toward new ideas. On the other hand, a group of educational experts believe that educational research faces many complications, such as having many variables that cannot be studied under a strictly controlled process, and this limits access to accurate generalisations and hinders the process of conducting educational research owing to negative impressions of educational leaders concerning educational research (Berliner, 2002).

Despite the great importance of educational research in developing the performance of male and female teachers and increasing their professional development, some studies indicate that male and female teachers refrain from conducting educational research and exercising their research role in the educational field, and some other studies shed light on the important challenges facing them. An example is the study conducted by Ulla (2018)

in which some challenges were discussed, including the lack of school support, insufficient references, the heavy workload on the teacher, and the lack of teachers' knowledge on conducting educational research. Sarkar (2014) also mentioned in his study that the difficulty of obtaining consent to collect data is one of the challenges that face teachers when conducting educational research, in addition to the challenges of distributing survey questionnaires. The study conducted by Feyisa et al. (2022) also show that one of the challenges is the lack of training of in-service teachers to conduct educational research, the teachers' failure to share their experiences and involvement in conducting research, and the fact that their involvement in educational research is solely for the aim of evaluating their performance. It is through research that teachers become aware that they need to develop some additional competencies in different areas (Osmanović-Zajić, Mamutović & Maksimović, 2021).

The study by Anyanwu and Jules (2022) addressed the difficulties that teachers faced during the conduct of educational research, concerning workload and family requirements, i.e., most challenges are individual and personal. However, Wangdi and Tharchen (2021) showed that the challenges facing teachers in conducting research included the lack of research knowledge, incentives, experience, reliable resources such as books, and the lack of time due to heavy workloads. Bullo et al (2021) also identified the difficulties that teachers face when conducting research, showing the importance of seminars and training courses on educational research. They recommended reducing teaching burdens and other tasks so that teachers have sufficient time and ability to produce high-quality research. Enerio (2020) showed that teachers have a good understanding of what it means to conduct research; however, they are unable to conduct practical research, and they find it difficult because they do not have time to conduct such research, but they are willing to do so if someone guides them in the process.

Gouda (2020) identified the challenges in developing a vision that helps those in charge of educational research to overcome them so that they can find appropriate solutions. The study found that the most prominent challenges facing educational research are the absence of an institutional research role and the lack of interconnection between research and real problems in the educational field. The study demonstrated the importance of providing legislation that supports educational research and providing funding alternatives for educational research institutions. The study by AlMalki (2019) determined the level of difficulties in conducting educational research and ways to overcome them from the viewpoint of male and female teachers in public schools in Jeddah Governorate. It also revealed the impact of some variables such as gender, academic degree, and years of experience on these difficulties. The results showed that the difficulties that male and female teachers face in conducting educational research are enormous, and the highest of them are administrative difficulties. The findings also indicated notable differences relating to gender and experience but not to academic qualification.

Based on the studies reviewed above, it can be noted that many have shown the difficulties and challenges facing conducting educational research (e.g., Anyanwu & Jules, 2022; Feyisa et al., 2022; Wangdi & Tharchen, 2021; Bullo et al., 2021; Enerio, 2020; Gouda, 2020; AlMalki, 2019), where most have tackled administrative difficulties and

obstacles. The researcher has sought to distinguish this study from previous studies by investigating the difficulties and suggesting ways to overcome them, whilst recognising that challenges in the social and political climate that cause obstacles may be unique in different country contexts. This underlines the view that schoolteachers represent a link between theory and practice in contemporary education, where research motivates teachers and increases their awareness of the need for lifelong learning (Akanke, 2021).

Statement of the problem

The problem addressed in this study revolves around understanding the research crisis that the field of education suffers from at a time when the complaints are escalating regarding the low interest of schoolteachers in conducting educational research and paying attention to it, though this should constitute a cornerstone for educational reform. Without an interest in educational research from schoolteachers, reform attempts may fail to reflect realities, so this study aims to shed light on the difficulties that face school teachers in conducting educational research and suggest ways to overcome these.

Research questions

The study mainly aims to answer the following research questions:

- RQ 1. What difficulties do schoolteachers face in conducting educational research?
- RQ 2. Do the difficulties faced by schoolteachers in conducting educational research differ according to academic qualification and years of experience?
- RQ 3. What are the ways followed to overcome the difficulties faced by school teachers in conducting educational research?

Materials and methods

The present study adopted the descriptive approach because it is better suited to achieving the study's objectives, especially with regard to revealing the difficulties that school teachers face in conducting educational research and ways to overcome them through proposals.

The study sample

The study sample consisted of 502 teachers in public and private schools under the Directorate of Education in Amman in the first semester of the year 2022/2023 (Table 1).

Table 1: Distribution of respondents according to the variables of the study (N=502)

Variable	Levels	Frequency	Percentage
Academic qualification	Bachelor degree or less	312	62.0%
	Masters degree and above	190	38.0%
Years of experience	Less than 5 years	120	24.0%
	5-10 years	233	46.0%
	More than 10 years	149	30.0%

Measurement instruments

A two-part questionnaire was designed, where the first part asked for some personal information related to the study sample, and the second part included two sections with 67 items in total. The first section with 48 items measured the difficulties faced by schoolteachers in conducting educational research. It comprised four domains, namely cognitive difficulties, administrative difficulties, technical difficulties, and personal difficulties. The second section comprised 19 suggestions to overcome the difficulties faced by schoolteachers in conducting educational research.

A panel of arbitrators with adequate expertise and specialisation in administration and educational research reviewed the questionnaire to check its validity. Appropriate modifications and additions were made to finalise the tool was finalised the 67 items in the questionnaire. A five-point Likert scale (strongly agree=5, agree=4, neutral=3, disagree=2, strongly disagree=1) was used. To make certain that the research tool is stable, the Cronbach alpha equation was applied to all areas of the study as well as the scale. The Cronbach's alpha coefficients range between 0.84 and 0.93, the highest value being for cognitive difficulties, and the lowest for personal difficulties. Table 2 provides a summary.

Table 2: Distribution of 67 items according to the dimensions and areas of the study

Area	Dimension	No. of items
Difficulties	Cognitive difficulties	14
	Administrative difficulties	13
	Technical difficulties	11
	Personal difficulties	10
Suggestions for ways to overcome difficulties	-	19

The following division was used to determine the degree of estimation of the study sample's responses to the items:

- From 1 to less than 1.8 represents a very low score
- From 1.8 to less than 2.6 represents a low score
- From 2.6 to less than 3.4 represents an average score
- From 3.4 to less than 4.2 represents a high score
- From 4.2 to 5 represents a very high score
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Results and discussion

RQ 1: What difficulties do schoolteachers face in conducting educational research?

In order to find the answer to the first question, the arithmetic means and standard deviations of the study sample's responses were determined for each field of study and each item on the questionnaire. Tables 3 to 7 show results for the first question.

Table 3: Degree of difficulties faced in conducting educational research from the teachers' viewpoint

Rank	Difficulties dimension	Arithmetic mean	Standard deviation	Degree
4	Cognitive	3.61	11.71	High
3	Administrative	3.62	8.77	High
2	Technical	3.63	8.47	High
1	Personal	3.70	7.09	High
	Total difficulties	3.64	33.97	High

Table 3 shows the arithmetic means for both study areas, which have a high degree, as the largest difficulties that school teachers face in conducting educational research are personal difficulties, ranked first with an arithmetic mean 3.70, followed by technical difficulties with an arithmetic mean 3.63. Administrative difficulties ranked third with an arithmetic mean 3.62 while cognitive difficulties ranked fourth with arithmetic mean 3.61.

The result for teachers' personal difficulties, if reflected in their research work, will lead to weaker research outputs and a lower rate of solutions to educational problems. Having cognitive difficulties in the last rank indicates that teachers lack the skills needed to prepare educational research which is reflected in their knowledge structure. This aligns with the study by Ulla (2018) which emphasised teacher's cognitive inadequacy to conduct educational research, and the study by Wangdi and Tharchen (2021) which emphasised the lack of research knowledge, which is considered one of the most important difficulties for teachers conducting educational research. This result is different from Akande (2021) who found that the social and political climate and the environment for obtaining information are considered as among the most important difficulties for conducting educational research. Akande's study examined the challenges encountered in the course of implementing of an action research project in two divided communities in North-Central Nigeria. To investigate further, the present study's arithmetic means and standard deviations are shown for the 14 items in cognitive difficulties (Table 4).

Table 4 shows item means ranged from 2.84 to 4.32 with standard deviations in the range 0.96 to 1.35. Item 5, "There is a gap between research university knowledge and application in the educational field" attained the highest mean, rated "very high degree". Item 4, "Authentic scientific sources and references used to conduct research are unavailable" received the lowest mean, rated "medium".

The total arithmetic mean for cognitive difficulties items was 3.61, rated as "high degree". Difficulties in conducting educational research by teachers may relate to a perception that conducting research in the university was theoretical, and when teachers entered practice, they found a gap between university research knowledge and the realities of the classroom and school. This may contribute to creating more difficulties for teachers in conducting educational research which they were not exposed to in their university experiences.

Table 4: Results for 14 items in the first area: Cognitive difficulties

Item no.	Rank	Item	Arithmetic mean	Standard deviation	Degree
5	1	There is a gap between research university knowledge and application in the educational field	4.32	1.01	Very high
14	2	The way technology is employed in conducting educational research is weak	4.15	1.09	High
8	3	There is cognitive impairment in the basics of scientific documentation of the references used	4.08	1.08	High
12	4	There are cognitive and skill weaknesses in designing and applying research tools	3.74	0.94	High
1	5	The cognitive structure used in defining clear perceptions of field research problems is weak	3.65	1.15	High
10	6	It is difficult to distinguish between peer-reviewed journals from other journals	3.63	1.11	High
2	7	The knowledge structure of how to publish scientific research is weak	3.56	1.04	High
3	8	The inability to publish educational research in scientific journals, according to publishing policies	3.55	1.27	High
7	9	Having poor statistical data analysis skills	3.53	1.08	High
6	10	There is a lack of educational curricula for thinking skills and scientific research	3.50	1.01	High
11	11	The knowledge structure of how to formulate research questions and hypotheses is weak	3.46	0.96	High
13	12	The knowledge structure on the basis of discussing the research results is weak	3.34	1.13	Medium
9	13	There is no appropriate evidence to develop teachers' research skills	3.13	1.24	Medium
4	14	Authentic scientific sources and references used to conduct research are unavailable	2.84	1.35	Medium
Total			3.61	11.71	High

The results that have a “medium degree” rating, such as in item 4, may arise because teachers face difficulties due to the unavailability of scientific sources and references. This result goes in line with Ulla’s study (2018) which addressed the lack of teachers’ knowledge about conducting educational research. This result aligns also with Wangdi and Tharchen’s study (2021) which confirmed that lack of research knowledge is one of the most important difficulties for teachers in conducting educational research. However, these results differed from Akande’s study (2021) in that the social and political climate, the environment, and the obstacles in obtaining information are among the most important difficulties for conducting educational research.

Table 5: Results for 13 items in the second area: Administrative difficulties

Item no.	Rank	Item	Arithmetic means	Standard deviation	Degree
22	1	Weak encouragement of educational administration for the teacher when applying educational research	4.38	1.00	Very high
23	2	The lack of research administrative staffing to support the researcher	4.32	1.01	Very high
18	3	Administrative procedures reduce the teachers' participation in research conferences and seminars	4.26	0.95	Very high
24	4	There is difficulty in communicating with the necessary authorities to conduct educational research	3.82	0.94	High
19	5	The weak interest of the administrative centre in the culture of conducting educational research	3.70	1.02	High
20	5	No one facilitates the process of conducting educational research	3.70	0.87	High
27	7	The lack of experience of many administrators and supervisors in training teachers to conduct research	3.64	1.10	High
25	8	Not activating educational research recommendations in educational decision-making	3.62	1.14	High
16	9	Conflicting circulars of the school administration and the Ministry of Education about conducting educational research	3.61	0.89	High
15	10	Some educational agencies and institutions refrain from providing research data to the researcher	3.53	0.88	High
21	11	Weak guidance of the supervisors to teachers about the importance of conducting educational research	3.41	1.21	High
17	12	Publishing educational research is not included in the criteria for evaluating teachers' performance and is not considered in their scope of work	2.75	1.48	Medium
26	13	The ambiguity of criteria for evaluating educational research by the administrative centre	2.32	1.40	Medium
Total			3.62	8.77	High

Table 5 shows that item means ranged from 2.32 to 4.38. Three items have a very high degree of administrative difficulties, namely: "Weak encouragement of educational administration for the teacher when applying educational research"; "The lack of research administrative staff to support the researcher"; and "Administrative procedures reduce the teachers' participation in research conferences and seminars". Two items were rated "medium degree", one being "The ambiguity of criteria for evaluating educational research by the administrative centre"; the other being "Publishing educational research is

not included in the criteria for evaluating teachers' performance and is not considered in their scope of work". Moreover, eight items have a "high degree".

The total average for administrative difficulties was 3.62, representing a "high degree". This may be related to administrative encouragement provided to teachers being one of the main factors that contribute to supporting teachers in conducting educational research. Not having qualified, trained, and supportive administrative staff may create difficulty for teachers in interpreting some research trends and support in the educational field, which worsens field problems for teachers.

The results that have a "medium degree" can also be attributed to teachers facing difficulties due to lack of knowledge and familiarity with criteria for evaluating the educational research they are conducting. The administrative centre should inform teachers of the standards for evaluating their performance at the end of the academic year. These results may be generally attributed to the administrative aspect being one of the important aspects on which teachers rely when conducting educational research. It is normal that there are difficulties that hinder researchers because people in charge often may be more concerned with administrative matters and leadership and are less able to care about field research matters, perhaps thinking that this task is one for educational supervisors. This result agrees with Gouda (2020) who emphasised the absence of an institutional role in research. It is also consistent with Ulla (2018) who indicated that the lack of school support leads to many difficulties in conducting educational research.

Table 6 shows item means ranged from 2.80 to 4.37, with two items obtaining the highest averages, rated as "very high degree". These are item 35, "The lack of internal regulations that facilitate the techniques of conducting educational research", and item 32, "The research sample is not cooperative with the researcher". Item 31, "The insufficiency of training programs in the field of educational research", received the lowest average. Eight items have a "high degree". The total arithmetic means for technical difficulties was 3.63, representing a "high degree".

The "high degree" items in technical difficulties show that the difficulties are related to each other, as the research process is not a business in which workers aim to manufacture a product, but the teacher-researcher needs internal regulations to facilitate the process of conducting educational research concerning field problems. Teachers-researchers also need data from research samples, and this data has to attain high accuracy and objectivity, which is sought in educational research outputs and how to benefit from them. The reason why item 31 has the lowest mean may be attributed to the weakness of training programs being a problem. There is a requirement for persons with experience in training programs for teachers to develop their research skills. This result agrees with Gouda (2020) and Feyisa et al. (2022) who referred to the lack of correlation between research and problems.

Table 6: Results for 11 items in the third area: Technical difficulties

Item no.	Rank	Item	Arithmetic means	Standard deviation	Degree
35	1	The lack of internal regulations that facilitate the techniques of conducting educational research	4.37	0.82	Very high
32	2	The research sample is not cooperative with the researcher	4.21	1.12	Very high
36	3	The weakness of the Internet in educational institutions (schools)	3.74	0.78	High
37	4	Unavailability of research techniques in educational institutions (schools)	3.71	1.23	High
34	5	Poor research cooperation between teachers and educational supervisors	3.64	1.10	High
33	6	The lack of suitable places in schools to conduct research activities	3.61	1.18	High
38	7	Poor technical and material research support for the distinguished researchers	3.54	1.21	High
28	8	The unavailability of reviewers in the Ministry of Education to review research tools	3.50	1.10	High
29	9	Lack of critical vision of educational research by teachers and supervisors	3.41	1.11	High
30	9	The difficulty in communication between the researcher and the research beneficiaries	3.41	1.05	High
31	11	The insufficiency of training programs in the field of educational research	2.80	1.44	Medium
Total			3.63	8.47	High

Table 7 shows item means in the range 2.65 to 4.31, with two items rated as “very high degree”, item 44, “Increased professional burdens on teachers” and item 41, “Teachers’ beliefs in the importance of educational research at the university level only”. Item 40 “Teachers’ desire to join research training courses is low” had the lowest average, while seven items represented a “high degree”.

The mean for all items in personal difficulties was 3.70, which represents a “high degree” rating. This rating may be attributed to teachers tending to avoid conducting educational research for many reasons, including the increased number of burdens placed on them, and their beliefs that educational research is important only in universities, and also to their lack of experience in conducting educational research. The lowest mean may indicate a low desire to join research training courses due to the increased burdens, work pressures, and personal and family conditions of the researchers; difficulties exacerbated by a lack of support and incentives. This result is similar to other findings (Bullo et al., 2021; Wangdi & Tharchen, 2021; Ulla, 2018) showing that workload and its requirements create difficulties that limit the conducting of educational research.

Table 7: Results for 10 items in the fourth area: Personal difficulties

Item no.	Rank	Item	Arithmetic means	Standard deviation	Degree
44	1	Increased professional burdens on teachers	4.31	0.81	Very high
41	2	Teachers' beliefs in the importance of educational research at the university level only	4.25	1.03	Very high
45	3	Teacher's lack of confidence in the results shown by educational research	3.82	0.97	High
48	4	Poor understanding of the teachers of the foundations and standards of educational research	3.73	0.94	High
39	5	General weakness in teacher's educational research	3.67	0.89	High
43	6	Low teachers' willingness to practice and conduct educational research	3.65	0.98	High
42	6	Conducting and publishing educational research is not linked to any job incentives for teachers	3.65	1.23	High
46	8	Teachers are afraid of making mistakes when conducting educational research	3.64	1.09	High
47	9	Teachers believe that conducting educational research requires a lot of effort and time	3.62	1.18	High
40	10	Teachers' desire to join research training courses is low	2.65	1.30	Medium
Total			3.70	7.09	High

RQ 2: Do the difficulties faced by schoolteachers in conducting educational research differ according to academic qualification and years of experience?

To answer the second question, the arithmetic means and standard deviations of the difficulties faced by schoolteachers in conducting educational research were calculated for the variables of educational qualification and years of experience. An independent samples t-test was done for the academic qualification variable, and one-way analysis of variance was applied to the years of experience variable. Results are shown in Tables 8 to 10.

Differences according to educational qualification

Table 8 shows dimension means and the results of the t-test for the study sample's responses on the areas of difficulties that schoolteachers face in conducting educational research, according to the academic qualification variable. No statistically significant differences exist at the level of significance (0.05) in each dimension, and at the level of all dimensions. These results may be interpreted in the sense that these difficulties can be encountered by all teachers, whether they have a high or a low academic qualification. This is due to their profession, being in the same environment, and being governed by the same laws and regulations. This result is in line with the study by AlMalki (2019).

Table 8: Results according to educational qualification (N=502)

Dimension	Academic qualification	n	Arithmetic mean	Standard deviation	Value of <i>t</i>	Sig. level
Cognitive difficulties	Bachelor degree and below	312	49.848	11.854	1.52	0.13
	Masters degree	190	55.546	9.658		
Administrative difficulties	Bachelor degree and below	312	46.671	8.982	1.24	0.21
	Masters degree	190	50.182	6.615		
Technical difficulties	Bachelor degree and below	312	39.519	8.800	1.34	0.18
	Masters degree	190	43.182	4.750		
Personal difficulties	Bachelor degree and below	312	36.570	7.182	1.86	0.09
	Masters degree	190	40.364	5.591		
All dimensions	Bachelor degree and below	312	172.608	34.809	1.53	0.12
	Masters degree	190	189.273	23.559		

To determine whether there are statistically significant differences between the responses of the study sample on the dimensions of research difficulties faced by schoolteachers, according to the variable years of experience, dimension means and standard deviations were calculated, and one-way ANOVA was used (Tables 9 and 10).

Differences according to years of experience

Table 9: Results according to years of experience (N=502)

Dimension	Years of experience	n	Arithmetic mean	Standard deviation
Cognitive difficulties	Less than 5 years	120	49.10	11.54
	5 - 10 years	233	49.86	12.19
	More than 10 years	149	52.88	11.03
Administrative difficulties	Less than 5 years	120	45.52	8.16
	5 - 10 years	233	46.89	9.38
	More than 10 years	149	48.68	8.09
Technical difficulties	Less than 5 years	120	37.47	7.22
	5 - 10 years	233	39.76	9.05
	More than 10 years	149	42.24	7.95
Personal difficulties	Less than 5 years	120	36.00	6.75
	5 - 10 years	233	36.95	7.50
	More than 10 years	149	37.96	6.70
All areas	Less than 5 years	120	168.10	31.79
	5 - 10 years	233	173.47	36.17
	More than 10 years	149	181.76	31.30

Table 9 shows some differences in the dimension means and the scale as a whole, depending on the years of experience. To assess the statistical significance of these differences, one-way ANOVA was applied (Table 10).

Table 10: One-way analysis of variance to detect whether differences in all fields of study and the scale as a whole depend on years of experience

Area	Source of variation	Sum of squares	Degrees of freedom	Average squares	F value	Statistical sig.
Cognitive difficulties	Intergroup	196.675	2	98.338	0.71	0.49
	Within groups	12009.647	499	138.042		
	Total	12206.322	501			
Administrative difficulties	Intergroup	111.467	2	55.733	0.72	0.49
	Within groups	6738.633	499	77.456		
	Total	6850.100	501			
Technical difficulties	Intergroup	249.234	2	124.617	1.76	0.17
	Within groups	6145.666	499	70.640		
	Total	6394.900	501			
Personal difficulties	Intergroup	42.027	2	21.013	0.41	0.66
	Within groups	4432.873	499	50.953		
	Total	4474.900	501			
All areas	Intergroup	2140.794	2	1070.397	0.92	0.40
	Within groups	100599.828	499	1156.320		
	Total	102740.622	501			

According to the variable of years of experience, Table 10 demonstrates that there are no statistically significant differences in any of the study areas at the level of significance (0.05). This result differed from AlMalki (2019) who showed that there are differences due to years of experience. These results may be attributed to the difficulties that schoolteachers face in conducting educational research being various, and can be found normally in educational institutions. All members of the study sample with different years of experience tend to agree on this point because they work in the same environment and face the same realities. They tend to present a single and consistent perception of the difficulties they face in conducting educational research.

RQ 3: What are the ways followed to overcome the difficulties faced by schoolteachers in conducting educational research?

Arithmetic means and standard deviations were calculated for each item that suggested ways to overcome difficulties (Table 11). Table 11 demonstrates the ranking of the items that suggested ways to overcome the difficulties faced by schoolteachers in conducting educational research according to the item means of the responses. One item represented a “very high” degree rating, “Reducing the professional burden placed on teachers to encourage conducting research” with mean 4.22. Six items rated “medium” degree, the lowest being item 58, “Including scientific research and statistics courses within teachers’ preparation programs”. The other 12 items were rated “high” degree.

Table 11: Results for the items that suggested ways to overcome difficulties

Item no.	Rank	Item	Arithmetic means	Standard deviation	Degree
54	1	Reducing the professional burden placed on teachers to encourage conducting research	4.22	1.06	Very high
57	2	Holding courses to train teachers on research skills and data analysis programs	4.13	1.07	High
67	3	Spreading the culture of scientific research in the entire educational system	4.05	1.08	High
63	4	Providing full facilities for teachers when conducting research	4.04	1.14	High
55	5	Supporting teachers to attend and participate in training courses and research conferences	3.62	1.07	High
61	5	Establishing a partnership with scientific research departments in universities and exchanging scientific and research expertise	3.62	0.93	High
64	7	Including scientific publishing principles as a criterion for ranks and occupying administrative and supervisory positions	3.56	0.90	High
60	8	Making scholarly publication an item for teacher evaluation in the annual performance record	3.53	0.98	High
52	9	Providing practical guides for teachers to conduct educational research	3.51	1.25	High
49	9	Holding research competitions for both the educational and administrative staff	3.51	0.93	High
51	9	Creating research learning communities between teachers and administrators	3.51	1.07	High
50	12	Having the supervisors following-up with teachers with official letters while conducting educational research	3.42	1.14	High
56	13	Organising a list of peer-reviewed scientific journals for publishing educational research	3.41	1.32	High
59	14	Providing an online library for the researchers	3.38	1.05	Medium
65	15	Establishing a council consisting of specialised research staff and teachers' assistants	3.37	1.11	Medium
66	16	Providing a wide-ranging and encouraging research environment for teachers	3.24	1.50	Medium
62	17	Publishing educational research results in local and international journals	3.23	1.12	Medium
53	18	Appointing reviewers from within the Ministry of Education to facilitate research work	3.17	1.27	Medium
58	19	Including scientific research and statistics courses within teacher education programs	3.10	1.19	Medium
Total			3.56	14.08	High

The means for all suggested ways was 3.56, rated “high” degree. This result may arise because conducting educational research needs greater support from officials, to enable it to become more common in the entire educational system. It may also be attributed to the importance of providing specialised and supportive research staff to act as facilitators for research work conducted by teachers in the field, and to identify the requirements needed for progressing educational research.

The item that obtained the highest mean confirms that teachers feel overburdened while having low reinforcement, which reflects a great difficulty in their ability to conduct educational research and achieve the goals desired from researchers in the field. The items that obtained the lowest means could also be attributed to teachers feeling that an overburdening is also occurring in pre-service teacher preparation programs, so that the bases of scientific research and statistics could be acquired later in their career life. In addition, research results must receive more attention from officials so that they help teachers publish in educational research journals, whether local or international, and thereby help to encourage the conduct of educational research in the field.

Recommendations

The study recommends the following in light of the findings:

1. Developing a pre-service teacher preparation program so that a large part of it is allocated to researchers in order to prepare a teacher capable of conducting educational research in the field.
2. Requiring teachers to attend training courses devoted to in-service educational research.
3. Expanding the scope of educational research by providing an online library involving all schools with local, Arab, and foreign universities to benefit from the research process.
4. Providing job incentives and allocating financial rewards for publishing educational research by teachers, supervisors, and administrators.
5. Developing a unified and clear research methodology with precise regulations that the teacher, supervisor, and administrator should follow while conducting educational research.
6. Establishing refereed scientific journals under the umbrella of the Education Department, concerned with publishing teachers’ research in the educational field.
7. Expanding cooperation frameworks with universities by activating the role of faculty members and their cooperation with schoolteachers in conducting and publishing educational research.

What has been presented about the difficulties faced by schoolteachers in conducting educational research and ways to overcome them remains an important attempt to diagnose and propose solutions that require more analytical and critical studies on this reality, in an effort to provide a comprehensive and clear view of the educational system and the difficulties it faces in fulfilling its role in development.

References

- Akande, O. D. (2021). The challenges of implementing action research in a divided context: A field account. *The Qualitative Report*, 26(8), 2502-2520. <https://doi.org/10.46743/2160-3715/2021.4658>
- Allamai, F. (2019). Finnish experience in preparation of researcher teacher and the possibility of benefiting from it in Egypt. *Journal of Educational and Social Studies*, 25(12), 219-332. <https://doi.org/10.21608/jesu.2019.91319> [in Arabic]
- AlMalki, F. (2019). Difficulties to conduct educational researches and methods to overcome from viewpoint of teachers of government schools in Jeddah Governorate. *International Interdisciplinary Journal of Education*, 8(8), 120-133. <https://ijoe.org/index.php/IIJE/issue/view/3> [In Arabic]
- Anyanwu, R. N. & Jules, R. (2022). Doing action research: The experience of teachers in Seychelles. *East African Journal of Education Studies*, 5(1), 14-25. <https://doi.org/10.37284/eajes.5.1.528>
- Bakhit, M. S. & AlQaoud, I. (2012). The effect of proposed training program to develop action research skills among social studies teachers in Jordan. *King Saud University Journal - Educational Sciences and Islamic Studies*, 24(4), 1487-1518. <https://jes.ksu.edu.sa/ar/node/6518> [en: <https://jes.ksu.edu.sa/en/node/5441>]
- Berliner, D. C. (2002). Comment: Educational research: The hardest science of all. *Educational Researcher*. 31(8), 18-20. <https://doi.org/10.3102/0013189X031008018>
- Bullo, M. M., Labastida, R. T. & Manlapas, C. C. (2021). Challenges and difficulties encountered by teachers in the conduct of educational research: Basis for teachers' enhancement program. *International Journal of Research Studies in Education*, 10(13), 67-75. <https://doi.org/10.5861/ijrse.2021.a044>
- Clark, J. S., Porath, S., Thiele, J. & Jobe, M. (2020). *Action research*. New York: New Prairie Press. <https://newprairiepress.org/ebooks/34>
- ElSayed, A. A. & Moussa, M. F. (2019). Attitudes of the faculty members in faculty of Education, Najran University towards utilizing qualitative research methods in educational research. *Journal of Educational and Psychological Sciences*, 24(3), 78-100. <https://search.emarefa.net/detail/BIM-969478>
- Enerio, A. Jr. T. (2020). Master teachers' challenges in doing action research: A case study. *Universal Journal of Educational Research*, 8(7), 2990-2995. <https://doi.org/10.13189/ujer.2020.080727>
- Feyisa, M. B., Feyisa, A. B., Moreda, A. K. & Hailu, Y. (2022). The practices and challenges of conducting action research in some selected secondary schools of Bale Zone, Oromia, Ethiopia. *Educational Action Research*, online first. <https://doi.org/10.1080/09650792.2021.1997778>
- Gardner, H. (2002). The quality and qualities of educational research. *Education Week*, 4 September, 49-72. <https://www.edweek.org/leadership/opinion-the-quality-and-qualities-of-educational-research/2002/09>
- Gouda, A. S. (2020). Educational research challenges and ways to overcome. *Journal of the Faculty of Education, Benny Swife University*, 17(97), 96-121. <https://doi.org/10.21608/jfe.2020.129161>

- Henson, K. T. (1996). Teachers as researchers. In J. Sikula, T. Buttery & E. Guyton (Eds.), *Handbook of research on teacher education* (2nd ed., pp. 53-66). New York: Macmillan.
- Lamauskas, V., Augienė, D. & Makarskaitė-Petkevičienė, R. (2020). Primary school teachers' educational research: Educational practice and professional development context. *International Journal of Cognitive Research in Science, Engineering and Education*, 8(3), 1-18. <https://doi.org/10.23947/2334-8496-2020-8-3-1-18>
- Moraes, A. & Guariente, M. H. de M. (2016). Scientific research in nurses' education: Perspective of the teaching. *Journal of Nursing / Revisita De Enfermagem*, 10(1), 191-193. <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/download/10938/12237>
- Nassar, A. A. M. (2015). Activation of educational research fundamentals in the light of knowledge society requirements: A future vision. *The Arab Journal for Quality Assurance in Higher Education*, 8(2). <https://doi.org/10.20428/ajqahe.v8i2.808>
- Osmanović-Zajić, J., Mamutović, A. & Maksimović, J. (2021). The role of action research in teachers' professional development, *International Journal of Cognitive Research in Science, Engineering and Education*, 9(3), 301-317. <https://doi.org/10.23947/2334-8496-2021-9-3-301-317>
- Sarkar, M. (2014). Challenges in conducting educational research: The case of a developing country. In *Contemporary approaches to Research in Mathematics, Science, Health and Environmental Education 2014*. Melbourne: Deakin University. <https://research.monash.edu/en/publications/challenges-in-conducting-educational-research-the-case-of-a-devel>
- Ulla, M. B. (2018). Benefits and challenges of doing research: Experiences from Philippine public school teachers. *Issues in Educational Research*, 28(3), 797-810. <http://www.iier.org.au/iier28/ulla.pdf>
- Wangdi, T. & Tharchen, N. (2021). Bhutanese school teachers' perceptions, challenges and perceived benefits in doing research. *Issues in Educational Research*, 31(3), 990-1005. <http://www.iier.org.au/iier31/wangdi.pdf>
- Yigit, C. & Bagceci, B. (2017). Teachers' opinions regarding the usage of action research in professional development. *Journal of Education and Training Studies*, 5(2), 243-252. <https://doi.org/10.11114/jets.v5i2.1878>

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