

Exploring the Students' Preferences for Open and Closed Book Examination to Assess Learning in Pakistan

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Received: 19th December 2021

Revised: 12th January 2022

Accepted: 17th January 2022

Abstract: The Examination has been classified differently for the purpose of assessment of learning. The purpose of the study was to explore the preferences of students for open and closed book examination to assess learning. The study was interpretive in nature and used qualitative research methodology. Purposive sampling technique was used to select a sample. Sample consisted of fifteen experienced students of teacher education program. Structured interview protocol was used as the instrument of the study. Data were analyzed through thematic analyses. Results of the study indicates that students were prefer open book exam to assess their learning because they think that at higher education level they need to enhance their creativity and think critically. Open book exam enhances their confidence level and reducing the anxiety level.

Keywords: Open book exam, closed book exams, learning assessment

Introduction

Todays in advanced educational organizations, critical thinking is regularly referred to as one of the important non-negotiables. Ackerman and Leiser (2013) clarify that self-regulated learning (SRL) is dynamic, valuable process whereby understudies direct the exertion they put resources into adapting to accomplish self-set learning objectives. Self-direction is a piece of the outlook change expected to enhance understudy execution. Open-book examinations require the amplification of student innovativeness.

Green, Ferrante and Heppard (2016) cites Feller (1994) acknowledged that educators need to focus more on educating students in higher-level abilities including conceptualization, problem-solving, and reasoning. In no way is this a new problem. According to Makala (2011), open-book exams measure students' creative and fundamental abilities. When students are given an open-book exam to complete, the assessors must demonstrate how the students have applied the information rather than simply dispensing the subject.

Furthermore, Chaudhary and Dey (2013) contest that modern evaluation techniques have evolved to address societal problems. "Examining focused on execution has replaced content-based testing. Evaluation is no longer utilised for evaluating and confirmation, rather it has associated with learning and ability expansion of understudies" (Chaudhary &Dey 2013). (Chaudhary &Dey 2013).

Our Education system has become more conscious about examination rather than production, rote learning and memorization takes place as a norms of exams. In the result, the production of our higher educational level has been described as ill trained, half-baked or cooked and poor quality (Obanya, 2002). Students passed the exams without understanding and they feel no need to clear their concept. They never raised questions, just focus to memorized the things as it is (Idaka & Akubuiro, 2012).

Assessment of student performance is a persistent issue with regard to learning outcomes. Exams are typically categorised as "open-book" or "closed-book" depending on whether students are allowed to bring resources to the test. The goal of this study is to determine if students prefer open or closed-book exams to measure their learning progress. This study examines the effects of open-book versus closed-book testing on students' performance on significant exams.

According to McDowell (1995), students were obviously trying to systematise, organise, and synthesise their knowledge in order to prepare for open-book exams (integration vs. memorization). When compared to the demands of the exam, students seemed more motivated and conscious of their level of learning. The memorization of factual material is important to pupils as they get ready for exams with closed books. Aside from these several research, it seems that open-book exams foster innovation. Although there are many research that focus on how students approach learning according to the various test formats they choose, there are relatively few studies that specifically compare the approaches to learning employed by students who prefer open- and closed-book essay exams (Karagiannopoulou, 2010). Teachers may find the information gleaned from conducting this study useful in developing their pedagogical strategies and improving their assessment practises. Students may find it beneficial to develop better study habits. The study's findings might aid in enhancing assessment-taking procedures.

Research Objectives

The study would focus to achieve the following research objectives

1. To investigate the students' preference of examination mode (open or closed book).
2. To explore the students' perspective about open and closed book examination to assess learning.

Research Question

To achieve the objectives of the study, following research questions are designed:

1. How can closed and open book exam enable students to learn?
2. From the perspectives of students, what exam mode are the most effective for enabling them to learn course material?
3. Which type of exam (open and closed book) is best predicted to assess the students learning?

Literature Review

The attitudes of students toward various types of tests, including open- and closed-book exams, have rarely been the focus of reviews. It has been made clear that evaluation criteria must be in line with higher departmental goals regarding the development of higher order intellectual abilities and a thorough theoretical understanding of any particular subject students consider collectively for better figuring out how to happen. In their 2013 article, Karagiannopoulou and Milienos quoted Zoller and Ben-Chaim (1988), who looked into the relationship between students' propensity for traditional and non-traditional types of exams, such as open-book exams, and feelings of success. They discovered that the preferred types of exams greatly reduce test anxiety and provide higher evaluations in a similar way, which appears to benefit low achievers more than medium and high achievers. It has been taken into account that teachers don't take these findings into account and still provide pupils the type of evaluation they believe is best for their needs while paying little attention to the students' choices. This may cause the learning-treating appraisal to lose its effectiveness as a tool for teaching and learning and become just an assessment approach (Zoller & Ben-Chaim, 1990).

Open-Book and Closed-Book Type Examinations

Exams in classes are given in a set amount of time, and there are two types of tests: open book and closed book. These differ in that information may be used during the exams in one type but not the other. Tests with an essay component do seem to stimulate more in-depth thinking, however openbook exams should be used to further examine the effect. According to reports (Biggs & Tang, 2011; Karagiannopoulou & Milienos, 2013), the open book evaluation form emphasises thoroughness and comprehending, thinking, and analysing while also enhancing higher order cognitive skills. The effects of open-book exams on students' learning have been shown in a number of studies to have both positive and negative effects (Vanderburgh, 2005). It has been discovered that students who take the open-book exam tend to report higher levels of mastering the course material, association in the learning process, utilising the information picked up innovatively, and approaching the exam with good faith than those taking the closed-book exam. The open-book exam reduces the rote memorization of facts (Biggs & Tang, 2011) and thus encourages students to study in a more constructive way, promoting active learning and critical thinking (Broyles, Cyr, & Korsen, 2005; Theophilides & Koutselini, 2000).

The open and closed book examination models are further explained (and distinguished) by Williams and Wong (2007). They claim that the open-book exams demonstrate a sincere effort to engage students rather than alienate them and that academic dishonesty is less common due to the format of the exams. Additionally, because they understand the purpose of the project, the pupils relate to it. By contrast, the closed book, supervised exam enables a process of "packing" the night before and "knowledge dumping" on test day with minimal ongoing learning after that (Williams & Wong, 2007).

However, Agarwal, Karpicke, Kang, Roedeger, and McDermott (2007) state that it may be argued that closed-book exams have a greater capacity for improving adaptability than open-book exams. They also confirm that one theory supporting in-depth investigations is that the investigations demand a more difficult recovery and provide more benefits for long-term maintenance. Additionally, circumstances that necessitate more difficult and challenging handling may lessen initial adaptation at the conclusion of the day to upgrade long-distance maintenance (Agarwal et al., 2007). There are many teachers who use effective closed-book exams that go beyond pointless memory tests or information dumping. High-quality closedbook exams push candidates' cognitive abilities and ensure that they apply what they have learned

in new contexts. Research has shown that if the question paper is drawn precisely, there is no appreciable difference in exam performance (Vyas & Vyas, 2009).

Students' Learning Assessment

Many believe that tests can accomplish more even though learning assessment is crucial. Exams can deepen learning while also enhancing long-term memory (Roediger&Karpicke, 2006). The argument then shifts to test application rather than whether tests are beneficial. For instance, according to Agarwal, Karpicke, Kang, Roediger, and McDermott (2008), open-book testing led to greater early performance but the benefit did not last. Others have claimed that final exams with closed books don't accurately gauge a student's deep conceptual grasp. Williams (2006) notes that closed-book final examinations promote "cramming" and "data dumps" and suggests that closed-book supervised exams have devolved into an outdated practice.

In general, we believe that deep learning is preferable for modern students, and open-book testing has been acknowledged as a fantastic way to strengthen deep learning. However, although acknowledging this deep vs surface learning viewpoint, experts in the field of medical education discovered the opposite results. Due in part to the fact that students had more inspiration to think about for closed book exams, Heijne-Penninga, Kuks, Hofman, and CohenSchotanus (2008) found that closed book tests encouraged profound adaption more than open-book exams.

Theophilides and Koutselini (2000) claim that the students prepared for the open-book exam by making references to various sources and processing the gathered information. They would then be instructed to understand the subject and be able to provide creative answers to the inquiry. Contrary to what would be expected, students who requested a closed book exam tended to focus just on the task or instructional exercise address and retained them.

Students' Preferences

Routine study and memorising of knowledge to be recited during exams have become standard practise as a result of education being examination aware rather than productive conscious. As a result, pupils pass exams without knowing the concept or having the skills necessary to use their knowledge to solve problems in the real world. Students try anything to help their memory in the exam room due to the distorted emphasis on high results. As a result, cheating on CBEs is becoming common and includes using unapproved resources, lecture notes, phones, writing on objects like clothing and chairs as well as the human body (closed book examinations).Due to the pervasiveness of the problem, a significant number of students show up to practically every exam intending to cheat by obtaining unapproved study aids (Idaka&Akubuiro, 2012).

According to published research, pupils favour open-book tests. In comparison to the conventional approach of closed book tests, they claimed that the open book exams allowed them to study more. Open book exams were recommended as the optimum practise based on the results of prior studies. Best practises, according to research, may involve making an attempt to ensure that teachers are as united as possible in their desire to research novel strategies for boosting students' learning (Green, Ferrante &Heppard, 2016).

Research Methodology

The study included qualitative research techniques and had an interpretive focus. The researcher was more concerned in gathering information that would enable them to make suggestions than in making predictions about which examination techniques would be best for evaluating students' learning. The researcher used a phenomenological technique to gain a student-centered understanding of the phenomenon of open and closed book exams. Generally speaking, phenomenologists believe that there are certain commonalities in how people perceive and interpret similar events; they seek to identify, understand, and characterize these patterns (Fraenkel, Wallen& Hyun, 2011).

Population and Sample

Participants in the study were teacher education students who had taken both open- and closed-book exams. To choose a sample, the Purposive sampling technique was applied. The sample is often a purposeful sample in practically all qualitative research (Fraenkel, Wallen& Hyun, 2011). There were a total of fifteen students in the sample (eight students of B.Ed. Hons 7th semester and seven students of M.A Education 3rd semester). Only seasoned pupils were chosen to represent the sample.

Instrument

The study's tool was a structured interview process. Interviews have been regarded as the most effective data collection technique because they offer a comprehension of the people involved and a window into the issue being researched (Cohen et al, 2007). The interviewing procedures were also approved by experts.

Interviews were used to gather data. The researcher conducted interviews in-person. Interviewees received a formal letter from the researcher together with interview questions, asking them to schedule the day and time of the interview at their convenience. All participant interviews were taped with their consent. It basically entails the researcher assessing, synthesising, and condensing the data they gather from diverse sources in a qualitative study. However, the majority of data analysis in qualitative research involves description; even when specific statistics are generated, they typically have a descriptive rather than an inferential purpose (Fraenkel, Wallen& Hyun, 2011). Experts assisted in the transcription and translation of all interviews from Urdu to English. Thematic analysis was used to thoroughly evaluate the text and identify the key themes that were present in the frequently unorganised and ad hoc material. It is thus because people don't always speak or act in a very organised or systematic manner. To identify the themes contained in the data, the researcher must engage in an analytical procedure (Howitt & Cramer, 2011).

Results

The process of analysis involves various steps, including familiarising yourself with the data, initial coding, theme seeking, theme evaluation, theme labelling, and report authoring. It is the most exhaustive and difficult thematic analysis, according to Howitt & Cramer (2011), and it produces a deep and indepth knowledge of the data. To fully understand the transcribed material, I went back and read it all again. Initial coding is a stage in the process of creating themes (Howitt and Cramer, 2011). The goal is to extract the text's main ideas. In the research, hand coding was used. I started off by making notes on the text segment corners. The essential points in each section of the text were summarised in the notes. She cut out the pertinent sections, highlighted them, and then adhered them to index cards. Additionally, the codes were adhered to unique index cards. Recurrent codes were found after she read through every

transcript. I then collected the data by gathering in one location all the text instances to which a specific code was applied. The required text segments were manually inserted under each code once the index cards with codes were placed on a table top. The first attempt at coding typically yields a huge number of codes that must be meaningfully grouped into more general categories to obtain themes (Howitt and Cramer, 2011). To organise the codes, I went through the interviews and the coded chunks. Index cards having codes already put on them were sorted, and those with similar coding were grouped together into different heaps. The text parts beneath these groupings were also read numerous times in order to establish themes. These techniques allowed the researcher to pinpoint recurring patterns in relation to my research questions: Examine the following: a) Importance of the exam, b) Value of memorization in learning, c) Knowledge of open book exams, d) Examining of higher order learning, e) Useful material for open book exams, f) Benefits of open book exams, g) Open book exam at higher education level, h) Open book exam at higher education level, I Limitations of open book exams, j) Open book exams lowering anxiety level, k) It was a circular process that necessitated regular comparison and back-and-forth examination of the data to determine if any fresh information could be categorized under these more specific themes and so to achieve more relevant themes.

The researcher interviewed fifteen (15) students of higher education level who had enrolled in teacher education programs. Eight of the students of B.Ed Hons. program (53.3%) and seven of the students of M.A Education (46.7%). (figure 1)

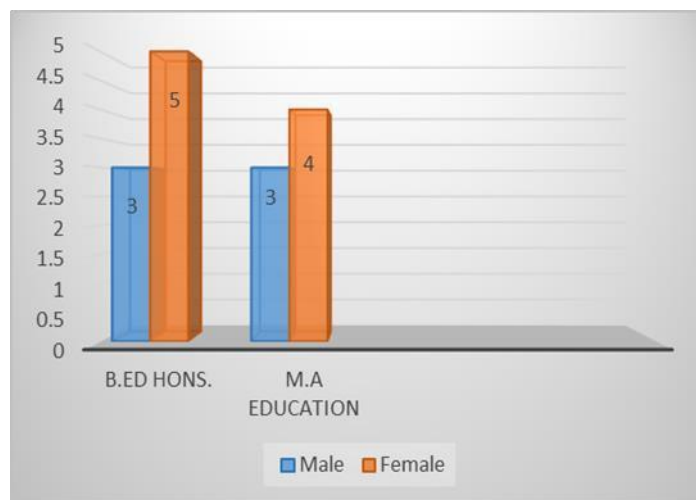


Figure 1. Sample distribution by gender and program

Students reflections and opinion according to the themes presented below: (table 1)

Table 1

Students' reflection for open and closed book examinations

Major Themes	Descriptions
Importance of Examination	Assessment of learning, Promotion to the next grade, Motivation for learning
Importance of memorization	Part of learning, Definitions of facts and formulas etc. require memorization
in learning	Rote learning cognitive

	skill
Understanding about open book exam	Discourage the rote learning Evaluate the critical thinking Takes less time for preparation Encourage to apply the knowledge
Experience to take open book exam	Two or three times Good experience and practice Understanding of content,
Assessment of higher order learning	Analyzing ability Application of knowledge Enhancing skills of critical thinking Thoroughly study the syllabus book
Useful material for open book exams	Highlighted lectures Summaries of contents Making your own notes Enhancement of searching skills
Benefits of open book exams	Conceptual and application based Assess creativity rather than rote learning Lifelong learning
Open book exams at higher education level	Career preparation Apply knowledge on new situation Higher order thinking
Limitations of open book exams	Lack of proper guidance Misconceptions about exams lack of time management skill Student take it as easy and don't give proper time to preparation
Reducing anxiety level	Feel active Difficult to understand the examiner expectations in open book exam Less stress on memory
Confidence level	Open book exam; Material availability Closed book; Good memory is supportive
Suggestions for improvement	Change the teaching technique Instruct well before exams Classroom test practice before final exams

Importance of examination. Students opinions highly supported the importance of examinations. All of the students were reflected regarding importance of examination as examination play important role to assess their knowledge and learning. On the other hand, some students agreed upon that exams are important for the promotion to the next grade. One of the student stated that, “Exams encourage us for preparation and motivate us to bring ourselves at the top”.

Importance of memorization in learning. All students agreed with the statement that closed book exams emphasize memorizing facts and information. They claim that memorization is one of the most important part of learning by stated that they memorized most of their content. One of the respondent stated that, “Many information needs to be memorized like name of important personalities their works and name of places, histories, important dates and most important we memorized vocabulary.

So that's all is a part of our learning". Another participant stated that, "I think learning is mixture of memorization and application".

Understanding about open book exams. Open book exam is great inducement for the students as they are able to use their knowledge rather than only remember it. On the response of the question about understanding of open book exams, students reflected that open book exams allow them to take notes, texts or other material with them in to an exam situation. this type of exams tests their ability to find and apply information and knowledge. One of the respondent reflected that, "Open book exam discourage the rote learning. It enhances our creativity and tests the ability of application". Another participant claims that, "Open book exams takes less time for preparation and requires less memorization, it depends on logical thinking".

Experiences to take open book exams. When asked to the student about how many time they have got experience to take open book exams? They respond differently some of the participant have got experience just two times but most of the students have got this experience three to four times. They also stated that that was good experiences.

Assessment of higher order learning. Open book exams assess students' higher order learning. Most of the students agreed with this statement by stated that open book exam is creative exam for this they study all the content and at the time of exam they search the relevant material from the book and answer the questions. One of the respondent stated that, "We memorized and forget but for the preparation of open book exam we are not focusing on rote learning. We just clear our concepts and study the material well then we are able to attempt the open book exam and really open book exam assess our higher order thinking". Another participant stated that, "At university level we need to improve our thinking ability but through closed book exams it is not possible. We just memorized the things and after sometime we forgot. It is not the right way of learning. We should clear our concept, able to apply our knowledge and develop the new theories and it is possible through exams like open book".

Useful material for open book exams. For open book exams students are allowed to take all material with them at examination place which they think relevant to the subject. when asked to the students about how many books and material they refer for open book examination? They reflected that many books and notes reading is required. Most of the students' had same opinion that much reading is requiring for this type of exam and they also stated that there is no need to carried away and overloaded with materials and resources in the exam, only take what you think really helpful. One of the respondent views that, "I just carefully and actively listen all the lectures and prepare my notes that are enough for me to attempt the open book exam".

Benefits of open book exams. Open book exams are not easy option. It is misunderstanding about open book exams is that there is no need to study. When asked the question to students, what are the benefits of open book examination when no direct questions are asked from the book? Most of the participant stated that in open book exams, the resources materials are made available with them, so they are expected to do more than just reproduced them. They must be able to find, interpret and apply the information in their sources to the exam questions. One of the respondent stated that, "We search and used our thinking ability so it is beneficial for us". Another participant stated that, "No direct question is asked in open book exam but we already know that the questions which are asked in exams are conceptual and application so we just get an idea from available material and write the answer".

Open book exam at higher education level. Some participants were not in the favour of open book exam in all subjects at higher education level. They state it as good practice but do not recommended for all subjects. One of the respondent stated that, "At higher education level we need higher order thinking, through open book exam assessment we will able to produce new and creative knowledge and understand the better use of our knowledge. Some courses and subject just requires memorization and others requires analysis and application I think open book exam is not gives good result in all subjects but for some subject it is good". Most of the participant were in the favour of open book exams in all subjects but excluded foundation courses.

Limitations of open book exams. Some misconception about open book exam leads to limitation and disadvantages. Participants views shows that there are many possible disadvantages of open book exams like; Student would stop studying and memorizing and simply copy from the material available at the examination hall., less time give to preparation because they thought they have all material with them, and sometimes student may spend too much on finding out which parts of books to look for answer instead of applying the knowledge, practical skills and reasoning ability.

Open book exams reducing anxiety level. Literature supported that open book exam successfully reducing the exam anxiety. Participants opinion were that they feel relax because all material and notes are available. One of the respondent stated that, "We feel more active when taking open book exam". On the other hand, one of the participant stated that, "No, sometime it is very difficult to understand the examiner expectations".

Confidence level. To explore the students' preferences for open and closed book exams researcher asked the question, which type of exams enhances your confidence level and how? Most of the respondent in the favour of open book exams, because they make summaries of their content which are very helping for them in exam and they feel confident before and after exam. Some participants supported both type of exams. One of them stated that, "Open and closed both type of exams enhances my confidence. In open book exam all helping material develops my confidence and in close book exam my memory helps me a lot". Another respondent support closed book exam by stated that, "Both type of exams is good but my memory works excellent so I perform good in closed book exams so my achievement enhances my confidence".

Suggestions for improvement. Participants recommended that more practise be done with open book examinations and that teachers should provide sufficient instruction prior to administering these tests in order to improve open book exams. More desk space is required for students during the exam since they frequently need a lot of desk space for their textbooks, notes, and other reference materials, according to one of the participants. Students recommend that teachers educate themselves on the many types of exams before administering them. **Discussion and Conclusion**

Assessment is a challenging process at the college level. Any university's evaluation process reveals its standards and excellence. The purpose of this study was to determine whether students preferred open- or closed-book exams. The majority of the findings from earlier research suggested that several students were confused about the requirements of the open-book exam and how to study, which therefore led to subpar performance (Karagiannopoulou, 2010; Karagiannopoulou&Entwistle, 2012). According to the findings of a prior study, the majority of students who prefer open-book exams learn through looking for significance, connecting ideas, using evidence, and being interested in concepts (Karagiannopoulou&Milienos, 2013).

The findings of this study provide a response to the two research questions: Which exam format enables students to learn course information the most effectively? And which kind of exam—open or closed—is most likely to evaluate students' learning? The majority of students favour open-book exams because they help them strengthen their critical thinking abilities and enable them to apply their information rather than merely relying on memorization; these exams also call for higher order thinking. Open-book exams are nothing new; they have been administered for many years. However, due to several misconceptions, they have been linked to subpar student performance. The idea that students have of open-book exams may cause them to prepare less.

Students prefer open book exam but never neglect the importance of memorization. they also support the memorization as it is part of learning. This study concluded that with the results in the favor of open book exam. Students point of view that at higher education level we should be able to critically think and analyze the information so it is possible when our assessment is conducted in such a critical manner like open book exams.

Recommendations

In the light of conclusion, it is recommended that, before conducting open book exam, teacher should properly instruct students, teacher should explain the assessment criteria before the exam, before conducting open book exam in final exams teacher should offer practice this type of exam in class in the form of minor tests, teacher should highlight the important material during lecture, it helps students for preparation, and focus should be moves towards teaching methodology to make open book exam more feasible to assess the students learning. For further research it is recommended that this study only explore the students' preference for open and closed book to assess learning, it should be further investigating the impact of open book exam on students' outcomes.

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