

Action Research Study
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Title of the Study: Teaching by Asking Instead of Telling: Does the Socratic Method Increase Students' Motivation?
Location or Institution Al-Bayan Preparatory School for Girls
Abstract <p>Socratic method is a pedagogical technique in which a teacher does not give information directly but instead asks a series of questions, with the result that the student comes either to the desired knowledge by answering the questions or to a deeper awareness of the limits of knowledge .</p> <p>This study used Socratic method and lecture method in process of comparing the effects of each one on the understanding , attention and motivation incensement of (12-15) students in science lessons and the results was collected by surveying students , test them and interviewing some people who used this method.</p> <p>Most of students agreed that Socratic Method engage them in the lesson, made them motivated and need to know more about the lesson also it raises the understanding of the concepts.</p> <p>According to the experimental results, the Socratic Method was proven to have positive impact to the student's achievement</p>
Grade Level: preparatory
Data Collection Methods: <ul style="list-style-type: none">• Questionnaire• interviews
Subject/Topic: Science

**Teaching By Asking Instead of Telling:
Does the Socratic Method Increase Students' Motivation ?**

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Abstract

Socratic method is a pedagogical technique in which a teacher does not give information directly but instead asks a series of questions, with the result that the student comes either to the desired knowledge by answering the questions or to a deeper awareness of the limits of knowledge .

This study used Socratic method and lecture method in process of comparing the effects of each one on the understanding , attention and motivation incensement of (12-15) students and the results was collected by surveying students , test them and interviewing some people who used this method.

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Introduction

The oldest and still the most powerful, teaching tactic for fostering critical thinking is Socratic teaching. In Socratic teaching we focus on giving students questions, not answers. We model an inquiring, probing mind by continually probing into the subject with questions

The Socratic Method is easy, if you understand the logic of what you are explaining; it is impossible if you do not so it will force the teacher to think about the logic of the topic . So, if you understand that logic, what you do is you ask questions to see how much your "student" understands first. That way you know where to begin any explanations, Socratic or otherwise. Once you know the starting place, you have to know what the "next" thing you want them to know is.

Then you have to come up with a question that leads them there. It has to be a question that is specific enough to be helpful. It is like playing charades, however, in that you will go down dead ends sometimes. What seems like a really clever way to get a word across in "Charades" doesn't always work.

Finally, two of the interesting, perhaps side, benefits of using the Socratic method are that it gives the students a chance to experience the attendant joy and excitement of discovering (often complex) ideas on their own. And it gives teachers a chance to learn how much more inventive and bright a great many more students are than usually appear to be when they are primarily passive.

Review of Literature

Socratic-Dialectic Learning System of Recursion Programming

Kuo-En Chang, Pin-Chieh Lin, Yao-Ting Sung, and Sei-Wang Chen

The purpose of this research was to construct a recursion programming learning system based on Socratic dialogue. Since recursion programming learning relates to the formation and evolution of mental models, the learning may not be effective if teachers rely only on simply telling the students the standard solutions. Instead, teachers should urge the students to consider the mistakes and contradictions discovered by them selves in the learning process. Socratic dialogue is applied as a dialectic method, which presents questions to students and encourages them to reflect on their own thinking. In this study, we explored the fundamental Socratic dialogue reasoning principles and implemented these principles through production rules. This Socratic-dialectic learning

system was implemented using database techniques and evaluated by an empirical study. According to the experimental results, the Socratic dialogue was proven to have positive impact on recursion programming learning.

The Socratic Method:

by [Rick Garlikov](#)

“Students do not get bored or lose concentration if they are actively participating. Almost all of these children participated the whole time”

“This method takes a lot of energy and concentration when you are doing it fast, the way I like to do it when beginning a new topic. A teacher cannot do this for every topic or all day long, at least not the first time one teaches particular topics this way. It takes a lot of preparation and a lot of thought”

“The chief benefits of this method are that it excites students' curiosity and arouses their thinking, rather than stifling it. It also makes teaching more interesting, because most of the time, you learn more from the students -- or by what they make you think of -- than what you knew going into the class”

“It gives constant feed-back and thus allows monitoring of the students' understanding as you go. So you know what problems and misunderstandings or lack of understandings you need to address as you are presenting the material”

Aims and Purposes

The purpose of this research was to find a way for increasing the motivation of students and finding an interesting , useful environment inside the class.

We wanted to participate all the students in the lesson and engage both teacher and students in an open ended dialogue , also to create a productive atmosphere in the classroom and encourage students to use critical thinking during the lesson.

The Methods and Procedures :

Our research depended on discovering the effect of the Socratic method on students in grade eight (ages between 12-15 years) and will it increase their motivation and participation in the class.

We chose two science teachers for grade 8, each teacher took two classes

Each teacher presented her lesson in two different ways

The first lesson was presented to class(A) in a lecture traditional way

The second lesson was presented to class B by asking questions (Socratic method)

After that we handed out surveys to the students , interviewed some randomly so we can learn which lesson was better in all ways

We designed a test for all the classes to know which class understood better

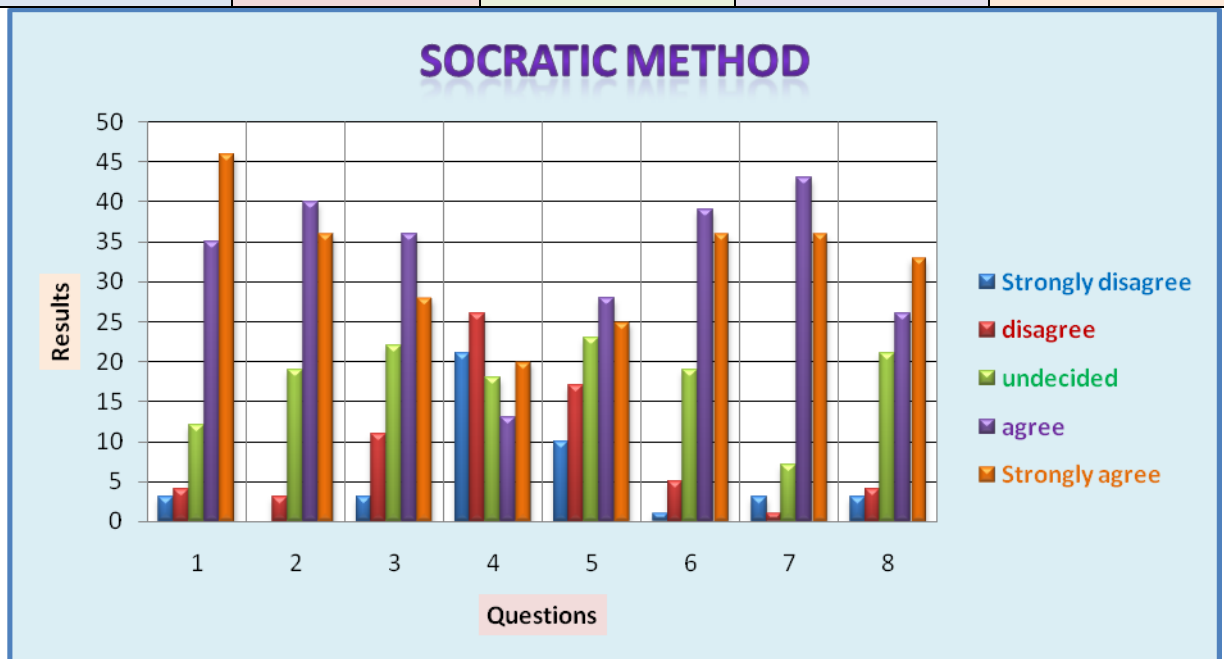
We made interviews with teachers involved and with teachers that attended some of the lessons during the steps of the research.

We analyzed all the information and results , made a graph and wrote the conclusion and comments

Results

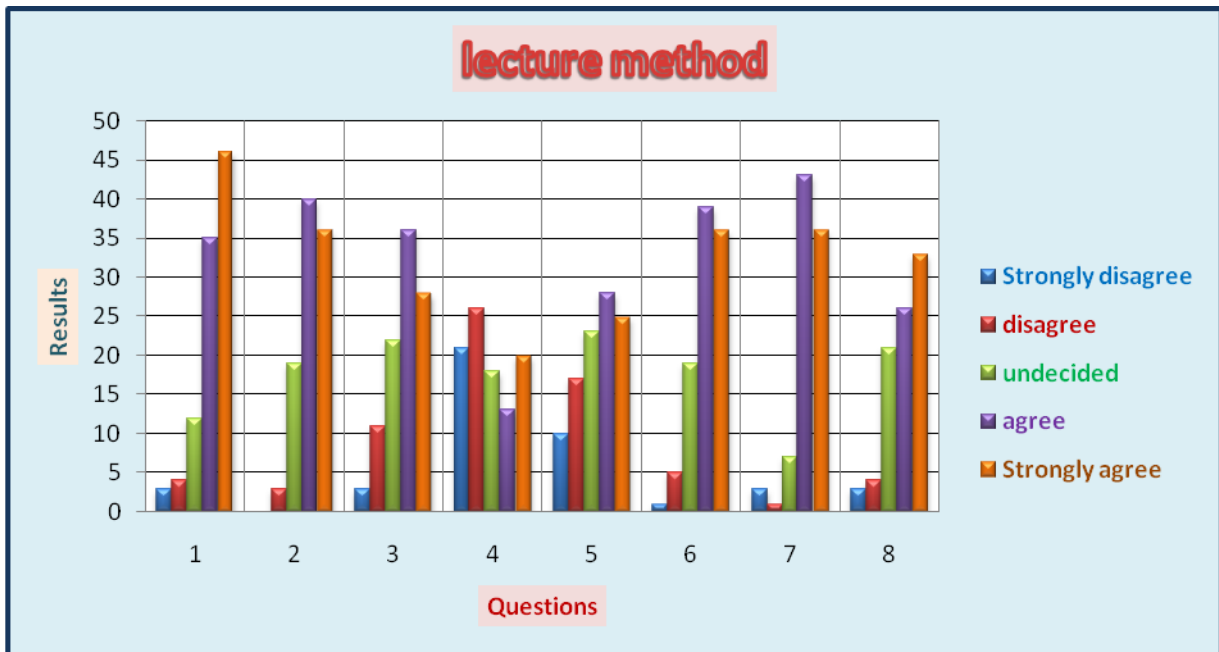
Socratic Method

Strongly disagree	Disagree	undecided	agree	Strongly agree
3	4	12	35	46
0	3	19	40	36
3	11	22	36	28
21	26	18	13	20
10	17	23	28	25
1	5	19	39	36
3	1	7	43	36
3	4	21	26	33



Lecture Method

Strongly disagree	disagree	undecided	agree	Strongly agree
9	10	13	35	23
12	14	28	18	17
11	14	37	20	13
11	27	32	22	4
7	7	35	30	7
27	27	23	11	1
6	10	28	33	16
3	8	23	23	33



Students science survey 2007/2008 Grade 9

Study the following statements and put tick in the appropriate place?

Demographic questions:

	<u>Strongly agree</u>	<u>agree</u>	<u>Undecided</u>	<u>Disagree</u>	<u>Strongly disagree</u>
<u>I think that science lessons are interesting.</u>					
<u>I think science lessons are boring</u>					
<u>I think exercise is useless</u>					
<u>I do exercise everyday</u>					
<u>I don't have time to exercise</u>					

Questions about the lesson:

	<u>Strongly agree</u>	<u>agree</u>	<u>Undecided</u>	<u>Disagree</u>	<u>Strongly disagree</u>
<u>1- I understood the lesson</u>					
<u>2- I think that exercise improves my learning</u>					
<u>3-After exercising I felt refreshed</u>					
<u>4- I felt tired in the class after exercising</u>					
<u>5- I can't concentrate in the class after exercising</u>					
<u>6- I felt active and motive to participate in the lesson</u>					
<u>7-The lesson made me pay attention</u>					
<u>8- Read this quote</u> <u>What I hear I forget , what I see I remember , what I do I understand</u>					

The interviews regarding the Socratic Method action research

The First Interview

We interviewed the vice principle of our school "Ms. Asma Al-Kubisi" about the lessons she attended during our research and her comments were:

"The method is terrific if we prepared it very well, it affects the class management and it increases the attention of the students, this method increases the critical thinking and it creates a motivated area in the class room and kills boring, I agree that this method participated all the class by asking different kinds of questions to cover the different levels of students in the class room"

"this method needs training to build in a professional way and to achieve the purpose that is designed for "she added"

The vice principle used this method when she was a teacher and she started to compare it with the traditional way and here opinion was " the lecture makes the students feel bored and it cuts the time that is limited for the lesson rather than the Socratic method which is saving time in the class room and also low achievement will be collected by the lecture method "

The Second Interview

We made a second interview with a science teacher and a member of this research and she took part of an important procedure in the research ' Ms. Amna Ibrahim' and her comments were:

"the Socratic method enables students construct their understanding by thinking and explain different kind of questions and the class room is managed in a highly organized way.

The students in this method can build their understanding; difficult concepts can be clarified and arranged in a systematic way.

The negative side of this method is that it needs a good language for the ELL students and it needs good preparation"

We asked some questions about the traditional way and her comments were:

"The traditional method is hard to attract student's attention, and it takes time to reach the understanding of the lesson in the limited time"

"In spite of the difficulties of using Socratic Method it is an interesting way of learning and understanding things for students and teachers" she added.

The Third Interview

The third interview was with a science teacher, she is an important core maker in this research "Mrs. Maysa Alizzi" and her comments were:

"Socratic method improve the understanding of the students and makes it fast , the class room was easier to manage as the girls were busy concentrating and focusing on the questions.

Almost all the girls participated in the lesson because it motivated them to compete with each other and they began asking more questions trying to learn more about the lesson.

As for the negative side, the teacher has to prepare more for the lesson making good and creative questions"

The asking for the traditional way of learning like the lecture, her opinion was "the lecture lesson made the students bored, lazy and sleepy which affects the class management and make it harder and affects the understanding of the students rather than Socratic Method which makes the students motivated and active"

Conclusion

From our research we discovered that the Socratic method was very useful in attracting the attention of the students in the class and it was a successful method to use on the students in grade eight ages (12-13) .. from our observation we found that almost all the students were very active and more motivated to learn more information about the topic .

From our questionnaires we learned that the students that didn't have interest in science as a subject , were very interested in the lesson we gave in the Socratic way and they participated in answering most of the questions their comments after the class were that they didn't feel bored during the lesson also the time went by without noticing and that was very important to them .

From our results we learned that this method proved to be excellent in science lessons , the students were very excited and understood the lesson clearly , their achievements in the Socratic lesson were much better than the traditional lecture lesson

Maybe the negative side of the method is that teachers have to prepare for the lesson by choosing the right questions that suits the topic and leads to the information wanted , so it takes time and effort from them .

References

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