

Nursing Student's Attitudes towards Clickers in the Classroom

اتجاهات طلبة التمريض نحو الناقر في الصف الدراسي

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الخلاصة:

الهدف: تهدف الدراسة إلى تقييم و وصف اتجاهات طلبة بكالوريوس التمريض نحو استخدام الناقر في الصف .
المنهجية: دراسة وصفية تهدف إلى تقييم و وصف اتجاهات الطلبة نحو استخدام الناقر في الصف الدراسي. استخدم الباحث مقياس الاتجاهات المكون من 20 فقرة وطورها الباحث و تم اختبار صدق المقياس من خلال عرضها على 13 خبيراً في مجال التمريض. سبعة طلاباً من كلية التمريض/جامعة الموصل شاركوا في هذه الدراسة للفترة من 15-20/تشرين الأول، 2013. وتم تحليل البيانات من خلال استخدام الإحصاء الوصفي والاستدلالي كالنسب المئوية و الاختبار التائي لدراسة الفروق المعنوية بين المتغيرات.

النتائج: إجمالاً النتائج أشارت إلى أن الطلبة كانوا راضين عن استخدام الناقر في الصف الدراسي و نصحو المدرسين للاستمرار في استخدامهم له في المستقبل. أيضاً الطلبة أدركوا ان استخدامهم للناقر ساعدهم على اكتساب المعرفة و احتباسها لديهم.
الاستنتاجات: هذا البحث يساهم في تطوير التعليم العالي في العراق بشكل عام و في مجال تعليم التمريض بشكل خاص.
التوصيات: توصي الدراسة باعتماد نتائج الدراسة الحالية وتعميمها على باقي الكليات.
الكلمات المفتاحية: الناقر، الاتجاهات

Abstract

Objectives: The purpose of this study was to assess and describe baccalaureate nursing student's attitudes towards clickers in the classroom.

Method: A descriptive study was utilized to assess and describe student's attitudes with the use of clickers in the classroom. Attitude scales consisted of (20) items were developed by the authors with content validity established through review of the items by (13) expert nursing faculty. The 70 of Mosul Nursing students were participated in the study for the period 16-20 October, 2013. Statistical analysis was conducted to determine a frequency distribution of responses for each item as reported for the entire sample.

Results: Overall, the findings demonstrated that students were satisfied with the use of clickers in the classroom and encouraged the instructor to continue to use them for this class in the future. Students' overall perceived the clickers to help with their knowledge acquisition and retention.

Conclusions: This paper contributes to the literature on the use of innovative technology such as clickers in large class lectures in the Iraqi higher education context in particular and Nursing teaching context in general.

Recommendation: Further research regarding the motivation of students within the classroom and clicker implementation should be investigated.

Keywords: Attitudes, Clickers

INTRODUCTION:

The use of Audience Response Systems (ARS) or 'clickers' has increased in popularity as an active learning strategy for many nursing faculty. The technology, which involves students responding to questions with a handheld device, provides immediate two-way communication between faculty and students. ARS technology has broad applications in the classroom, including, but not limited to, student engagement in classroom discussions, testing, as well as formative and summative course evaluation.⁽¹⁾ Audience response systems are commonly called "clickers" or "key pads" in the United States, and "handsets" or "zappers" in the United Kingdom⁽²⁾. The "clickers system" consists of a student with a transmitter (clicker) that looks very much like a small TV remote control. A clicker has a number of buttons, typically labeled 1/A, 2/B, 3/C and so forth. The classroom has one or more wall-mounted receivers that pick up the signals generated when a student pushes one of the buttons, and a computer equipped with software to record each student's response to a posted question. Results are presented without student names attached, typically as a bar chart that can be projected in front of the class to show the percentage of various answers. The use of clickers enhances the learning environment⁽³⁾ and makes learning active⁽⁴⁾. It is knowledge-centered as incorporating clicker questions into the lecture noticeably helped keep students focused by restarting their attention span with each new question. It is learning center as the stickers provided an unexpected way to chat with students prior to class. The objective of this study was to assess and

describe Mosul's Nursing student's attitudes towards clickers in the classroom and describe clickers as a tool to enhance active learning.

METHODOLOGY

A descriptive study with a survey was utilized to explore and describe student's attitudes with the use of clickers in the classroom. The response system used in this study was the "Clicker" system developed and marketed by Clicker, Inc. The clickers were used in every 50 minute class twice a week when a lecture was given except for a few classes that consisted of student presentations or case studies. The lectures were presented in Microsoft PowerPoint with the inclusion of an average of five clicker questions asked per class on the class content. Prior to each lecture students gathered their assigned clicker for use in class and returned the clicker at the end. This procedure allowed for the clickers to be utilized in other nursing courses by other students in the nursing department. Clicker attitudes scale that consisted of (20) items was developed by the author with content validity established through review of the items by 13 expert nursing faculties. The paper and pencil evaluation utilizing a 5-point Likert scale (1 strongly disagree to 5 strongly agree) to measure student's satisfaction. A convenience sample of 70 nursing students voluntarily participated in data collection. Participants were selected based on their enrollment in an undergraduate Community Health Nursing course in the fall of 2013 in which the instructor was using clickers in the majority of class sessions. Students had no prior experience with clickers. The sample consisted of 40 females and 30 male. All respondents were 100% with an age range from 20 to 26 years old. The data from the 70 surveys were analyzed for frequency and distribution. The highest capable score indicating highly agree and the lowest score of (disagree) as determined by adding the responses to the Likert-scale questions. The surveys were individually scored and a further analysis was conducted to determine a frequency distribution of responses for each item as reported for the entire sample.

RESULTS:

Table 1: Students Responses regarding uses of Clickers.

Overall for eleven items	SD %	D %	A %	SA %	X	SD
The use of clickers has helped me to learn key principles in the class.	5 (7.2)	4 (5.7)	50 (71.4)	11 (15.7)	2.61	0.5
The use of clickers has helped keep my attention in the class.	3 (4.3)	2 (2.3)	56 (80)	9 (12.8)	2.88	0.4
The use of clickers has made this class enjoyable.	2 (2.3)	7 (10)	51 (72.8)	10 (14.3)	2.40	0.2
Clickers are easy to use in the class.	2 (2.3)	2 (2.3)	59 (84.3)	7 (10)	3.51	0.6
Clickers used for the class would help to improve my overall final grade.	7 (10)	2 (2.3)	49 (70)	12 (17.1)	3.33	0.9
I would like to see the use of clickers in more of my classes.	1 (1.4)	4 (5.7)	56 (80)	9 (12.8)	3.26	0.6
I feel that the lecture time would have been better with the use of clickers compared with traditional lecture.	4 (5.7)	2 (2.3)	50 (71.4)	14 (20)	2.44	0.5
The session with clickers was well organized in the class.	3 (4.3)	3 (4.3)	48 (68.6)	16 (22.8)	2.51	0.2
The use of clickers helped my experience in this class to be more like that of a smaller class.	4 (5.7)	7 (10)	52 (74.3)	7 (10)	2.10	0.5

Table 1, in general, the students held positive views about the uses of clickers in their classroom. They found that clickers have made their class more enjoyable and easy to use. In addition, they found that lecture times were better with the use of clickers compared with traditional lecture. They reported that the classroom session with clickers were well organized and would like to see more use of clickers in their classes. Furthermore, the students believed that the use of clickers has helped them to learn the key principles in the class, keep their attention in the class, and make their large class experience more like that of a smaller class. However, the students did not feel that the use of clickers will help improve their grades.

Table 2: Students' Responses regarding impact of Clickers on their learning.

Overall for eleven items	SD %	D %	A %	SA %	X	SD
Clickers helped me stay focused and motivated to learn.	3 (4.3)	2 (2.3)	55 (78.5)	10 (14.3)	2.94	0.5
Using the clickers helped me to verify my understanding of certain concepts.	6 (8.6)	3 (4.3)	54 (77.1)	7 (10)	2.96	0.4
Participating with clickers enhance my learning.	4 (5.7)	5 (6.7)	53 (75.7)	8 (11.4)	3.26	0.7
Participating with clickers increased my involvement in the lecture.	6 (8)	5 (6.7)	59 (78.7)	5 (6.7)	3.47	0.6
Participation with clickers increased my interaction with my other friends.	3 (4.3)	7 (10)	50 (71.4)	10 (14.3)	2.40	0.7
The use of clickers helped in my preparation for exams.	5 (7.1)	2 (2.3)	56 (80)	7 (10)	3.19	0.9
The use of clickers aided my own independent learning.	2 (2.3)	8 (11.4)	49 (70)	11	3.23	0.6
The clickers helped me to validate my own learning.	8 (11.4)	5 (6.7)	45 (64.3)	12	3.06	0.1
enjoyed using the clickers in the class.	3 (4.3)	4 (5.7)	58 (82.8)	5 (6.7)	2.87	0.7
The use of clickers helped in giving me feedback during the lecture.	2 (2.3)	3 (4.3)	62 (88.6)	3 (4.3)	2.66	0.5
The use clickers motivate me to come to class.	1 (1.4)	3 (4.3)	59 (84.3)	7 (10)	2.54	0.7

As shown in Table 2, in general the students felt that the use of clickers have a positive impact on their learning. They enjoyed their clickers based classes and found that it helped them stay focused and motivated to learn, increased their involvement in lectures and provided feedback during the lecture. In addition, using clickers helped them to verify understanding of certain concepts, assisted in validating learning, enhanced their learning, and increased interactions with other friends. However, they were not convinced the use of clickers helped them in preparing for examinations or motivated them to attend classes.

DISCUSSION

The findings reveals that students viewed the use of clickers in their classroom in a positive effect concurring with past studies such as Beatty et al. ⁽⁵⁾, Beekes ⁽⁶⁾, Fitch ⁽⁷⁾, Morin et al ⁽⁸⁾, and Laxman ⁽⁹⁾. The findings also indicated that the use of clickers was perceived as having a positive impact on learning. The clickers were easy to use and made learning enjoyable. The students would

like to use clickers in class and they believed that it assisted their learning of important principles. These findings augmented similar findings reported by Beekes ⁽⁶⁾, Jackson and Tree ⁽¹⁰⁾, Morin et al ⁽⁸⁾, and Simpson and Oliver ⁽²⁾. The use of clickers also made them more attentive in class and provided a small class atmosphere. Kay and LeSage ⁽¹¹⁾ reported similar findings stating that the use of clickers increased student attention and resulted in higher interest and engagement levels in class. More importantly, the students enjoyed their clickers based lessons and it helped them stay focused and motivated to learn ⁽¹²⁾. The use of clickers in the class focused students' attention on the lessons and provided the push for students to be involved in the large class lessons. Furthermore, the students in this study reported being more involved in lectures and received feedback during the lecture. These findings augmented past studies such as Mazur ⁽¹³⁾ and Yourstone et al. ⁽¹⁴⁾. Clickers increased opportunities for interactions among students and between students and lecturers during lecture times which traditionally are passive and lecturer-directed ⁽¹⁵⁾. In addition, clickers provide opportunities for lecturer to encourage the shy students and those at back of the class to voice their ideas and questions. These are usually students who will otherwise not contribute to class discussions and prefer to conform to popular opinions ⁽¹⁶⁾. In addition, clickers engender peer learning and peer instructions have been found to be less threatening and enable learners ⁽⁴⁾. Clickers offer opportunity for implementing active interactive pedagogy during class time and encourage students to enjoy and participate in the lessons. Beekes ⁽⁶⁾ suggests that integrating clickers into large class lectures can results in constructive and immediate feedback making students being active participants in the lessons. Nevertheless, lecturers need to note that other than being prompt, feedback needs to be directive and specific to be useful to students learning ⁽¹⁷⁾. Beekes ⁽⁶⁾ however, conclude that interactivity is an important characteristic of clickers based lesson. Clickers use enhanced learning, and increased interactions ⁽⁸⁾. Furthermore, the students in this study reported being more involved in lectures and received feedback during the lecture. These findings augmented past studies such as Mazur ⁽¹³⁾ and Yourstone et al (2008). Clickers increased opportunities for interactions among students and between students and lecturers during lecture times which traditionally are passive and lecturer-directed ⁽¹⁵⁾. In addition, clickers provide opportunities for lecturer to encourage the shy students and those at back of the class to voice their ideas and questions. These are usually students who will otherwise not contribute to class discussions and prefer to conform to popular opinions ⁽¹⁶⁾. In addition, clickers engender peer learning and peer instructions have been found to be less threatening and enable learners ⁽⁴⁾. Clickers' offer opportunity for implementing an active, interactive pedagogy during class time and encourage students to enjoy and participate in the lessons. Beekes ⁽⁶⁾ suggests that integrating clickers into large class lectures can results in constructive and immediate feedback making students being active participants in the lessons. Nevertheless, lecturers need to note that other than being prompt, feedback needs to be direct and specific to be useful to students learning ⁽¹⁷⁾. However, Beekes ⁽⁶⁾ conclude that interactivity is an important characteristic of clickers based lesson. Clickers use enhanced learning, and increased interactions ⁽⁸⁾. The findings of the study also indicated that the use of clickers motivated students to attend classes and helped them to validate their learning. Hansen ⁽¹⁸⁾ observed that students expressed a positive view of clickers in terms of enhancing motivation. Yourstone et al ⁽¹⁴⁾ and Elliot ⁽¹²⁾ also reported similar findings that the use of clickers helped students to verify understanding of certain concepts and validate learning in their studies. Yet, students in this study did feel that the use of clickers will improve their performance or assist in their examination preparation. Clickers in itself may not influence the quality of interactions as it is the quality of teaching that mattered. This finding is in consensus with what has been reported in the clickers literature which states that clickers like most other technology is not a panacea in itself in solving pedagogical conundrums ^(4; 19). In fact, there are few (if any) collections of good clicker

questions available for most fields of educational studies⁽¹⁰⁾. Furthermore, the literature has noted that the use of clickers although at times may not enhanced examinations' grade sit generally does not harm students' performances^(20, 21). Some possible reasons include the quality of questions posed and lecturers' questioning skills; and how lecturers' focused students' attention on the reasoning rather than correctness of answers⁽²²⁾. However, a positive finding from this study indicated that there were no gender differences in students' perceptions on the use of clickers. This finding contradicted several past studies such as King and Joshi⁽²³⁾, and Mac George et al.⁽²⁴⁾ which indicated that females tend to view the use of clickers more positively.

CONCLUSION:

However, due to the small sample size used in this study, the finding is not conclusive and more replications are required.

RECOMMENDATION:

The study recommended that:

1. Further research regarding the motivation of students within the classroom and clicker implementation should be investigated.
2. Future studies can also include how nurse educators influence student motivation within the classroom with the implementation of clicker technology. Lastly,
3. A follow-up study should try to determine whether or not technological acceptance of the nurse educator alters clicker effectiveness on nursing student performance in class.

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