

THE EFFECT OF THE COLD CALL STRATEGY IN EXCITABILITY OF STUDENTS MOTIVATION BASIC STAGE TO LEARN SCIENCE IN JORDAN

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ABSTRACT: *The study aims to identify the effect of the cold call strategy in raising the motivation of students in the basic stage in Jordan to learn science. To achieve the objectives of the study, the researcher followed the analytical descriptive approach in terms of applying the study tool and data collection and analysis. Of the Jerash Educational Directorate, while the sample of the study was (30) students, The study concluded that there is an impact of the cold call strategy in raising the motivation of students of basic stage in Jordan to learn science. The researcher recommended conducting training courses for the science teacher to show the importance of cold call strategy in stimulating students' motivation to learn science.*

KEYWORDS: Science, Cold Communication, Motivation

INTRODUCTION

At the present time, science plays a major role in the conduct of daily life across the globe. The progress of countries is measured in terms of scientific and industrial potential. Therefore, countries are classified as "advanced" industrialized countries and countries where scientific advances are beginning to develop. "No luck in contemporary science.

Based on this development and this view, it was necessary for those responsible for education to allocate a large part of education to scientific education in order to prepare generations to rely on after God in the recovery of ancestral legacy of science and technology, and this will not be by adhering to traditional teaching strategies that proved unable to prepare A generation that is open to science and capable of excellence, but it was incumbent upon our educational institutions to search for all that is new and all that is able to stimulate the motivation of students to learn science. (Al-Falah, 2013)

From here emerged the strategies of modern teaching, which formed an integral part of the progress of knowledge and science, and contributed all the contribution to the transformation of science from the indoctrination to the understanding and scrutiny and partnership between the teacher and student and school management, to graduate us with a generation distinct and aware able to learn ahead of science and knowledge (Samarrai, 2014) One of these strategies is cold communication strategy, which is one of the simplest, most cost effective and reliable strategies in the classroom to achieve diversity and seriousness in education. Based on the above, the researcher will measure the impact of cold call strategy in raising the motivation of students of basic stage in Jordan to learn science.

Problem of the study

Over the course of decades, a certain method and pattern has prevailed in the teaching of science within our schools. The teaching pattern depends on teaching, teaching and conservation. Our view of science in general and of the curriculum in particular has led to the

prevalence of this teaching pattern. Science, as many of us consider it, is a set of facts, laws, theories, and curriculum. These are just themes between the two textbooks. This narrow perception of science and curriculum has led to low learning skills among students. And conservation.

Hence, the current study problem in measuring the impact of cold call strategy in raising the motivation of students of the basic stage in Jordan to learn science.

Questions of the Study:

1. What are the methods of teaching science prevalent in Arab society?
2. What is the importance of cold call strategy in teaching?
3. What is the impact of the cold call strategy in stimulating the motivation of students of the basic stage in Jordan to learn science?

Hypotheses of the Study:

1. There is no statistically significant effect at the level of significance ($\alpha = 0.05$) of the cold call strategy in stimulating the motivation of students of the basic stage in Jordan to learn science.

Importance of study:

The importance of this study is of the importance of science in the development of peoples and countries, and its effects in raising the level of society and improving the various services in it, science is the basis of development and strength, so it was incumbent on our educational institutions to do more to teach our students science and motivation to learn, Including a generation that has the love of knowledge and learning and has the ability to innovate, distinguish and build different inventions.

Objectives of the study:

1. Knowledge of methods of teaching science in the Arab society.
2. Identify cold communication strategy.
3. Measuring the impact of cold call strategy in stimulating the motivation of students of the basic stage in Jordan to learn science.

Terminology of the Study:

Cold call strategy: is one of the strategies that forces all students to participate and interact within the classroom. The teacher asks students to answer, regardless of whether they want to participate or not, or even the student's knowledge of the answer. (Lemov, 2010)

Upper secondary stage: This is the stage that extends from the seventh grade to the tenth grade in the schools affiliated to the Jordanian Ministry of Education (Ministry of Education and Jordan)

LITERATURE REVIEW

In this course, the researcher will present the methods of teaching science and the development of teaching methods across civilizations, ways to help students learn about concepts, Cold Call Strategy, Importance of Cold Call Strategy, The Key principles of Cold Call Strategy and Objectives of the Strategy and Important notes of the strategy.

Methods of Teaching Science:

There are many methods and methods used in teaching science, including the following:

1. The indirect methods are to accept the views of students and encourage them to participate in the educational process, where the teacher seeks to know the views and problems of students and try to solve, where the studies have shown the role of the teacher's behavior and its impact on the progress of achievement of students, Rather, methods must be adapted to the different nature and mission of the teacher.
2. The method of teaching based on praise and criticism: It means moderate praise and positive, as studies have shown that the increase in criticism by the teacher leads to a decline in the level of the student.
3. Feedback-Based Teaching Method This method is one of the most important methods in self-learning methods, and its use is based on the student's positive impact.
4. The method of teaching based on the use of student ideas, and this method is divided into five stages: extract the idea expressed by the student by noting the repetition of a group of names. Help the student develop the idea he understands by rephrasing the sentences by the teacher. Use the student idea by the teacher to reach the results of the analysis. Find a link between the idea of the student and the teacher. Summarize ideas by student.
5. Methods of teaching based on repetition of questions: This method aims to develop the speed of achievement and effectiveness of the student (Al-Falah, 2013)

Evolution of teaching methods across civilizations:

Scholars and researchers noted that the methods of teaching and teaching developed through different times and civilizations, where parents teach their children a profession or a craft in imitation and imitation, ie indirectly, and then the method of teaching and memorizing information began. Some individuals with private property began to observe human interaction and interaction Individuals, and natural phenomena were observed and interpreted, leading to the accumulation of a large number of information, and the need to transfer this information to individuals by teaching and memorizing it to students. When ancient civilizations such as Mesopotamia Iraq emerged scientific ways interesting to facilitate the teaching of different sciences, and in the civilization of the Greeks every philosopher became especially in teaching information commensurate with the philosophy of the way, and became a religious and spiritual side of the foundations of teaching methods, where the Christian Church oversaw Europe's education in the sixth century AD. In the Islamic era, the method of education, which depends on indoctrination and conservation as well as experience, and activating the essential role of religious education and good morals has emerged. In modern times, methods of teaching, teaching methods and curricula have been developed based on precise scientific foundations and based on psychology using modern techniques. (Samurai, 2014)

Ways to help students learn concepts:

The teacher strives to find ways to help students learn concepts that are more complex than scientific facts. Here are the most important ways to help students learn concepts:

1. The use of different teaching methods that do not depend on direct indoctrination, but depends on the participation of students and motivate them to practice activities.
2. Organization of curricula in the form of specific key concepts, so that each concept includes a set of scientific facts.
3. Emphasize the scientific study and activate the role of laboratories to provide students with scientific concepts.
4. Use a lot of other sources and different teaching aids besides the textbook.
5. Linking new concepts to the experiences of previous students and linking them to the environment in which they live as the concept of herbs that grow in their environment.
6. Transfer student from sensory experiences to abstract actual experiences.
7. The use of teaching aids and laboratory experiments makes learning the concepts easy and achievable (Al-Falah, 2013)

Cold Call Strategy:

This is calling on students to engage, participate in a lesson and give an answer regardless of whether they have put up their hands or not, Cold call ensures that all students pay attention because they think it is possible that they will be called on and therefore they must prepare to answer, It shows students that whether they know the answer or not, the teacher desires them to be involved in the lesson; thus giving them a sense of belonging and acceptance. (Cromwell, Sharon. 2010).

Importance of Cold Call Strategy:

- When a teacher Cold calls, it allows checking for understanding effectively and systematically. It shows that whether they are willing or not, you still care that they are involved and learning.
- Cold call increases the speed in terms of pacing and rate at which material is covered. When a teacher Cold calls, they no longer have to dangle hints to encourage participation.
- It allows one to distribute work more broadly around the classroom. It signals to students that they are likely to be called upon to participate therefore should engage in the work of the class, that you care about what they have to say, that you care about their opinion and insights.
- Cold call also enables a teacher to distribute work around the classroom more fully and more authoritatively. It makes students accountable, involved and responsible regardless of their ability.(Cox, 2017)

The Key principles of Cold call Strategy:

- Cold call is predictable: it is a superb preventative method; it is an engagement and not a discipline strategy.
- Cold call is systematic: it is about their expectations and not about individual students, and is universal, does not discriminate/is all inclusive.
- Cold call is positive: its supreme purpose is to foster positive engagement in the work going on in class. It shows that the teacher has respect and faith in the student to make useful contributions.
- Cold call is scaffold: it is particularly effective when started with simple questions and progress is made to more challenging ones. (Claiborne, Morrell, Bandy, and Bruff, 2017)

Objectives of the Strategy:

- To stimulate and maintain students' curiosity and interest throughout the lesson.
- To cater for different types of learners by varying the learning opportunities.
- To use appropriate teaching/learning materials to address the different ability levels.
- To make lessons real and relevant. (Bromley, 2014)

How to Implementation cold calling strategy and its steps?

Step 1: Teacher asks a question in class and watches to see which students have put up their hands and which students have not.

Note 1: Some students will not put up their hands because they do not know the answer, others because they are unsure and others because they cannot be bothered to do so.

Step 2: Randomly select students who have not put up their hands to answer the question.

Note 2: Of course, teacher chooses those who have put up their hands as well.

Step 3: Do not accept the 'I don't know' answer from a student. Simplify the question then scaffold (increase difficulty of questions)

Note 3: Start with simple questions, build to difficult and more challenging questions to encourage a student to keep trying. (Berliner, 2009)

Important notes of the strategy:

1. Cold call also works well when no student in the lesson has put up their hand to answer the question.
2. Cold call motivates students to prepare and work hard for answers since they will be called upon to participate in the lesson anyway because they know that no matter how intelligent, weak, interested, disinterested they are, the teacher will still ask and expect them to participate. (Cromwell, 2010)

Methodology of the Study:

A) population and Study Sample: The population of the current study consists of the tenth grade students in the Jerash Education Directorate in the Hashemite Kingdom of Jordan (1737). The sample of the study consisted of (30) female students of the tenth grade of the secondary school of girls.

B) The Study Tool:

The researcher invented one main research tool, a questionnaire consisting of (20) paragraphs to measure the motivation of students to learn science.

C) Statistical treatment:

- 1- Using the Cronbach's Alpha coefficient to determine the reliability of the tool.
2. The arithmetical averages and the standard deviations.
3. One sample t test.

d) Reliability of the study instrument:

The researcher applied the tool on a survey sample of the study population of (20) students to calculate the reliability of the study tool through the equation of the consistency of internal consistency (midterm fragmentation) and corrected by the equation of Spearman Brown, and the following table indicates the value of reliability and corrected reliability value.

The mean reliability coefficient was (0.86) in this study, while the corrected reliability coefficient (0.92) was acceptable in this type of humanitarian studies. See Table (1).

Table (1) The study tool reliability coefficient

Corrected reliability coefficient	Split – half reliability coefficient
0.92	0.86

$$\text{Corrected reliability equation} = 2 \times \text{split – half reliability coefficient} / 1 + \text{split – half reliability coefficient}$$

Data Analysis and Testing of Study Hypotheses:

The first main hypothesis: There is no statistically significant effect at the level of significance ($\alpha = 0.05$) of the cold call strategy in stimulating the motivation of students of the basic stage in Jordan to learn science.

Table (2): The arithmetical averages, the standard deviations and the T value of the responses of the sample members of the study sample.

Table No. (2) The arithmetic means, standard deviations and T – value of the sample members responses to the study tool

No.	Arithmetic mean	Standard deviation	T	df	sig
30	86.54	1.98	7.87	29	0.000

By looking at the previous table, we find that there is a statistically significant effect on the level of alpha (0.05) of the cold call strategy in raising the motivation of the students of the basic stage in Jordan to learn science. The value of the significance level was less than the value of the alpha), Thus accepting the alternative hypothesis and rejecting zero, as the arithmetic average of 86.54 indicates the strength and positive relationship.

RESULTS

1. There is a statistically significant impact of the cold call strategy in raising the motivation of students of the basic stage in Jordan to learn science.

RECOMMENDATIONS

1. Holding training courses for scientists to show the importance of cold call strategy in stimulating student motivation to learn science.
2. Providing the necessary materials for the implementation of modern learning strategies in Jordanian public schools.

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