

---

## Attitudes of Faculty and Students toward Open-book Examination as a Teaching Strategy in Nursing Education at Hawler Medical University

**Dlzar Sedeeq Anwer;** *Department of Nursing, College of Nursing, Hawler Medical University, Erbil, Iraq.*

(Correspondence: [dlzar.anwer@valpo.edu](mailto:dlzar.anwer@valpo.edu))

**Asma Mamhusseini;** *Civil Engineering Department College of Engineering/ Tishk International University, Erbil, Iraq.*

**Yousif Bakr Omar;** *Department of Nursing, College of Nursing, Hawler Medical University, Erbil, Iraq.*

**Murad Sherzad Othman;** *Department of Nursing, College of Nursing, Hawler Medical University, Erbil, Iraq.*

---

### ABSTRACT

**Background and objectives:** Open-book examinations (OBEs) is a non-traditional teaching strategy increasingly offered today in nursing education programs. Open-book examination is one in which students are allowed to use their notes, textbooks, and other approved material (preferably not electronic) while answering examination questions. The purpose of this study was to evaluate the attitudes of faculty and students towards open-book examinations as a teaching strategy in nursing education.

**Methods:** A descriptive study was carried out at College of Nursing in Hawler Medical University. A self-administered questionnaire was used to collect data. The validity of the questionnaire was confirmed because it produced accurate results of the study. Also, the questionnaire was reliable because it gave a consistent result throughout the study. Total of 100 nursing students and 35 teaching staff were participated in the study. Data were analyzed by using frequency and percentage for students and teachers.

**Results:** The majority of the students (45%) and faculties (45.7%) agreed that OBEs facilitate thinking at higher cognitive levels. Most of the students (61%) and teachers (51.4%) agreed that OBEs decrease students' test anxiety. Also, teachers (48.6%) and students (41%) agreed that OBEs promote critical thinking regarding the contents of the course. Teachers and students agreed that OBEs encourage self-directed learning, decrease memorizing contents, promote student-centered approach to education, encourage students to read textbooks and articles more, and help students to be long-life learners.

**Conclusion:** This study confirmed that open-book examinations when used as a teaching strategy in nursing education programs played an important role in improving nursing curriculum. To decrease students' anxiety regarding examinations, this study pointed out that OBEs can minimize the students' anxiety during examinations.

**Key words:** open-book examination, nursing education, teaching strategy, critical thinking, faculty

---

*Received: 04/11/2019*

*Accepted: 22/12/2019*

*Published: 30/11/2020*

### INTRODUCTION

Open-book examinations (OBEs) are one of the tools progressively offered today in order to diminish test anxiety and to help students show their information and abilities and, correspondingly, have a more optimistic attitude towards tests. An ideal meaning of a classroom OBE is one in which test takers (students) are allowed

to access their notes, textbooks, and other approved reading material while answering examination questions. It may be oral or written, a component of, or a complete exam. To be effectively used for assessment, OBEs have to be part of the learning experience (formative assessment).[1] OBEs emphasize problem solving,

creativity or deep knowledge rather than a simple recall. OBEs have achieved both the requirements of an assessment tool and a student-centered method to education, as a technique that reduces the level of testing anxiety experienced by students. [2] Studies have presented that students identify five key benefits in OBEs, specifically practice in the creative use of course content, course content ability, increased chance for student self-evaluation and feedback, less test anxiety and more student regulation of content studied. [3] OBEs have been recommended as a proper alternative because they lessen anxiety in students, who feel less worried by the need to rote memorize information and inspire students to apply their information to realistic problems that they might encounter in real life. Also, OBEs encourage a broader reading around a subject and combination of information from several sources and facilitate thinking at higher cognitive levels, such as problem solving and reasoning. OBEs, which appear to foster self-directed learning by promoting deep learning, critical thinking, and interdisciplinary problem solving—are a form of authentic assessment. [4] OBEs may also encourage more accurate learning opportunities that emphasize higher order thinking skills. Closed book examinations test only what students can memorize, while OBEs have an increased potential to measure higher level thinking skills and relate more closely to real-world work environments. OBEs is one method for integrating realistic, open-ended tasks into higher education [5]. Authentic assessment is based on students' abilities to perform meaningful tasks they may have to do in the "real world and also requires students to apply what they have learned. [6] OBEs push student to read more and places a higher emphasis on understanding thoughts and principles. However, it mentioned that the grades

achieved by students who did OBEs were lower than those obtained by traditional manner possibly due to the higher level of difficulty and difficulty of the questions, thus required higher order of critical thinking [7]. The purpose of this study was to evaluate the attitudes of faculty and students towards open-book examinations as a teaching strategy in nursing education.

## METHODS

A quantitative, descriptive study was used to evaluate the attitudes of faculty and students regarding open-book examinations among teachers and students. The participants of this study were selected from students and faculty of College of Nursing at Hawler Medical University. This study was conducted from June 2019 until October 2019. A non-probability-convenience sample (N =35) of faculty and (N=100) because it was easier to collect data and catch samples. Fourth stage students of Midwifery and Nursing department in College of Nursing at Hawler Medical University were sampled in this study. All teachers and fourth stage students of midwifery and nursing department from College of Nursing at Hawler Medical University were included. The reason why chose fourth stage students because they had more experiences with formats and types of examinations than first, second, and third stage students. This study was submitted to the scientific committee of College of Nursing to get approval prior to beginning of this study. Also, the oral informed consent of the participants was taken as an ethical requirement to participate the study. Statistical Package for the Social Sciences (SPSS) was used (frequency and percentage) in this study. Participants were recruited by explaining the purpose of the study. A questionnaire was developed by researchers and the questionnaires' validity and reliability were confirmed

before collecting data. The questionnaire consisted of two parts; part one is demographic data (age, gender, and occupation) and the second part is about students' and teachers' attitudes regarding open-book examinations. This part consisted of 10 items, each with the following options: strongly agree, moderately agree, somewhat agree, and disagree. Researchers distributed questionnaire among students and teachers in order to fill them out. Prior to collecting data collection, participants were informed of methods to ensure confidentiality and his/her right to refuse participation at any time. After collecting data, all data were secured in locked box in order to protect participants' confidentiality.

## RESULTS

The majority of the teachers between ages 36-55 years old (62.9%), were male (54.3 %). The majority of occupations of the study sample were students (74.07%). While the majority of the students were between 20-22 years old (70 %), 78 % were female. More than half of the students (60%) strongly agreed that open-book examinations are believed to be able to reduce students' anxiety, while more than half of the teachers (51.4%) moderately agreed that open-book examinations are believed to be able to reduce students' anxiety. The highest percentage (41.0%) of students and teachers (48.6%) strongly agreed that open-book examinations encourage students to think critically regarding the contents of the course. Most of the students (42 %) and teachers (40%) strongly agreed open-book examinations encourage self-directed learning by promoting deep learning and critical thinking. The majority of the students (45%) strongly agreed that open-book examinations facilitate thinking at higher cognitive levels, such as problem solving and reasoning. While the majority of the teachers (45.7%)

moderately agreed that open-book examinations facilitate thinking at higher cognitive levels, such as problem solving and reasoning. 36% students moderately agreed that open-book examinations make student-centered approach to education while 34 %n teachers strongly agreed that open-book examinations make student-centered approach to education.

The majority of the students and teachers agreed (strongly & moderately) that open-book examinations encourage students to decrease memorizing contents. The majority of the students strongly (40%) and moderately (40%) agreed that open-book examinations are preferable way to teaching and learning than closed-book examinations, while the majority of the teachers moderately (31.4%) and somewhat (31.4%) agreed that open-book examinations are preferable way to teaching and learning than closed-book examinations. The highest percentage of the teachers (60%) and students (48%) strongly agreed that open-book examinations encourage students more reading textbooks and articles. Also, both students (47%) and teachers (37.1%) strongly agreed that open-book examinations help students to be long- life learners. The majority of the teachers (28.6%) moderately agreed that open-book examinations are less time-consuming for preparation, while the majority of the students (46%) strongly agreed that open-book examinations are less time-consuming for preparation. The perspective of overall students and teachers toward open-book examinations as a teaching strategy in the classroom were relatively very close.

**Table 1:** Demographic data of the study sample

| Variables       | No. | (%)     |
|-----------------|-----|---------|
| Teacher Age     |     |         |
| 25-35           | 10  | (28.6)  |
| 36-55           | 22  | (62.8)  |
| ≤ 56            | 3   | (8.6)   |
| Students Age    |     |         |
| 20-22           | 70  | (70)    |
| 23-29           | 22  | (22)    |
| ≤30             | 8   | (8)     |
| Teacher Gender  |     |         |
| Male            | 19  | (54.3)  |
| Female          | 16  | (45.7)  |
| Students Gender |     |         |
| Male            | 22  | (22)    |
| Female          | 78  | (78)    |
| Occupation      |     |         |
| Teacher         | 35  | (25.92) |
| Students        | 100 | (74.08) |

**Table 2:** Students’ and teachers’ perspective regarding open-book examinations

| SN | Items                                                                                                         | Strongly Agree |              | Moderately agree |              | Somewhat agree |              | Disagree   |             |
|----|---------------------------------------------------------------------------------------------------------------|----------------|--------------|------------------|--------------|----------------|--------------|------------|-------------|
|    |                                                                                                               | F (%)          | F (%)        | F (%)            | F (%)        | F (%)          | F (%)        | F(%)       | F (%)       |
|    |                                                                                                               | Students       | Teachers     | Students         | Teachers     | Students       | Teachers     | Students   | Teachers    |
| 1  | Open-book examinations are believed to be able to reduce students’ anxiety                                    | 60<br>(60)     | 12<br>(34.3) | 23<br>(23)       | 18<br>(51.4) | 13<br>(13)     | 3<br>(8.6)   | 4<br>(4)   | 2<br>(5.7)  |
| 2  | Open-book examinations encourage students to think critically regarding the contents of the course.           | 41<br>(41)     | 17<br>(48.6) | 36<br>(36)       | 5<br>(14.3)  | 9<br>(9)       | 11<br>(31.4) | 14<br>(14) | 2<br>(5.7)  |
| 3  | Open-book examinations encourage self-directed learning by promoting deep learning and critical thinking.     | 42<br>(42)     | 14<br>(40)   | 30<br>(30)       | 12<br>(34.3) | 14<br>(14)     | 8<br>(22.9)  | 14<br>(14) | 1<br>(2.9)  |
| 4  | Open-book examinations facilitate thinking at higher cognitive levels, such as problem solving and reasoning. | 45<br>(45)     | 11<br>(31.4) | 31<br>(31)       | 16<br>(45.7) | 13<br>(13)     | 7<br>(20)    | 11<br>(11) | 1<br>(2.9)  |
| 5  | Open-book examinations make student-centered approach to education.                                           | 35<br>(35)     | 12<br>(34.3) | 36<br>(36)       | 12<br>(34.3) | 13<br>(13)     | 8<br>(22.9)  | 16<br>(16) | 3<br>(8.6)  |
| 6  | Open-book examinations encourage students to decrease memorizing contents.                                    | 49<br>(49)     | 19<br>(54.3) | 26<br>(26)       | 9<br>(25.7)  | 12<br>(12)     | 7<br>(20)    | 13<br>(13) | 0<br>(0)    |
| 7  | Open-book examinations are preferable way to teaching and learning than closed-book examinations              | 40<br>(40)     | 9<br>(25.7)  | 40<br>(40)       | 11<br>(31.4) | 14<br>(14)     | 11<br>(31.4) | 6<br>(6)   | 4<br>(11.4) |
| 8  | Open-book examinations encourage students more reading textbooks and articles.                                | 48<br>(48)     | 21<br>(60)   | 24<br>(24)       | 6<br>(17.1)  | 17<br>(17)     | 5<br>(14.3)  | 11<br>(11) | 3<br>(8.6)  |
| 9  | Open-book examinations help students to be long-life learner                                                  | 47<br>(47)     | 13<br>(37.1) | 29<br>(29)       | 9<br>(25.7)  | 15<br>(15)     | 12<br>(34.3) | 9<br>(9)   | 1<br>(2.9)  |
| 10 | Open-book examinations are less time-consuming for preparation                                                | 46<br>(46)     | 9<br>(25.7)  | 35<br>(35)       | 10<br>(28.6) | 12<br>(12)     | 7<br>(20)    | 7<br>(7)   | 9<br>(25.8) |

## DISCUSSION

The majority of the students and teachers agreed (strongly & moderately) that open-book examinations encourage students to decrease memorizing contents. The present study is supported by another study conducted in Hong Kong which indicated that open-book examinations are believed to be able to reduce students' anxiety and rote memorizing of facts. The purpose of the study was to assess what preparations students have undertaken before taking open-book examinations and what learning style they adopted during the preparation of this non-traditional approach to subject testing. The results of the study indicated that students had a positive perception towards open-book examinations. [8] In this study, the highest percentage of the teachers (60%) and students (48%) strongly agreed that open-book examinations encourage students more reading textbooks and articles. This finding is supported by a study conducted in the United States of America; the findings indicated that students taking open-book pre-quizzes performed better on open book final exams. This research approach also showed preliminary indications that the students value their textbooks more, and used them more frequently and broadly, to prepare for class using open-book testing protocols as opposed to using traditional closed-book testing procedures. [9] In this study, the majority of the teachers (28.6%) moderately agreed that open-book examinations are less time-consuming for preparation, while the majority of the students (46%) strongly agreed that open-book examinations are less time-consuming for preparation. A study had been conducted in Finland, which does not support this study, indicated that the students used approximately the same time to study for an online examination as for faculty examination, but over half of them reported using more time

for responding and learning more from an online examination compared to a faculty examination. The purpose of this study was to investigate university students' experiences of open-book and open-web online examinations compared to traditional class examinations regarding preparing, responding, and learning. The data (N = 110) were collected by an online survey from the university students who took an online examination. [10] In this study, the majority of the students strongly (40%) and moderately (40%) agreed that open-book examinations are preferable way to teaching and learning than closed-book examinations, while the majority of the teachers moderately (31.4%) and somewhat (31.4%) agreed that open-book examinations are preferable way to teaching and learning than closed-book examinations. These findings are supported by the results of a study conducted in Singapore which evaluated the influence of open book examinations on the learning habits of students in the Nanyang Technological University in Singapore. A survey was conducted in order to determine whether students preferred open book examination and the reasons for their preference. The results of the survey exhibited that almost two-thirds of the students preferred open book examinations despite being more familiar with closed book examinations. They felt that preparations for open book examinations were less time-consuming and that they required less memorization and left more room for logical thinking. [11] Another study results indicated that students preparing for a closed book examination tend to delay their study at the end of the semester, focus on the given texts and memorize information. Students preparing for an open-book examination tend to access various sources and interrelate the information acquired; when taking the exam, they work innovatively while,

at the same time, they probe deeply into the knowledge gained. [12] There are several potential limitations to the study: (a) small sample size, (b) geographical area consisting only of College of Nursing-Hawler Medical University, (c) dependence on students' and teachers' attitude regarding OBEs, and (d) the inexperience of the researchers could introduce researchers' bias.

### CONCLUSION

This study supports the use of open-book examinations as a teaching strategy in nursing education programs and open-book examinations have an important role on improving nursing curriculum. Also, students and faculty stated that open-book examination encourages students' critical thinking, decrease students' test anxiety, encourage self-directed learning, decrease memorizing contents, make student-centered approach to education, encourage students more reading textbooks and articles, and help students to be long-life learners.

### CONFLICT OF INTEREST

The authors declared that there is no conflict of interest with this study.

### REFERENCES

- [1] Doghonadze N, Demir H. Critical analysis of open-book exams for university students. 2018. International Black Sea University.
- [2] Chan MY. The use of open-book examinations to motivate students: a case study from Hong Kong. *World Transactions on Engineering and Technology Education* 2004; 3(1): 111-114.
- [3] Gujral S, Gupta M. A study of attitude of teachers and students towards open book and closedbook assessment. *International Journal of Scientific Research and Management* 2015; 5(7): 6034-6038.
- [4] Brightwell R, Daniel J, Stewart A. Evaluation: is an open book examination easier. *Bioscience Education e-Journal* 2004; 3.
- [5] Rakes GC. Open book testing in online learning environments. *Journal of Interactive Online Learning* 2008; 7(1): 1541-4914.
- [6] Dale VH, Wieland B, Pirkelbauer B, Nevel A. Value and benefits of open-book examinations as assessment for deep learning in a post-graduate animal health course. *Journal of Veterinary Medical Education* 2009; 36(4): 403-410.
- [7] Abdul Jalal MF, Ain Fadhil SS, Hasini H. Students, assessment through open-book concept for final exam. *International Journal of Asian Social Science* 2014; 2(1): 217-225.
- [8] Linda DH, Snyder J. Authentic assessment of teaching in context. *Teaching and Teacher Education* 2000; 16: 523-545.
- [9] Green SG, Ferrante Cj, Heppard KA. Using open-book exams to enhance student learning, performance, and motivation. *The Journal of Effective Teaching* 2016; 16(1): 19-35.
- [10] Myyry L, Joutsenvirta T. Open-book, open-web online examinations: Developing examination practices to support university students' learning and self-efficacy 2015; *Active Learning in Higher Education* 2015; 16(2): 119-132.
- [11] Loi SL, Chuah JC. The Impact of Open Book Examinations on Student Learning 1999. Nanyang Technological University.
- [12] Theophilides C, Koutselini M. Study behavior in the closed-book and the open-book examination: a comparative analysis. *Educational Research and Evaluation* 2010; 6(4): 379-393.