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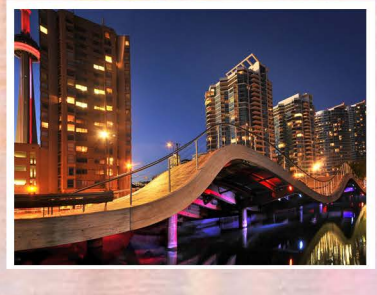


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Reality of Action Researches Practiced by High School Mathematics Teachers in Saudi Arabia

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Abstract

This research aims to investigate the reality of action researches and their tendencies practiced by high school mathematics teachers, as well as to understand the various obstacles that hinder the implementation of these researches. In doing so, the researchers followed the descriptive method through quantitative and qualitative data, and applied a 28-item questionnaire on a cluster random sample consisting of 157 high school mathematics teachers in Riyadh city. Moreover, a semi-structured interview with five opened questions has been applied on 67 teachers who participated in the questionnaire. Research results showed that mathematics teachers do believe in the importance of action researches as being an effective tool in improving their class practices. However, more than 86% of teachers have never participated in action researches during their work collectively, nor independently; despite their passion and perception towards the importance of action researches. In addition, results indicated that the lack of sufficient time, weak financial and emotional support, the scarcity of teachers' training programs in action research practice and the lack of appropriate school atmosphere were among the most difficult obstacles that prevent mathematics teachers from practicing action researches. In light of these results, the researchers recommended the importance of spreading the culture of action researches within schools, training and motivating teachers to widely put them into practice and developing a practical plan within the school to provide an opportunity for teachers to practice action researches.

1. Introduction

Action research is defined as research conducted by teachers, educational supervisors or administrators with the aim of improving their performance and educational practices or solving the educational problems they face (Huwaidi, 2012).

The research process has several basic scientific steps for its implementation, which can be summarized in: selecting and identifying the problem of research, developing research hypotheses, creating sufficient knowledge of the subject, collecting information, verifying hypotheses, executing procedures, organizing, analyzing and interpreting data, The researcher draws on the findings of the study (Dahawi, 2006), which is based on a set of tools that assist the researcher in collecting information, including observations, interviews, questionnaires, content analysis, and case studies (Haidar, 2004).

The action research is characterized by the fact that it does not require large budgets to implement it. It does not require representative samples of the society, nor does it require prior academic permission. It focuses directly on the reality of the school and in the classroom (Abu Hala, 2001).

2. Study Review

The researcher noted the many and repeated assertions on the importance of procedural research in the interpretation of the problems faced by workers in the field of education and work to find a suitable time for them and the difficulties and obstacles they face in the design and implementation of such research, The existence of studies on the reality of the practice of mathematics teachers for procedural research in the secondary stage in Saudi Arabia, which led to this research, the reality of the practice of mathematics teachers in the secondary stage of procedural research and attitudes towards them and the difficulties that prevent them from doing applied research.

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3. Questions of the Study

- What is the orientation of high school mathematics teachers towards procedural research?
- What is the practice of mathematics teachers in the secondary stage of procedural research?
- What are the obstacles of practicing mathematics teachers in the secondary stage of procedural research?

4. Methodology

The researcher followed the descriptive approach with qualitative and quantitative data, through which more and more detailed information can be identified in the detailed description of the reality of the practice of mathematics teachers in the secondary stage of procedural research.

4.1 Sample Data

The target research community of all mathematics teachers in the public secondary schools in the Department of Education in Riyadh during the academic year 2016/2017, about 600 teachers, and the number of respondents who applied the questionnaire 157 teachers, the card was only applied to 67 teachers They applied the questionnaire.

4.2 Study Tools

First, the questionnaire: consists of two axes, the first one consists of 14 words, reveals the attitudes of the secondary school mathematics teachers towards the practice of procedural research, and the second axis is also from 14 words that reveal the obstacles of practicing mathematics teachers in the secondary stage of procedural research.

4.3 Interview tool

The subject of the research and its fields called for the use of the quasi-standardized field interview tool to ensure that the field objectives of the research were achieved, the most important of which was to identify the reality of the practice of mathematics teachers in the secondary stage of procedural research. The interview card was designed by reference to previous researches and studies related to the subject of the research, and consisted of the following questions:

- Do you want to practice or do a procedural research? And why?
- Have you ever done a procedural research? What is the title of your research?

- Have your colleagues participated in a procedural research? What is the title of the research?
- Why did you conduct an action search? (What is the problem or need that prompted you to do procedural research?)

- Have you encountered obstacles or difficulties in carrying out the procedural research? What are those difficulties?

4.4 Sincerity and Stability Study Tools

The validity of the questionnaire and the interview card were verified by presenting them to a number of specialized arbitrators. Based on the opinions of the arbitrators, the necessary amendments were made. The stability of the questionnaire was confirmed by application on a sample of the survey. Stability was extracted using the Cronbach's Alpha coefficient, which proved that the tool has a high degree of stability.

4.5 Study Results

- The percentage of teachers who wish to conduct procedural research was 63 teachers (94% of the sample). Only 4 teachers (6%) did not want to conduct research.

- The majority of the 58 teachers (over 86% of the sample) did not participate in the conduct of procedural research during their work, as well as doing so independently. While only 9 teachers (almost 14%) were in practice.

- Obstacles and difficulties: The number of teachers who actually conducted procedural research (nine teachers), five of whom saw no difficulties or impediments during the implementation of procedural research, while four of them encountered difficulties during their implementation.

- The reality of the practices of mathematics teachers for procedural research in light of the characteristics of the research sample: Degree (Diploma, Bachelor, Master), and the type of educational qualification (educational, non-educational).

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4.6 Degree (Diploma, Bachelor, Master)

All three diploma-qualified teachers did not conduct procedural research at all, while two of them had a desire to conduct procedural research and one did not. A total of 59 teachers with bachelor's degrees were interviewed. The results revealed that fifty-six of them had a desire to conduct procedural research, while three of them did not show any desire. The actual practice of procedural research for teachers with bachelor's degree was achieved only With only four teachers. The interview also included five teachers who received a master's degree, four of whom did procedural research and one did not practice this type of research, although all five teachers with a master's degree had a desire.

4.7 Type of Qualification (educational, non-educational)

The result of the interviews showed that all teachers who have conducted procedural research from educators except one had a non-educational qualification.

5. Recommendations:

In the light of the research results, the researcher recommends:

- Disseminating the culture of procedural research within the school, such as distributing some brochures or conducting seminars on procedural research and its importance.
- Pre-service and in-service training of teachers in conducting research.
- Motivate teachers to conduct procedural research, and encourage them materially and morally, because they have an impact on their professional development.
- Develop a practical plan within the schools that includes the opportunity for teachers to practice procedural research, and to calculate the practice of research within the teaching quorum of the teacher.

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