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The Impact of Rich Teaching of The Concept on Mathematical Ability and The Survival of The Learning Impact of Basic Seventh Grade Students

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Abstract

The study aims to demonstrate the impact of rich teaching of the concept on mathematical ability and the survival of learning impact. The study relied on the experimental approach. It represents the research community of all seventh grade students in Irbid governorate, and reaches the size of the study sample (44) students distributed to two groups: a pilot group taught by rich conceptual teaching and the other is a control group taught in the traditional way. A mathematical ability test was prepared and re-applied two weeks later to measure the level of survival of the learning impact and the results of the study showed statistically significant differences at the indicative level (0.05) in the average scores of female students of the experimental and control group in the mathematical ability test, and they were in favour of the pilot group studied through the rich teaching of the concept, It also showed that there were no statistically significant differences at the indicative level (0.05) between the average pilot group in the dimensional and deferred application.

Keywords: *Rich Teaching of Concepts, Mathematical Ability, Survival of Learning Impact, Seventh Grade Students*

INTRODUCTION

Mathematics is one of the most important sciences that plays an important role in human life. It is indispensable in organizing various fields and daily activities, so it has evolved and progressed rapidly, encompassing all dimensions of life. Math has served the individual and society since the earliest times, and has been used to facilitate people's daily lives, which has made it the basis for life, trade, industry and communications, serving as the backbone of social construction.

Teaching mathematics requires an educational environment that is rich in mathematical concepts that a student needs to cope with his/her sequenced and emerging variables. The structure of mathematics consists of a conceptual structure, characterized by a coherent fabric of interconnected concepts with differing logical relationships, which together constitute rules, theories and laws, and because mathematical concepts constitute a fundamental component of mathematical knowledge, its pedagogical education enjoys a great deal of educational experts' interest. The impact of concepts on the development of students' diverse educational skills (Abrahamson, et all., 2020).

The rich teaching of the concept is characterized by abstraction, and it is seen as an enrichment of the thought, analysis and perception processes. The nature of the teaching of conceptual processes is followed by the teaching of procedural processes that achieve the concept in question. Thus, good teaching requires teachers to enrich the teaching of mathematics with conceptual concepts and processes. The student can achieve the highest grades if the procedures are learned only without understanding the concept. The conceptual-rich teaching environment is expected to contribute to enriching the processes of mental thinking and creativity in mathematics (Tashtoush, et all., 2022).

Studies based on mathematics teaching and learning have confirmed that conceptual-rich teaching is based on processes successive content and logically structured in their content to teach and clearly define the general-to-private concept of mathematics. Conceptual-rich teaching is also based on constructive theory and presuppositions based on two assumptions: Learning new concepts either by translating the knowledge process (conceptual knowledge), or by translating concept learning into visible mental processes (procedural knowledge) (Rata, McPhail, 2020).

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Mathematical ability is a complex, rather than simple, mental capacity. This ability appears in performing calculations easily, quickly and accurately. Its importance is demonstrated by the fact that it makes the student capable of formulating any relationship between numerical symbols or between non-verbal symbols, memorizing, and retrieving them and using them when needed. Developing this ability makes student overcome the problems a he may face in calculating or drafting numbers or symbols (Xie, et all. 2020).

Mathematical ability is known as a student's ability to understand, assimilate, remember and apply mathematical concepts, symbols and generalizations (elements of mathematical knowledge) in mathematical situations (Kusuma, et all., 2023). Black Yale,(cited in Mejrechy, 2023), also defined it as an optional thinking of quantitative relationships and conclusive thinking and as a reflection of the general ability on the base of the numbers and symbols of geometric forms.

The survival of the impact of learning remains important as one of the key factors that align the learner with learning attitudes, especially when the student finds himself facing s certain situations that make the process difficult to remember many times. There is a range of factors that affect the preservation of information and the survival of the learning impact, including: Distributed and concentrated exercise, speed of learning, degree of mastering learning, method of memorizing measurement, and information organization mechanism (Ali et al., 2023).

From that on, this study was designed to demonstrate the impact of the rich teaching of the concept on mathematical ability and the survival of the learning impact of the primary seventh graders.

Study Problem and Questions

The teaching of scientific subjects aims at making students acquire scientific concepts effectively, as well as developing varying life skills. As the researcher revised the literature review, she found out that there is a weakness in students' acquisition of scientific concepts (Al-Anzi, 2022), as the researcher noted in her work as a mathematics teacher, some of the difficulties faced by students in mathematics were their struggles in the way of dealing with subjects. Through her research, she found that the level of mathematical ability was below the required level, affecting their academic performance.

The problem of the study was identified in the answer to the following main question: What impact does rich teaching of the concept have on mathematical ability and the survival of the learning impact of seventh-grade students? This question has the following hypotheses:

First hypothesis: There are no statistically significant differences at α level ≤ 0.05) between the average scores of the pilot group that was taught by the concept's rich teaching strategy and the control group that was taught by the traditional method of testing mathematical ability in post-application.

Second hypothesis: There are no statistically significant differences at α level ≤ 0.05) between the average scores of the experimental group learned by the concept's rich teaching strategy and the control group learned by the usual method of postponed mathematical ability testing in post-application.

Objectives Of the Study

The Research Aims To

- Describing the impact of the rich teaching of the concept on the mathmatical ability of seventh graders.

- Describing the impact of the rich teaching of the concept on the survival of the learning impact of seventh graders.

Significance of the Study

The significance of the study lies in its response to educational advocacy of curriculum planners, teacher training planners, teaching staff and learners in keeping up with modern educational trends that call for the application of teaching strategies that contribute to positive outcomes of the educational process. It also highlights the

importance of using rich teaching material for teaching staff in order to improve the teaching process in Jordanian Hashemite Kingdom schools, as well as the educational literature related to its variables.

Study Concepts

Rich teaching of the concept: a growth in active constructive learning to shape knowledge. It is also a reflection of active processes done by students to organize, build and restore concepts presented to them in learning experiences at the same time (Khazali and Faris, 2022). Procedurally: conducting a series of structured mental procedures to promote the mathematical concepts included in the seventh grade mathematics curriculum/second term.

Mathematical ability: the ability to understand the nature of mathematics and to assimilate, store, remember and understand mathematical symbols, terminology, concepts and generalizations, stre them in memory and apply them in new mathematical situations (Simbolon, et all., 2018). Procedural: The degree of students in the mathematical ability test is indicated by the "Integer Bases and Algebraic Expressions" unit in the seventh grade course book.

The survival of learning Effect: The result of the remainder of the learning memory, measured by the degree to which the learner gets the subject when the test is applied to him again, which has already been applied immediately after completion of the curriculum (Kooloos, et all., 2020).

Procedurally, it is defined as how much seventh graders retain the information, concepts and knowledge contained in the "Integer bases and Algebraic Expression" module, and their ability to retrieve them four weeks after studying the unit, and is measured by the degree to which students receive the postponed mathematical ability test.

THEORETICAL LITERATURE

This section contains a presentation of the theoretical literature on which this study was based, and it includes the concepts underlying this study: rich teaching of the concept, mathematical ability and the survival of the impact of learning, in terms of their definition, characteristics and relevance in the field of education.

Rich Teaching of The Concept

The learning environment based on conceptual-rich teaching elements is an active teaching strategy, which is based on constructive theory by characterizing students' previous cognitive structure and concepts, rectifying, crystallizing them into a new concept and then building on them (Rata, McPhail, 2020). The concept-rich educational environment needs five structured and logically sequenced elements. These elements are one of the axioms of mathematics learning to help students understand mathematics and its concepts. These components are as follows (Xie, et all., 2020):

Practice (application): Learning concepts requires adequate practice and application, by enriching and adequately replicating the teaching of mathematics with the greatest examples and activities rich in concepts.

- Diversity of contexts: discussing students' ideas while taking into account their difference and diversity in solving exercises and analysing common errors. Here, students must experience a wide variety of applications to be able to acquire the concept.

- Giving meaning to the concept: translating the concept and interpreting it in words and symbols, where the teacher acts as a mediator. The process of giving meaning to the concept in words or symbols is done by developing students' understanding of the concepts through thinking and verbal expression, and the validity of giving it a meaning expresses the student's understanding of it.

- Reconceptualizing: It comes after linking new experiences with previous experiences and focusing on new applications of the concept that is used to link new experiences with old ones.

- Verification: Teachers must encourage students to move to new experiences through the curriculum and factual problems, i.e. students must convey their learning and understanding of concepts and employ them in the real environment.

The components of conceptual knowledge come from the students' awareness of concepts through the student's recognition of the mathematical concepts he deals with, the perception of their components and characteristics, and their tangible or almost mere relationship between them, such as the concepts of cube, circle, equation, standard deviation and computational means (Rata, McPhail, 2020).

It also consists of awareness of terminology through awareness of scientific, mathematical, social or economic terminology such as the even number, and the awareness of symbols and forms. It is also represented in understanding and perceiving of abstract symbols and visual forms and patterns, such as the symbol of equality and the shape of the natural curve. As well as awareness of the rules and laws through the student's knowledge of the components of the rule or law and the significance of each component and the relationship between the symbols that make up the laws such as the rectangular law = length x width (Rata, McPhail, 2020).

Mathematical Ability

Mathematical ability consists of several interconnected and interrelated capabilities: numerical ability, verbal understanding ability, spatial ability, and deductive ability. Numerical ability refers to the ability to perceive numerical relationships, numerical belongings and numerical additivity, and for verbal understanding ability refers to the ability to understand the meanings of words and written material (Dany 2020).

Spatial ability is associated with mental activity that depends on the visual perception of the movement of shapes in place and their effect is apparent when an individual practices forming a shape made of a number of small pieces, imagines a particular drawing, and the deductive ability indicates the ability to extract a certain relationship between two or more things, and it manifests itself in mental activity that requires the discovery of a rule linking a set of elements or the application of a rule to a partial condition and that ability consists of deduction and extrapolation (Danthony, et all., 2020).

In order to maintain student mathematical capacity, it is essential to promote the survival factor of the learning impact. which means preserving a previous learning that was firmly rooted in the students' minds during a sound educational process. It is also defined as the result of the what remains in the memory of education. It is measured by the degree to which the learner gets the substance when applying the test again and which has already been applied immediately after completion of the curriculum (Kusuma, et all., 2023).

Survival Of the Impact of Learning

It refers to the learner's remaining knowledge, information and experience, due to the differing educational attitudes and experiences he has been exposed to, and to the methods of maintaining the learning impact that must be taken into account: the repetition of education, the question from the learner and the answer from the teacher, and is one of the old methods used to obtain and maintain information. The anecdotal method is a successful and influential pedagogical and educational method; because of the influence of the story in teaching, as students, especially young ones, are willingly and greatly drawn to the story (Fouda, 2022).

The survival of the learning effect is measured by two methods: first, offering several alternatives, where student selects the alternative that he sees as valid. This method works when measuring the student's ability to discriminate. The teacher provides a set of definitions and asks the student to get the correct definition to retain it. The second method is: the repitition method, and it is based on remembering the right order and steps to do a skill properly already done in the original learning (Ali et al., 2023).

PREVIOUS STUDIES

The study of Ali et al. (2023) aimed to demonstrate the impact of the use of a four-stage Indian model in science teaching on the development of the survival impact of learning in middle school pupils, and it depended on experimental approach. The sample size of the study reached (65) students who were divided into a pilot and control group, and a pre and post achievement test was applied, and it was repeated after 20 days to measure the impact of learning, and the study found the effectiveness of the model in raising the attainment rate and the survival of their learning impact.

Al Khazaie and Faris (2022) aimed to demonstrate the effectiveness of an educational design according to the concept-rich mathematics teaching model in spatial ability, and relied on the experimental approach, representing the research community of middle-level students. To achieve the study's objective, a four-stage educational design was developed. (Analysis, preparation that includes design, development, implementation and evaluation). The results of the study showed statistically significant differences at the indicative level (0.05) between the average students of the pilot group and the control. The results were for the benefit of the pilot group that was taught according to the rich teaching of the concept model.

Al-Qahtani's study (2021) aimed to demonstrate the effectiveness of using the inverted learning strategy in teaching the curriculum and learning the cognitive attainment at levels (remembrance, understanding and application) and the survival of the impact of learning, and the trend towards distance learning. The research community was students of the Early Childhood Department of the Faculty of Education in Mouzahinia. The study sample consisted of 63 Female students divided into two pilot and control groups, a test to measure academic achievement and a measure of the tendency towards distance teaching were prepared. The results of the study showed effectiveness of the inverted learning strategy in developing achievement and students' tendenency toward distance learning, and the retention of the learning impact of the course.

Alrabie Study (2020) sought to demonstrate the effectiveness of teaching mathematics based on the components of concept-rich teaching in developing creative thinking skills in decimal fractures among basic students, and reached the size of the study sample 55 students in the fifth grade in the north of Amman. A creative thinking test was prepared, and the results of the study showed statistically significant differences at the indicative level (0.05) attributable to teaching method in creative thinking skills (fluency, flexibility, authenticity) and demonstrated a significant impact of teaching based on the components of the rich teaching of concepts.

METHOD AND PROCEDURES

This section addresses the procedures for the implementation of the study. In terms of indicating the study's approach, description of its community, sample identification, preparation of study tools, verification and validation procedures, and how to analyse them.

Study Methodology

The researcher depeded on the experimental approach using two groups, a pilot group taught by rich teaching of the concept, and a control group taught in the traditional way. The mathematical ability test was applied before and after teaching the correct basis unit of "the integer bases and algebraic expressions" of the basic seventh-grade mathematics book for the second semester.

Community and Study Members

The school community is comprised of all the basic seventh graders in a state school in Irbid governorate. The study sample consisted of 44 students who were distributed to the pilot group (22) students who were taught by the rich teaching of the concept, 15 study classes, and the control group (22) students who were taught by the traditional method (12 study classes).

Study tools: Study tools include: Teacher's Guide, Pre and Post Mathematical Ability Test.

Mathematical Ability Test

The researcher built a mathematical ability test on the basis of considering the level of the students and the individual differences between them, taking into account their level of clarity and linguistic integrity. The test consisted of (22) sections of multiple selection in its initial form, corrected in the light of the giving of tow degrees of correct response and zero to the wrong answer, and thus the test scores ranged from (0 - 44).

Psychometric Properties for Mathematical Ability Test

Apparent Honesty

The test was presented in its preliminary form to 10 arbitrators with specialized teaching staff in mathematics curricula and teaching methods working at Jordanian universities and mathematics teachers, to ascertain the comprehensiveness of the test, the linguistic integrity of its sections, its measurability, subparagraph affiliation and level of sensitivity to individual differences among students. In the light of their observations, the necessary adjustment was made for the final test to consist of 20 questions.

Coefficients Of Difficulty and Differentiation

After confirming the apparent honesty of the test, the test was applied to an reconnaissance sample of 20 seventh grade students out of the study sample in order to calculate the difficulty differentiation coefficients of the mathematical thinking test sections. Both the ease coefficient and the differentiation coefficient were extracted according to the following equations:

Difficulty coefficient = number of wrong answers/total number.

Differentiation coefficient = number of correct answers in the upper group - number of correct answers in the lower group/number of students in one of the two groups (10). The following table shows the results of these equations as follows:

Table (1): difficulty and differentiation coefficients of mathematical thinking test sections

Differentiation coefficient	Ease coefficient	Section number	Differentiation coefficient	Difficulty coefficient	Section number
0.40	0.50	11	0.60	0.30	1
0.40	0.40	12	0.40	0.30	2
0.50	0.35	13	0.20	0.30	3
0.60	0.40	14	0.70	0.35	4
0.40	0.40	15	0.50	0.35	5
0.30	0.25	16	0.50	0.55	6
0.50	0.45	17	0.20	0.30	7
0.40	0.30	18	0.40	0.30	8
0.60	0.30	19	0.30	0.45	9
0.40	0.40	20	0.50	0.35	10

Table 1 shows that the difficulty coefficient for mathematical ability test sections ranges from 0.30 to 0.50. These values are statistically acceptable, as the difficulty coefficients indicate the test sections' appropriateness to the students' level. The differentiation coefficients ranged from 0.20 to 0.70, which are statistically acceptable values, indicating the test sections' ability to distinguish students who are able to answer test questions correctly and students who are less able to do so.

Test Time

The test time was determined when applied to the survey sample by taking the arithmetic means of the first student's completion time (40) minutes, and the last student's completion time (60) minutes of the test , as the following:

Mathematical test time = 40 + 60/2 = [50] min, so test time = [50] min.

The Stability of Mathematical Ability Test

To ascertain the stability of the mathematical ability test, the stability of the test was calculated using the Cord Richardson 20 (KR-20) formula, because it is the most commonly used test, and the test stability value was (0.61), and this value indicates that the test has an appropriate degree of stability and homogeneity.

Inspection Of Parity of The Two Groups

To ensure the parity of the pilot and control groups on the mathematical ability test before the concept-rich teaching, an Independent Samples Test was conducted to clarify the significance and direction of the differences between the pilot and control group arithmetic means in pre measurement, and table (3) shows the following:

Table (3): The arithmetic means and standard deviations of mathematical ability test according to the group variable in pre measurement

Sig	Df	T	Control group		Pilot group	
0.224	42	1.233	standard deviation	Arithmetic means	standard deviation	Arithmetic means
			8.39	22.36	7.74	25.36

Table (3) shows apparent differences between the arithmetic means of pre measurement of mathematical ability test in pilot and control groups, with t = 1.233 at a statistically non-D level, indicating the parity of the two groups in pre testing.

Study Subject

The content of the "Unit of Integer Bases and Algebraic Expressions" was prepared according to the rich teaching of the concept (Teacher's Guide), aiming to achieving the objectives of the study. Therefore, the educational content was prepared in the lessons of the target unit in mathematics for the seventh grade according to the rich teaching of the concept to clarify how learning is applied according to the strategy by providing detailed information on the strategy and the defining the unit's lessons and how to apply them according to the strategy. The Teacher's Guide, drafted according to the rich teaching of the concept, contains the following elements: The main objectives and learning findings of each of the unit's lessons, demonstrating the time taken to teach the unit, as well as the educational sources that varied between (Textbook and worksheets, blackboard, photos, drawings and videos supporting educational content) in addition to containing educational activities such as the employment of images, forms and mental drawings, solving the book's exercises , work-in-group activities, work-in-pair activities. The formative evaluation mechanism ensures through classes by asking and answering questions, solving work sheets in groups, observing the performance of the students during the course using evaluation tables according to math skills, and finally applying the mathematical ability test to ensure the effectiveness of rich teaching of the concept.

Study Procedures

Study procedures include reviewing theoretical literature and previous studies related to the topic and its variables, identifying the educational material to be presented from the math book seventh grade students for the academic year 2023/2024, and then analyzing the content of topic: (Unit of Integer bases and Algebraic Expressions), selecting two sessions of the seventh grade in a state school in Irbid governorate and dividing them to two groups: a pilot group and a control group, designing a teacher guide containing the pillars of the rich teaching concept and methods of its application, constructing the mathematical ability test in its initial form, thereby ascertaining its honesty and stability by applying it to a reconnaissance sample. After that, a pre application of the test was conducted in order to ascertain the parity of the two groups. First, the topic was taught to the pilot group students according to the concept-rich teaching, and it was taught to the control group students according to the traditional method, and a post- application was carried out for each group to test mathematical ability. It was also re-applied after three weeks to measure the level of survival of the students' learning impact. The direct and deferred mathematical ability test was then corrected, their results were processed and discussed and recommendations were drawn.

Statistical Processing

Statistical methods were applied using the statistical package of social and educational sciences (SPSS), namely: Extraction of arithmetic means and standard deviations to test mathematical ability and standard errors of the marks of pilot and control groups to study tools for both ore and post measurement of the teaching strategy, and applying of the mono-accompanying variation analysis test (ANCOVA) to detect differences between the averages of the control and experimental groups in the mathematical ability test, and the Paired Sample Statistics test has been applied to show differences between the groups in post direct and postponed application of the mathematical ability test.

Results And Discussion of The Study

This section presents the results of the study and its discussion on "The impact of rich teaching of the concept on mathematical ability and the survival of the learning impact of female basic seventh graders". According to the series of study assumptions:

Results of the first hypothesis: "There are no statistically significant differences at α level ≤ 0.05) between the average scores of the pilot group learned by the concept's rich teaching strategy and the control group learned by the traditional method of testing mathematical ability in post application".

To answer this hypothesis, arithmetic means and standard deviations of 7th grade students' basic grades were extracted from the mathematical ability test. Table (3) shows the results of this:

Table (3): The arithmetic means of pilot and control group in mathematical ability test in post application:

Pre measurement		Post measurement			level
Standard deviation	**Arithmetic means**	**Standard deviation**	**Arithmetic means**	**group**	
7.74	25.36	7.06	33.14	pilot	**Mathematical ability test**
8.39	22.36	4.29	21.41	Control	

Table 3 shows that there are apparent differences between the arithmetic means of the post measurement of the mathematical ability test. To illustrate the significance of these differences between the averages, the accompanying single variation analysis has been applied, as shown in table 4:

Table (4): Co-variation test (ANCOVA) results to identify differences between the average of the two study groups in the mathematical ability test in post application

Size of impact	etha square	Sig	F value	Average of squares	Freedom degree	Squares' group	Source of variation	level
		0.224	1.521	99.000	1	99.000	Pre test	**Mathematical ability test**
Medium	0.51	0.00	44.311	1512.818	1	1512.818	Between the groups	
				34.141	42	1433.909	error	
					44	35674.000	Total	
					43	2946.727	Corrected total	

Table (4) shows differences between the average of the pilot and control groups in the mathematical capability test for seventh-grade students in post application after adjusting pre mathematical ability, with F = 44.311 at an indicative level (0.00), with an impact size of 0.51. These differences were in favour of the pilot group that was taught by the rich teaching of the concept, with the highest arithmetic average of 33.14. With this, Thus, the zero hypothesis was refused and alternative hypothesis indicating "statistically significant differences at α level ≤ 0.05) between the average scores of the pilot group taught by the concept's rich teaching strategy and the control group learned by the usual method of testing mathematical ability in post application" was accepted.

This result indicates a positive impact of rich teaching of the concept on mathematical ability, and the researcher attributes this result to the sequencing and regularity of the steps of rich teaching of the concept because this method facilitated the development of mathematical concepts and mathematical thought, as well as what this strategy provided during the presentation of module lessons "The integer bases and algebraic expressions" of different educational tasks that helped students build and link information to their past experiences. It also allowed students to work within groups in developing their skills to solve problems, plan and discuss.

This result is also attributable to the teacher's acceptance of the views and answers of students and encouraging them to express their views and enhance their response during the follow-up and discussion phase, promoting and developing students' mathematical thinking skills;. The rich teaching of the concept also clarifies and links important information and ideas of students and it also describes the relationship between the part and the whole, the sequence of information, events, discussion and dialogue. This helped to enhance students' ability to understand the relationships between forms and develop the ideas they contain.

This result was agreed with Alrabie Study (2020) which found an impact of the components of technical teaching with concepts in the development of creative thinking skills in decimal fractures among primary school students. It also agreed with the study of Khazai and Faris (2022) which found statistically significant differences at the indicative level (0.05) between the average grades of the students of the pilot group and the control, and for the benefit of the pilot group taught by the mathematics model teaching rich in concepts in spatial ability.

Results of the second hypothesis: "There are no statistically significant differences at α level ≤ 0.05) between the average scores of the pilot group taught by the concept's rich teaching strategy and the control group taught by the traditional method of postponed mathematical ability testing in post application".

To answer this hypothesis, averages and standard deviations of 7th grade students' basic grades were extracted from the mathematical ability test in direct and deferred post application. Table (3) shows the results of this:

Table (3): the result of (Paired Sample Statistics) to know the differences between the average between the study groups in direct and postponed post mathematical ability test

sig	df	T	Postponed pre test		Direct post measurement			level
0.183	43	1.354	Standard deviation	Arithmetic means	Standard deviation	Arithmetic means	group	
			7.13	33.27	7.06	33.14	pilot	Mathematical ability test
			4.29	21.41	4.29	21.41	Control	

Table (3) shows no differences between the average scores of the pilot and control groups in the mathematical ability test of seventh-grade students in direct and postponed post application, with a value of t = 1.354 at an indicative level (0.183), which confirms that the effect of learning in mathematics is maintained by rich teaching of the concept, and therefore the zero hypothesis is accepted.

The effectiveness of rich conceptual teaching can be attributed to the survival of a unit's learning impact "Integer bases and algebraic expressions" to the advantages of this strategy that enable it to contribute to helping students to self-learn and become self-reliant in learning, and thus increases their level of attention during class. This is reflected in their high level of retention of experience and information for a long time by promoting their role in the search for knowledge and information using various educational methods. This result agreed with Alrabie Study (2020), which found a significant impact of conceptual teaching of mathematics.

Recommendations

Through its findings, the study provides a set of recommendations:

- Guiding mathematics teachers towards using rich teaching of the concept as one of the useful strategies in teaching mathematics curriculum.

Holding specialized training courses for mathematics teacher in functioning the concept's rich teaching strategy.

- Making general introductive lectures for students to introduce the rich teaching of the concept to them and make them aware of its importance in increasing the level of mathematical ability and maintain the impact of learning.

- Prepare students educationally and psychologically to accept teaching using rich teaching of the concept.

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