

# Oral Examination as an Opportunity for Increased Student Learning

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**Abstract**—Although oral examination has received increased attention in recent years, this is still an underutilized assessment method in higher education. One of the reasons may be the lack of concrete guidance on how to design an oral examination. This article therefore aims at providing inspiration and support on how oral examinations can be conducted, including a discussion of their benefits and drawbacks. The article also aims at contributing to a changed view of student assessment to not only comprise an occasion for testing students' knowledge and understanding, but also for providing an opportunity for student learning. The article outlines how groupwise oral examination can provide this added value.

## I. INTRODUCTION

A range of events and circumstances in recent years, such as the COVID-19 pandemic and new technological advancements such as the launch of ChatGPT, have given rise to both discussions about and the implementation of new approaches to how teachers in higher education conduct teaching in general and assess student performance in particular. Oral examination has gained increased interest due to concerns about students' use of unauthorized aids in other assessment methods.

Yet, oral examination is still an unfamiliar assessment method for many teachers in higher education and written exams remains the dominating form of examination [1]. In order to spread knowledge about the viability of oral examination as an assessment method, including its benefits and drawbacks, it is important to discuss and share experiences about how oral examinations can be designed. The first aim of this article is therefore, based on over 10 years of experience of conducting oral examinations, to provide practical advice on how this form of assessment can be designed with the aim of forming a basis for discussion among teachers about the development of assessment methods in higher education.

In addition, the article hopes to broaden the view of examination in general, which typically only relates to testing students' level of knowledge. In this article, it is argued that the examination also can constitute an opportunity for reflection and learning among students. The second aim of the article is therefore to outline how oral examinations can be designed to constitute a learning opportunity.

## II. ORAL EXAMINATION – STRENGTHS AND WEAKNESSES

Literature addressing the use of oral examination in engineering courses remain limited, although this form of

assessment has gained increasing attention following the COVID-19 pandemic [2]. A number of benefits of oral examination have been emphasized in the literature. To begin with, it has been argued that oral examination has a potential to assess students' deeper understanding of the subject area compared to many other more traditional means of assessment such as written exams [3]. For example, [1] argue that oral exams may provide better opportunities for students to demonstrate the upper level of understanding of Bloom's taxonomy (see [4]), compared to written exams. Moreover, it is commonly acknowledged in didactic literature that students learn in different ways [5]. For this reason, it is reasonable to argue that different methods for assessing students should be offered throughout the curriculum [1];[6]. Another benefit, that has become increasingly articulated in recent years, relates to the fact that oral examination practically eliminates the possibility for cheating and plagiarism, for example by using ChatGPT. Finally, it has been argued that students come more prepared to an oral examination to avoid embarrassment [6].

A number of drawbacks have also been raised in the literature. One common objection to this assessment method is the risk of bias on the side of the teacher, arising from the fact that oral exams cannot be anonymized and are difficult to grade [1]. Some authors, however, have also questioned how significant this potential problem actually is [6]. Another downside of oral examination raised in literature is the claim that they are time-intensive [1];[7]. Finally, students who have no previous experience of oral exams may feel nervous and stressed on beforehand [8]. Potentially, this can influence their performance [1] although similar levels of anxiety between oral and written exams have been reported in some studies [6].

## III. DESIGNING AN ORAL EXAMINATION TO PROVIDE AN OPPORTUNITY FOR LEARNING

A number of factors need to be considered when designing an oral examination, and literature generally does not provide concrete guidance in this regard. For this reason, the following section outlines a number of steps and components useful for designing an oral examination, based on 10 years of experience from the courses VRSN20 and VRSN30 (Risk-based land use planning). It is important to mention that these courses have a pass or fail grading which facilitates assessment of student performance, although oral examinations also can be graded on a multi-scale grading system.

### A. Preparations

Students without prior experience of oral examination may feel nervous and anxious [8]. Therefore, it is highly

important that the teacher clearly communicates what types of questions that should be expected and how to prepare for the exam [9]. In the courses VRSN20 and VRSN30, students are therefore instructed to prepare by scrutinizing the weekly expected learning outcomes posted on the learning platform (Canvas) that highlights the most central aspect of each course week. These descriptions of expected learning outcomes typically involve course elements that firstly have been included in a lecture and then discussed in a seminar (or other active learning activity) the same week. The expected learning outcomes from each week are reformulated into questions used in the oral examination. As such, a constructive alignment is achieved between learning outcomes, teaching and learning activities, and assessment (see [10]; [11]).

### B. The examination session

In order to make the oral examination a learning opportunity, the examination session is performed in smaller groups of 4-5 students and one teacher, each session lasting for 60 minutes. Exam questions are written on pieces of paper that are folded together and placed in a bowl. The session begins by the teacher repeating the procedure that the students have already been informed about beforehand. The teacher also asks the students how they feel and reassures that there is no reason for being more nervous about the oral exam compared to a written one. These routines are used to address the potential anxiety often associated with oral examination [6]. The first student picks up a question and reads the question aloud. If the person needs a moment to collect his or her thoughts or make notes on a blank piece of paper, he or she is allowed to do so before answering. Once the person has answered the question, the teacher asks if anyone else in the room wants to add anything to the answer provided. This enables additional perspectives, details or nuances being brought up, and thereby makes the oral examination session not only an assessment of students' knowledge, but also an opportunity for students to learn from one another. When there is nothing more to add, the next person picks up a question and begins to answer, and the same procedure starts over. After a first round of questions, the teacher asks if everyone feels comfortable, and at this stage the students are normally much more relaxed. During the session, the teacher takes extensive notes, documenting the students' answers almost word-by-word. In the literature, other ways of documenting the oral examination have been suggested, such as the possibility of taping the entire session.

### C. Grading

Extensive documentation of the examination session is vital, as this documentation is used as a basis for grading and at the same time assures legal security. As in any type of grading, pre-established assessment criteria are required. For each question, a range of different keywords are described in the assessment criteria, some of which need to be mentioned by the student to gain full score. If not, a lower score is given. Students are also graded with regards to the answers they add on to another person's question, but for these answers, it is not possible to gain as high scores as the first person responding. This is because they have already received clues from the first student's answer. One

way of reducing the risk of bias and minimizing subjectivity on behalf of the teacher in the grading process is to hide the names of the students when their transcribed answers are compared to the assessment criteria.

### D. Students' view

From an analysis of free text answers in previous years' course evaluation questionnaires (CEQ), it can be concluded that the students frequently comment two important dimensions of the oral exam: the suitability of this means of assessment for demonstrating a deeper level understanding and the opportunity for learning that this assessment method offers. Here, quotations illustrating these points from last year's course evaluation report (VRSN20, 2023) are provided:

- "To have an oral exam and focusing on the understanding of key concept is the best assessment concept I ever had. It is very appreciated."
- "Oral examination in group and as a learning opportunity / discussion is a very good idea."
- "The oral exam was chill."
- "I very much enjoyed the oral examination as an evaluation method as it allowed to focus on understanding and gave way to interesting exchanges."
- "Also, I ended up appreciating the oral examination, even though it seemed to be scary in the beginning."
- "I liked the practical cases and although the oral exam made me very nervous, it was actually a new learning opportunity."
- "\* oral exam as learning experience. \*groups for the oral exam for discussion were great instead of individual exam."
- "I think it had a clear and logical structure, and was made up of components that addressed different forms of learnings (i.e. role play, group work, individual tasks, oral exam)."
- "\* oral exam was a good & appropriate way to assess our knowledge. It was done in a very respectful and comfortable way. Alex did not make it feel scary or intimidating."
- "The contents of oral exam was good to deepen the understandings of the concepts. It was rather a learning opportunity and chance to share thoughts with other students than a stressful exam."

While positive remarks in the course evaluation report may be regarded as almost anecdotal evidence of the appreciation of groupwise oral examination as a learning opportunity, it is important to keep in mind that students are free to bring up any aspect of the courses they wish in their free-text answers, and that they nonetheless regularly choose to comment this particular aspect of the courses. Moreover, this brief article only includes CEQ quotations from one course in one single year. As such, the quotations merely represent illustrations of common student responses. A more thorough thematic analysis covering free text answers from several years of CEQ reports for both courses (VRSN20 and VRSN30), or for additional courses using a similar assessment, would provide a richer and more holistic view of students' perceptions and attitudes.

## IV. CONCLUDING REMARKS

While the assessment of students' level of knowledge is a central part of higher education, the choice of assessment method provides an often-missed opportunity for learning. In this brief article, it was argued that oral examination in smaller groups provides an opportunity for learning that is also appreciated by students. The article also provided guidance on how such assessments can be designed, including both benefits and consideration of potential pitfalls.

## REFERENCES

- [1] M. J. Buehler and L. U. Schneider, "Speak up! Oral examinations and political science," *J. Polit. Sci. Educ.*, 2009, doi: 10.1080/15512160903253277.
- [2] M. Lubarda *et al.*, "Oral exams for large-enrollment engineering courses to promote academic integrity and student engagement during remote instruction," 2021, doi: 10.1109/FIE49875.2021.9637124.
- [3] B. B. Jensen, "Oral assessment in engineering education," *Int. J. Electr. Eng. Educ.*, 2010, doi: 10.7227/ijeee.47.4.2.
- [4] B. S. Bloom and D. R. Krathwohl, "Taxonomy of Educational Objectives: The Classification of Educational Goals," in *Handbook I: Cognitive Domain.*, 1956.
- [5] R. M. Felder and L. K. Silverman, "Learning and Teaching Styles in Engineering Education," *Eng. Educ.*, 1998.
- [6] P. Iannone and A. Simpson, "Students' views of oral performance assessment in mathematics: straddling the 'assessment of' and 'assessment for' learning divide," *Assess. Eval. High. Educ.*, 2015, doi: 10.1080/02602938.2014.961124.
- [7] R. Boedigheimer, M. Ghrist, D. Peterson, and B. Kallemyn, "Individual Oral Exams in Mathematics Courses: 10 Years of Experience at the Air Force Academy," *PRIMUS*, 2015, doi: 10.1080/10511970.2014.906008.
- [8] P. Rushton and D. Eggett, "Comparison of written and oral examinations in a Baccalaureate medical-surgical nursing course," *J. Prof. Nurs.*, 2003, doi: 10.1016/S8755-7223(03)00049-8.
- [9] K. Westhoff and C. Hagemeister, "Competence-oriented oral examinations: objective and valid," *Psychol. Test Assess. Model.*, vol. 56, no. 4, pp. 319–331, 2014.
- [10] Biggs J and Tang C, "Teaching for Quality Learning at University (3rd ed.)," *London Open Univ. Press*, 2007.
- [11] M. Elmgren and A.-S. Henriksson, *Academic teaching*. Lund: Studentlitteratur, 2018.