Traditional Lectures, Socratic Method and Student Lectures: Which One do the Students Prefer?

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Traditional Lectures, Socratic Method and Student Lectures: Which One do the Students Prefer?

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Abstract

Background: Traditional lectures are still the most popular instructional method in the universities. This paper aimed to report the effects of traditional lectures, Socratic Method and students' lectures on the students' anxiety, learning satisfaction and exam score.

Methods: A quasi-experimental study was conducted on 40 nursing students to assess the effects of three methods. The course content was divided into three sections and each section was taught using a different method. The students' anxiety was assessed at start and at the end of sections. The students' satisfaction and their exam score were evaluated at the end of sections.

Results: Mean exam score of the students was 12.62 for traditional lecture, 14.80 for Socratic Method and 15.10 for the students' lectures. The students' learning satisfaction was higher at the end of Socratic Method and students' lectures method. Traditional lectures induced the least anxiety while the Socratic Method induced the most.

Conclusions: Socratic Method and students' lectures are more preferred by the students. Level of the students' anxiety could be diminished through more preparations.

Introduction

Traditionally, the teaching in most Asian countries is dominated by a teacher-centered method (Zhenhui 2001, Wang & Farmer 2008). Several researchers have noted that eastern teachers of adults tend to emphasize knowledge, content, teacher-centered classrooms, and exam results while, concepts such as flexibility, problem solving, critical thinking and independent learning are not recognized (Boyle 2000, Zhenhui 2001, Adib-Hajbaghery 2005, Wang & Farmer 2008). These claims are confirmed by Sato (1982), who compared the participation of Asian students in the classroom interactions with that of non-Asian students. Sato found that the Asians took fewer speaking turns than their non-Asian classmates. It has also been noted that Korean students prefer that the teacher be the authority (Harshbarger et al. 1986). Asian students are reluctant to "stand out" by expressing their views or raising questions, particularly if this might be perceived as expressing public disagreement (Song 1995).

Some studies have also shown that most of the university teachers are not familiar with modern teaching methods (Stitt-Gohdes 2001, Farhadian et al. 2007) and traditional lectures are still the most popular instructional method in the universities (Benjamin 2002, John et al. 2007, Rahmani 2007, Saville 2009). According to Brown (2003), most of the university teachers have been taught in learning environments that were instructor centered, therefore, they teach in this way too. Factors such as simplicity of lecture presentation, its appropriateness for crowded classes, limitation of time and the massive amount of theoretical content which should be presented (Bligh 2000, Adib-Hajbaghery et al. 2004, Adib-Hajbaghery 2005, Farhadian et al. 2007) have also made the instructors to use lectures as the most popular teaching method. Overly using of lecture method will induce a hidden curriculum that teaches students to be obedient, compliant and inexpressiveness and also will reduce their self-confidence (Espeland & Shanta 2001). Studies have shown that teacher-centered teaching methods are not appropriate to teach students in nursing or other fields that training involves context and gives it meaning (Caudron 2000). Some studies have also shown that nursing students prefer teaching methods with more student involvement (Salsali 2005, Abu-Moghli et al. 2005). Some conflicting results have also reported when academic investigators have compared the effects of lectures and more active teaching methods such (Perkins & Saris 2001, Qualters 2001, Hunt et al. 2003, Barnes & Blevins 2003, Yoder & Hochevar 2005, Riggio 2007, Saville 2009).

In a study by Yoder and Hochevar (2005) it was
reported that student-led discussions not only produce favorable student performance, but also foster greater participation, self-confidence and leadership ability. Hunt et al. (2003) have also reported positive learning outcomes from team learning as compared to traditional lecture methods. In contrast to these findings, a study by Barnes and Blevins (2003) suggests that active, discussion-based methods are inferior to the lecture-based method. Some other researchers have also been compared the effects of lecture and other teaching methods like computer managed instruction (Halloran 1995), teaching in small groups (Salimi et al. 2007) technology-based instruction (Jeffries et al. 2003), and individual instruction (Coleman 2001) and reported that no significant differences were observed. A study by Qualties (2001) has also suggested that students do not favor active learning methods for the fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations. Therefore, this question has been remained worldwide that which teaching method could be more appropriate in academic education especially for nursing students. Consequently, this study was conducted to compare the effects of teacher traditional lectures, Socratic Method, and students lectures on anxiety, exam score and students? learning satisfaction. The results of this study could be helpful for the teachers worldwide and especially in the Asian region as they have similar academic structures with Iran, in which the present study was conducted.

Methods

A quazi-experimental study was conducted on a class of 40 second year nursing students. All students had the course of medical surgical nursing II with the first researcher. The content of the course was divided into three parts (12 sessions on urogenital nursing, 11 sessions on gastrointestinal nursing and 11 sessions on skeletal and connective tissue disorders). Then the lesson plan (including the details of subtitles, learning expectations, methods of teaching, learning activities and methods of evaluation) was provided for all the students.

Within the first part of the study (the first one third of semester) the content was taught using traditional lectures. The teacher was standing behind the podium while talking to the class or walking slowly in front of students and using chalkboard. The main activity of students was listening, note taking and answering a few questions.

The second part of the course (the middle one third of the semester) was taught using the Socratic Method. The students were required to refer to the textbooks and study the content (that was determined in the lesson plan) before the class was held. The teacher has also broken the content to small parts and has been designed several open ended questions about it. Then, the main activity of the teacher was asking questions, listening to the replies and confirming or correcting them by the aid of other students. Therefore, most of the students were asked in each session.

In third part (the last third of semester), teaching was assigned to the students. Therefore, the students were divided into 3-4 member teams. Then references (included of two textbooks and necessity to search for an up-to-date educational material on the subject mater from internet) were introduced to them and each team was required to prepare and deliver a lecture on the educational content. The teacher's activities were included of guiding students to search and prepare the content, guiding them to prepare their lecture, listening to their presentation, and finally correcting/modifying (if necessary) and helping the students to summarize the lesson.

Using a visual analog scale, the students? anxiety was assessed at the beginning and at the end of teaching with each method. The students specified their anxiety level by marking on a column from zero to ten. The students? learning satisfaction was also assessed with the same method at the end of each section. At the end of each section, a written exam was given, covering all the topics within that section to measure the students? achievement. Each exam was consisted of multiple choice questions and the students score was reported based on 20. Demographic information -gender, age and identification number- were also gathered.

Then, students? anxiety, learning satisfaction and exam performance were compared using the SPSS 11.5. Repeated measure ANOVA and T test were used for analyzing the data. All parts of content were delivered or facilitated by the first researcher and all testes and evaluations by the second researcher. The ethical aspects of the research were approved in the research committee of the nursing faculty.

Results

Among all students, 52.5% were female with mean (±SD) age of 23.57 (±2.06) years. Mean score of students? exam was 12.62 (±2.18) for traditional lectures, 14.80 (±1.48) for Socratic Method while it was 15.10 (±1.37) for the student lectures. A significant difference was observed between the mean
scores of the three methods (P)
Mean score of students? learning satisfaction was 3.37, 3.65, and 5.10 for the first, second and third method respectively. A significant difference was observed between the three mean scores (p)
The teacher?s lectures induced the least amount of anxiety (with a mean score of 1.92 at the beginning and 1.72 at the end), while the question and answer method induced the most (with a mean score of 6.20 at the beginning and 5.77 at the end). Teaching by the students induced moderate amount of anxiety. Anxiety decreased significantly at the end of Socratic Method and student lectures (p)
Significant differences were observed between anxiety mean scores at six time measurements (p)
The differences between the gender subgroups were also tested with regard to the anxiety, educational achievement and learning satisfaction but no significant differences were observed.

Discussion
The present study showed that the students? scores were higher in the two methods of "Socratic Method" and "students' lectures" than the traditional teacher's lecture method. This finding indicates that the students? learning was more in these two methods than the traditional lectures. In recent years several researchers have compared lectures and more active teaching methods. Conflicting results then were reported. For example, some researchers have reported that no significant differences were observed between the students? scores in traditional lectures versus active methods like working in small groups and multimedia or computer assisted teaching methods (Jeffries et al. 2003, McDonald 2003, Salimi et al. 2007). However, some other investigators have indicated that the students? scores in nursing and other fields were higher when they were taught using problem based learning, group discussions or role playing, than groups taught with traditional lectures (Johnson & Mighten 2005, Hazavehei & Taghdisi 2006, Dehordi 2008). Consequently, we can conclude that the more active teaching methods can bring more effective learning than traditional lectures.

Scientists in education see learning as a process of actively exploring information and formation of meaning by linking it to previous knowledge and experience (Alesandrini & Larson 2002). Accordingly, the teachers are encouraged not to teach the contents but to teach the students how to learn (Palmer 2003). Hence, students' participation in the education/learning process and substitution of self-directed learning opportunities for the traditional lecture are being emphasized (Glenn 2000). It is believed that such engagement will deepen the students? understanding of the course material, will encourage them to assume a major responsibility in the learning process, will help them improve their intellectual, interpersonal and team work skills, will improve their ability and skills to search, obtain, and organize information, will improve their ability to identify and solve problems and will help them set the foundation for life-long learning (Wilke 2003, O?Shea 2003, Debessay & Lerner 2004, Joyce et al. 2005).

In the present study, the teacher's lecture method induced the least anxiety while Socratic Method induced the most. The student's lectures induced moderate anxiety.

The significant difference between the students? anxiety scores at the beginning of the three methods can be referred to the students? confrontation with new expectations. Despite the apparent advantages of question and answer method, some researches indicated that students do not like to become involved in this manner (Hodges & Harvey 2002). This finding is relatively consistent with our study and possibly refers to the facts that the classroom environment and speaking in public can induce feelings such as evaluation apprehension (the fear of negative evaluation by other group members) and social anxiety (Elliott 2005, Wilson 2005).

Some reports have shown that students? inactivity in traditional teacher-centered classes would make them bored and exhausted that consequently would decrease their concentration and learning and finally would result in their absence from the classroom (Fasiki-Harandi et al. 2007). Conversely high levels of anxiety could also negatively affect one's ability to endure, concentrate, perceive and to learn (Jegede 2007). However, the students? reaction toward their learning environment will be affected by their expectations of the events there (Wallace & Truelove 2006). So, active teaching methods could decrease the students? anxiety and increase their motivation and learning if implemented with a good design and preparations. This finding is consistent with the reports of Andrew; Tang and Pan; and McFadden who reported that involving students in teaching process may reduce their anxiety in learning courses such as statistics and chemistry (McFadden 2001, Pan & Tang 2004, Andrew 2006).

Our results showed that the students? satisfaction has increased by increasing their involvement in teaching/learning activities. Other studies have also indicated that most of students prefer active teaching
methods and in their view, good teachers are the ones who encourage the students’ involvement in teaching/learning activities (Salsali 2005, Abu-Moghli et al. 2005, Coleman et al. 2001, Jeffries et al. 2003).

Conclusions

The results of the present study along with the previous evidence show that nursing students prefer more active teaching methods. It also was obvious that active methods could improve the students learning and satisfaction. However, it seems that the students’ satisfaction was also negatively in correlation with their anxiety level resulted from teaching methods. All the students expected to be questioned throughout the class -when Socratic Method was implementing- so they have been experienced more anxiety. Perhaps this anxiety has reduced their satisfaction compared to the ?student lectures? method. Students? anxiety and its negative consequences can be decreased by appropriate supports and preparations from the side of teacher.? Study limitations and implications:

Considering some limitations could be useful in generalizing the results of this study. Test intervals and different test times may affect the students? performance. Although we tried to assimilate the average difficulty level of tests, but it is possible that students perform somehow different in tests containing a different sample of questions. We tried to limit the observer’s bias; however, a double blind study can be suggested.

Based on the results of the present study the following implications and recommendations are also postulated:

- ??? Nurse educators should design teaching methods and learning activities in which the students are challenged and actively involved in learning.
- ??? They should act as facilitators of learning and should ensure the availability of resources and opportunities for practice.
- ??? Further studies may be needed to explore specific approaches for allowing students to take a more active role in the teaching/learning process in the classroom.
- Further investigation of the relationship of learning styles to teaching styles is needed.

These findings suggest that more active methods can be used as alternative to the traditional method of teaching. However, future research is needed to investigate how a variety of active teaching methods can be implemented in nursing education and how the students’ anxiety can be diminished in these methods.

References

40. Salimi T., Shahbazi L., Mojahed S., Ahmadieh


Illustrations

Illustration 1

Table 1: Comparison of the mean scores in the three methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Teaching method</th>
<th>Mean score</th>
<th>Sd</th>
<th>P value (t-test)</th>
<th>P value (Repeated measure ANOVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam score</td>
<td>Teacher's lecture</td>
<td>12.62</td>
<td>2.18</td>
<td>-</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Socratic Method</td>
<td>14.80</td>
<td>1.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student lectures</td>
<td>15.10</td>
<td>1.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Teacher's lecture</td>
<td>3.37</td>
<td>1.19</td>
<td>-</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Socratic Method</td>
<td>3.65</td>
<td>1.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student lectures</td>
<td>5.10</td>
<td>1.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>Teacher's lecture(at the beginning)</td>
<td>1.92</td>
<td>1.04</td>
<td>0.17</td>
<td>1.001</td>
</tr>
<tr>
<td></td>
<td>Teacher's lecture(at the end)</td>
<td>1.72</td>
<td>0.75</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socratic Method(at the beginning)</td>
<td>6.20</td>
<td>2.50</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Socratic Method(at the end)</td>
<td>5.77</td>
<td>2.18</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student lectures(at the beginning)</td>
<td>4.32</td>
<td>1.67</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td></td>
<td>student lectures(at the end)</td>
<td>3.37</td>
<td>1.58</td>
<td>0.001</td>
<td></td>
</tr>
</tbody>
</table>
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