

The Role of Educational Research in Achieving Total Quality in School Administration from the Perspective of a Sample of Educational Institution Principals in the Wilaya of Constantine

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ABSTRACT

This study aimed to answer the following main question: What is the role of educational research in achieving total quality in school administration from the perspective of a sample of principals of educational institutions across the three educational levels (primary, middle, and secondary) in the city of Constantine? It also examined whether there are statistically significant differences in the mean attitudes toward this role at a significance level of ($\alpha = 0.05$) attributable to variables such as gender, age, experience, and educational level. To achieve the study objectives, the researchers adopted the descriptive-analytical method, using a questionnaire as the primary tool. They developed an instrument to measure principals' attitudes toward the role of educational research in achieving total quality in school administration. The instrument consisted of 27 items distributed across nine dimensions. It was administered to a purposive sample of 50 principals in educational institutions in Constantine, after verifying its psychometric properties (validity and reliability). Data were analyzed using frequencies, percentages, arithmetic means, the independent samples t-test, and one-way ANOVA. The study concluded that educational research plays a role in achieving total quality in school administration through several quality dimensions, including: administrative and organizational policy, educational objectives, curricula, textbooks, teacher performance, teaching methods and strategies, assessment and examinations, the student, and monitoring of the educational process, with varying degrees of relative importance across these dimensions. The results also showed no statistically significant differences in the sample's attitudes toward this role attributable to age, experience, or educational level. Based on these findings, the researchers proposed a set of recommendations and suggestions.

Keywords: Educational research, total quality, school administration, educational institutions.

Introduction:

Total Quality Management (TQM) has recently entered the field of education as a modern administrative approach, following its success in other domains, particularly the industrial sector. One of the primary objectives of TQM is to prepare learners with specific competencies that enable them to keep pace with the knowledge explosion, rapid change, unprecedented technological advancement, and a world now described as a "global village" due to advanced communication networks. Education bears this responsibility in terms of preparing individuals capable of integrating into the new global

system, and TQM represents one of the fundamental and effective frameworks for accomplishing this task.

Given that education is the primary instrument of change in society, the quality of the educational process has become a central goal of teaching and learning systems and a phenomenon widely aspired to across institutions. Among the key and effective elements in implementing TQM in the educational field is the role of the school principal, as an educational leader with substantial familiarity with instructional processes. Through this study, we attempt to identify the role of educational research in achieving quality in school administration from the perspective of a sample of principals of educational institutions.

First: Theoretical Background of the Study

1. Research Problem:

Educational research is defined as research that examines educational phenomena and issues, along with all related psychological, social, philosophical, political, economic, administrative, linguistic, historical, and biological topics. This indicates that education is a complex, multifaceted, and comprehensive phenomenon with multiple methodological levels. Consequently, from a methodological standpoint, education requires a multidisciplinary approach to achieve quality in educational practices.

For educational institutions to reach peak performance and deliver high-quality services to individuals under their responsibility, they must adopt a distinguished and effective system. Among such systems is what is known as Total Quality Management. Educational institutions have attempted to implement it to keep pace with modernization and to graduate students capable of adapting to ongoing developments, entering the labor market, assuming responsibilities, performing effectively, and contributing to the development of the institutions in which they will work in the future.

Achieving these outcomes requires adherence to a set of standards and principles that constitute the pillars for implementing TQM in educational institutions. In light of the above, the issue of the role of educational research in the quality of school administration emerges as a topic requiring systematic and scientific investigation. Accordingly, this study seeks to answer the following question:

What is the role of educational research in achieving total quality in school administration from the perspective of a sample of educational institution principals?

2. Study Hypotheses:

2.1 General Hypothesis:

Educational research plays a role in achieving total quality in school administration.

2.2 Sub-Hypotheses:

1. Educational research plays a role in achieving quality in administrative and organizational policy.
2. Educational research contributes to achieving quality standards in educational objectives.
3. Educational research contributes to achieving quality standards in curricula.
4. Educational research contributes to achieving quality standards in textbooks.

5. Educational research contributes to achieving quality standards in teacher performance.
6. Educational research contributes to achieving quality standards in teaching methods and strategies.
7. Educational research contributes to achieving quality standards in assessment and examinations.
8. Educational research contributes to achieving quality standards related to the student.
9. Educational research contributes to achieving quality standards in monitoring the educational process.
10. There are no statistically significant differences in the attitudes of the study sample toward the role of educational research in achieving total quality in school administration attributable to variables such as gender, age, experience, and educational level.

3. Study Terminology:

3.1 Educational Research:

The term “educational research” refers to activities directed toward developing the science of behavior in educational settings (Jaber & Kazem, 1985, p. 21). Another definition considers educational research as one of the fields of scientific inquiry aimed at identifying educational problems and proposing appropriate solutions (Adas, 1997, p. 4). It is generally directed toward improving the educational process in pedagogical and psychological domains and solving problems faced by practitioners in their professional contexts (Atifa, 1996, p. 25).

3.2 Total Quality Management:

Al-Alawi defines it as an integrated system through which inputs—such as individuals, methods, and tools—interact to achieve a high level of quality. It involves active participation of staff in the educational process and focuses on the continuous improvement of output quality to satisfy beneficiaries (Al-Ta’i et al., 2007, pp. 25–27).

4. Study Objectives:

The study aims to:

- Identify the role of educational research in achieving total quality in school administration from the perspective of a sample of principals in Constantine.
- Determine whether there are differences in principals’ attitudes toward this role attributable to gender, age, experience, and educational level.
- Identify the standards required to achieve quality in school administration.

5. Importance of the Study:

The importance of this study stems from the significance of the topic it addresses—namely, the role of educational research in the quality of school administration—as well as the following:

- Attempting to uncover new knowledge about educational research, which may help provide solutions and alternatives that deepen understanding of the various dimensions of the educational process.
- Examining the reality of school quality and identifying its characteristics, dimensions, and different standards.

Second: Field (Empirical) Aspect of the Study

6. Study Methodology:

The nature of the research problem determines the appropriate methodology to be adopted, and methodologies vary depending on the issues under investigation. Given the nature of this study—focused on identifying the attitudes of school principals toward the role of educational research in achieving total quality in school administration—as well as the type of data sought, the descriptive-analytical method was deemed most suitable. This method is concerned with identifying the phenomenon under study, analyzing it, and attempting to interpret it based on various data, while analyzing results using appropriate statistical tools to obtain quantitative data and precise results consistent with the research problem and interpreted in light of the hypotheses (Shafeeq, 1985: 44).

7. Study Population:

The study population includes all principals of educational institutions across the three educational levels in the Wilaya of Constantine.

8. Study Sample:

The sample consisted of 50 principals of educational institutions, selected through a non-random purposive sampling method. Their ages ranged between 36 and 58 years, and they included both males and females.

9. Study Instrument:

The study relied on a questionnaire as the primary data collection tool in descriptive research. It is defined as a set of questions and situations covering psychological, social, educational topics, or personal data, administered to individuals or groups (Mansi, 2000: 95).

A questionnaire consisting of 27 items was developed, drawing on previous studies and a scale prepared by Issa Abu Abduh (2011). Its purpose was to identify principals' attitudes toward the role of educational research in achieving total quality in school administration. It includes two sections:

- **Section One:** Personal and professional data (gender, age, years of experience, educational level).

- **Section Two:** The role of educational research in achieving school administration quality, comprising nine dimensions:
 - (A) Quality standards for monitoring the educational process (items: 01, 10, 19)
 - (B) Student quality standards (items: 02, 11, 20)
 - (C) Assessment and examination quality standards (items: 03, 12, 21)
 - (D) Teaching methods and strategies quality standards (items: 04, 13, 22)
 - (E) Teacher performance quality standards (items: 05, 14, 23)
 - (F) Textbook quality standards (items: 06, 15, 24)
 - (G) Curriculum quality standards (items: 07, 16, 25)
 - (H) Educational objectives quality standards (items: 08, 17, 26)
 - (I) Administrative and organizational policy quality (items: 09, 18, 27)

A three-point Likert scale was used to measure responses:

- Always (3) – High
- Sometimes (2) – Medium
- Never (1) – Low

The instrument's psychometric properties were verified:

- **Validity:** Established through expert review (content validity).
- **Reliability:** Confirmed using Cronbach's alpha, which reached 0.91, indicating high reliability.

10. Statistical Methods Used:

Data were analyzed using descriptive and inferential statistics with SPSS (version 19), including:

- Frequencies and percentages
- Arithmetic mean and standard deviation
- Independent samples t-test
- One-way ANOVA (F-test)

11. Presentation and Analysis of Results

11.1 Analysis of Results Related to the First Sub-Hypothesis:

Educational research plays a role in achieving the quality of administrative and organizational policy.

Based on the responses of the study sample:

- 56% indicated that educational research always contributes to creating readiness and commitment within educational and school administrations to implement quality systems (mean = 2.52; SD = 0.57 – high level).
- 54% indicated that it always contributes to utilizing all available resources to facilitate achieving and funding educational objectives (mean = 2.38; SD = 0.75 – high level).
- 62% indicated that it always contributes to distributing responsibilities, authorities, and professional relationships among all members of the school community (mean = 2.51; SD = 0.67 – high level).

Overall, respondents agreed that educational research plays a significant role in achieving the quality of administrative and organizational policy (mean = 2.47; SD = 0.49 – high level). Accordingly, the first sub-hypothesis is confirmed.

11.2 Analysis of Results in Light of the Second Sub-Hypothesis:

Educational research plays a role in achieving quality standards in educational objectives.

No.	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
02	Educational objectives take into account the needs, capacities, and conditions of society	2	36	12	4%	72%
11	Objectives consider the needs and characteristics of students' age stages	14	22	14	28%	44%
20	Objectives emphasize the cognitive, cultural, and emotional development of the student	12	38	0	24%	76%

Quality in Educational Objectives: Mean = 2.01, Std. Dev. = 0.45 (Moderate)

Table 03: Shows respondents' answers regarding the second dimension of the questionnaire.

From the table above:

- 72% of respondents believe that educational research *often* contributes to aligning educational objectives with societal needs, capacities, and conditions (mean = 1.80; SD = 0.49 – moderate).
- 28% believe it *always* contributes to aligning objectives with students’ developmental characteristics (mean = 2.00; SD = 0.75 – moderate).
- 76% believe it *sometimes* contributes to emphasizing students’ cognitive, cultural, and affective development (mean = 2.24; SD = 0.43 – moderate).

Overall, respondents indicate that educational research plays a role in achieving quality standards in educational objectives (mean = 2.01; SD = 0.45 – moderate). Accordingly, the second sub-hypothesis is confirmed.

11.3 Analysis of Results in Light of the Third Sub-Hypothesis:

Educational research plays a role in achieving quality standards in curricula.

No.	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
03	Curricula include both theoretical and practical aspects	30	19	1	60%	38%
12	Diversification of knowledge sources for courses	13	29	8	26%	58%
21	Continuous curriculum development to keep pace with scientific and technological changes	29	13	8	58%	26%

Quality in Curricula: Mean = 2.36, Std. Dev. = 0.49 (High)

Table 04: Shows respondents’ answers regarding the third dimension.

From the table:

- 60% believe educational research *always* contributes to integrating theoretical and practical aspects in curricula (mean = 2.58; SD = 0.53 – high).
- 58% believe it *sometimes* contributes to diversifying knowledge sources (mean = 2.10; SD = 0.64 – moderate).
- 58% believe it *always* contributes to ongoing curriculum development (mean = 2.42; SD = 0.75 – high).

Overall, educational research plays a significant role in achieving curriculum quality standards (mean = 2.36; SD = 0.49 – high). Thus, the third sub-hypothesis is confirmed.

11.4 Analysis of Results in Light of the Fourth Sub-Hypothesis:

Educational research plays a role in achieving quality standards in textbooks.

No	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
04	Textbooks are produced with high quality	8	23	19	16%	46%
13	Textbook content aligns with societal culture	5	30	15	10%	60%
22	Availability of multiple references and sources for a course	4	26	20	8%	52%

Textbook Quality: Mean = 1.75, Std. Dev. = 0.55 (Moderate)

Table 05: Shows respondents' answers regarding the fourth dimension.

From the table:

- 46% believe educational research *sometimes* contributes to producing high-quality textbooks (mean = 1.78; SD = 0.70 – moderate).
- 60% believe it *sometimes* contributes to aligning textbook content with societal culture (mean = 1.80; SD = 0.60 – moderate).
- 52% believe it *sometimes* contributes to providing multiple references for a course (mean = 1.68; SD = 0.62 – moderate).

Overall, respondents indicate that educational research plays a role in achieving textbook quality standards (mean = 1.75; SD = 0.55 – moderate). Therefore, the fourth sub-hypothesis is confirmed.

11.5 Analysis of Results in Light of the Fifth Sub-Hypothesis:

Educational research plays a role in achieving quality standards in teacher performance.

No.	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
05	Improving teachers' instructional competence	1	42	7	2%	84%
14	Teachers are evaluated regularly and systematically to improve teaching	21	5	24	42%	10%
23	Continuous training programs are organized to qualify teachers and keep them updated	13	22	15	26%	44%

Teacher Performance Quality: Mean = 1.92, Std. Dev. = 0.58 (Moderate)

Table 06: Shows respondents' answers regarding the fifth dimension of the questionnaire.

From the table above:

- 84% of respondents believe that educational research *sometimes* contributes to improving teachers' instructional competence (mean = 1.88; SD = 0.38 – moderate).
- 48% believe that educational research *does not* contribute to regular and systematic teacher evaluation aimed at improving teaching (mean = 1.94; SD = 0.95 – moderate).
- 44% believe that educational research *always* contributes to organizing continuous training programs to keep teachers updated with scientific developments (mean = 1.96; SD = 0.75 – moderate).

Overall, respondents believe that educational research plays a role in achieving teacher performance quality standards (mean = 1.92; SD = 0.58 – moderate). Therefore, the fifth sub-hypothesis is confirmed.

11.6 Analysis of Results in Light of the Sixth Sub-Hypothesis:
Educational research plays a role in achieving quality standards in teaching methods and strategies.

No.	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
06	Diversification of teaching methods and strategies	10	26	14	20%	52%
15	Focus on achieving balance in educational goals	10	28	12	20%	56%
24	Encouraging students toward self-learning and independence in acquiring knowledge	30	9	11	60%	18%

Quality of Teaching Methods and Strategies: Mean = 2.08, Std. Dev. = 0.57 (Moderate)

Table 07: Shows respondents' answers regarding the sixth dimension.

From the table above:

- 52% believe that educational research *sometimes* contributes to diversifying teaching methods (mean = 1.92; SD = 0.69 – moderate).
- 56% believe that it *sometimes* contributes to achieving balance in educational goals (mean = 1.96; SD = 0.66 – moderate).

- 60% believe that it *always* contributes to encouraging self-directed learning and student autonomy (mean = 2.38; SD = 0.83 – high).

Overall, respondents believe that educational research plays a role in achieving quality standards in teaching methods and strategies (mean = 2.08; SD = 0.57 – moderate). Thus, the sixth sub-hypothesis is confirmed.

11.7 Analysis of Results in Light of the Seventh Sub-Hypothesis:

Educational research plays a role in achieving quality standards in assessment and examinations.

No.	Item	Frequencies	Percentages	Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes
07	Assessment achieves the educational competencies of each curriculum	10	39	1	20%	78%
16	Students are evaluated based on objective and systematic criteria بعيداً عن الذاتية	16	29	5	32%	58%
25	Measurement and evaluation standards align with international educational output standards	3	30	17	6%	60%

Quality of Assessment and Examinations: Mean = 2.04, Std. Dev. = 0.40 (Moderate)

Table 08: Shows respondents’ answers regarding the seventh dimension.

From the table above:

- 78% of respondents believe that educational research *sometimes* contributes to ensuring that assessment achieves the competencies of each curriculum (mean = 2.18; SD = 0.43 – moderate).
- 58% believe that it *sometimes* contributes to evaluating students based on objective and systematic criteria (mean = 2.22; SD = 0.61 – moderate).
- 60% believe that it *sometimes* contributes to establishing evaluation standards aligned with international benchmarks (mean = 1.72; SD = 0.57 – moderate).

Overall, respondents indicate that educational research plays a role in achieving quality standards in assessment and examinations (mean = 2.04; SD = 0.40 – moderate). Thus, the seventh sub-hypothesis is confirmed.

11.8 Analysis of Results in Light of the Eighth Sub-Hypothesis:

Educational research plays a role in achieving quality standards related to the student.

No.	Item	Frequencies		Percentages		Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes		
08	The student possesses sufficient prior knowledge and learning acquisitions	1	23	26	2%	46%		
17	The student adheres to a value system consistent with Arab-Islamic societal perspectives	10	22	18	20%	44%		
26	The student complies with institutional rules, regulations, and policies	23	26	1	46%	52%		

Student Quality: Mean = 1.92, Std. Dev. = 0.47 (Moderate)

Table 09: Shows respondents’ answers regarding the eighth dimension.

From the table above:

- 52% believe that educational research *does not* contribute to ensuring students possess sufficient prior knowledge (mean = 1.50; SD = 0.54 – moderate).
- 44% believe that it *sometimes* contributes to reinforcing students’ adherence to value systems aligned with societal perspectives (mean = 1.84; SD = 0.73 – moderate).
- 52% believe that it *sometimes* contributes to students’ compliance with institutional rules (mean = 2.44; SD = 0.54 – high).

Overall, respondents indicate that educational research plays a role in achieving student quality standards (mean = 1.92; SD = 0.47 – moderate). Therefore, the eighth sub-hypothesis is confirmed.

11.9 Analysis of Results in Light of the Ninth Sub-Hypothesis:

Educational research plays a role in achieving quality standards in monitoring the educational process.

No.	Item	Frequencies		Percentages		Mean	Std. Dev.	Level
		Always	Sometimes	Never	Always	Sometimes		
09	Existence of a monitoring system to identify factors affecting educational quality and outcomes	7	22	21	14%	44%		
18	Evaluation of teachers’ and students’ performance compared to objective standards and goals	23	13	14	46%	26%		
27	Opportunities are provided for all members of the school community to express opinions on educational quality	9	22	19	18%	44%		

Quality of Monitoring the Educational Process: Mean = 1.90, Std. Dev. = 0.64 (Moderate)

Table 10: Shows respondents’ answers regarding the ninth dimension.

From the responses of the sample presented in the table above:

- 44% of respondents believe that educational research *sometimes* contributes to establishing a monitoring system to identify factors affecting the quality of education and its outcomes (mean = 1.72; SD = 0.70 – moderate).
- 46% believe that it *always* contributes to evaluating teachers’ and students’ performance and comparing it with objective standards and goals (mean = 2.18; SD = 0.84 – moderate).
- 44% believe that it *sometimes* contributes to providing opportunities for all members of the school community to express their opinions regarding the quality of education (mean = 1.80; SD = 0.72 – moderate).

Overall, respondents indicate that educational research plays a role in achieving quality standards in monitoring the educational process (mean = 1.90; SD = 0.64 – moderate). Accordingly, the ninth sub-hypothesis is confirmed.

11.10–11.12 Discussion of Results in Light of the Tenth Sub-Hypothesis:

There are no statistically significant differences in the attitudes of the study sample toward the role of educational research in achieving total quality in school administration attributable to variables such as gender, age, experience, and educational level.

1. Gender Variable:

Variable	Gender	N	Mean	Std. Dev.	df	t-value	p-value
Attitudes toward the role of educational research	Male	26	1.95	0.35	48	2.37	0.02
	Female	24	2.16	0.24			

Table 11: Results of the t-test by gender.

The table shows that the mean score for males is 1.95 (SD = 0.35), while for females it is 2.16 (SD = 0.24). These values are relatively close, suggesting initially no major differences between the two groups.

However, the p-value (0.02) is less than the significance level ($\alpha = 0.05$). Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, indicating that there are statistically significant differences in attitudes attributable to gender.

2. Age Variable:

Variable	Age	N	Mean	Std. Dev.	df	t-value	p-value
Attitudes toward the role of educational research	36–47	22	2.02	0.25	48	0.49	0.62
	48–58	28	2.07	0.36			

Table 12: Results of the t-test by age groups.

The means (2.02 and 2.07) are close, indicating no substantial differences. The p-value (0.62) is greater than $\alpha = 0.05$, so the null hypothesis is accepted. Conclusion: No statistically significant differences based on age.

3. Experience Variable:

Chapter	Source of Variance	Sum of Squares	df	F-value	p-value
Attitudes toward the role of educational research	Between groups	0.25	2	1.24	0.29
	Within groups	4.85	47		
	Total	5.10	49		

Table 13: One-way ANOVA results by experience.

The p-value (0.29) is greater than $\alpha = 0.05$; therefore, the null hypothesis is accepted. **Conclusion:** No statistically significant differences based on experience.

4. Educational Level Variable:

محور	Source of Variance	Sum of Squares	df	F-value	p-value
Attitudes toward the role of educational research	Between groups	0.51	2	2.63	0.08
	Within groups	4.59	47		
	Total	5.10	49		

Table 14: One-way ANOVA results by educational level.

The p-value (0.08) is greater than $\alpha = 0.05$; therefore, the null hypothesis is accepted. Conclusion: No statistically significant differences based on educational level.

The p-value for the F-test is 0.08, which is greater than the significance level ($\alpha = 0.05$). Therefore, the null hypothesis is accepted, indicating that there are no statistically significant differences in the attitudes of the study sample toward the role of educational research in achieving total quality in school administration attributable to the educational level variable.

Based on the above, it can be concluded that the tenth sub-hypothesis—stating that there are no statistically significant differences in the attitudes of the study sample toward the role of educational research in achieving total quality in school administration attributable to variables (gender, age, experience, educational level)—is confirmed only with respect to the variables: age, experience, and educational level.**11.11 Discussion of Results in Light of the General Hypothesis:** *Educational research plays a role in achieving total quality in school administration.*

Overall Instrument	Mean	Std. Dev.
Attitudes toward the role of educational research in achieving total quality in school administration	2.05	0.32

Table 15: Mean of attitudes toward the role of educational research in achieving total quality in school administration.

University faculty members believe that educational research plays a role in achieving total quality in school administration, with a mean score of 2.05 and a standard deviation of 0.32, indicating a moderate level. Accordingly, the general hypothesis is confirmed in light of these results, as well as the confirmation of the first through ninth sub-hypotheses.

Conclusion:

This study, both theoretically and empirically, concluded that educational research plays a role in achieving total quality in school administration from the perspective of a sample of principals across the three educational levels (primary, middle, and secondary) in the Wilaya of Constantine. Based on the findings, the researchers proposed the following recommendations:

- Provide opportunities for school principals to express their views in the preparation of educational projects.
- Strengthen the link between educational institutions and universities to benefit from field-based educational research.
- Select individuals responsible for supervising educational institutions based on objective and scientific criteria to ensure they meet the required level of responsibility.
- Pay greater attention to those involved in the educational process, especially teachers, to enhance the effectiveness of their performance.
- Provide opportunities to support the development and improvement of educational staff performance by offering incentives and motivations that encourage continued research during their free time.
- Conduct further studies on topics such as: the role of teacher training in improving the quality of educational practice, and the role of reflective practice in achieving quality in the teaching-learning process.

The study concluded that educational research contributes to achieving total quality in school administration, based on both theoretical and field findings, from the perspective of school principals across all educational levels in Constantine.

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