



Forms of assessment with a focus on oral assessment and how oral assessment can be organised

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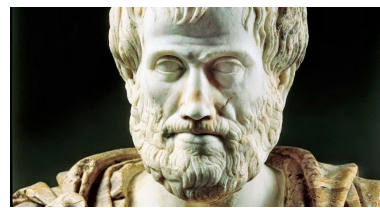
What knowledge and skills are in focus? How do we assess?



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Degree objectives

- Knowledge and understanding
- Skills and Abilities
- Evaluation ability and approach
- Episteme
- Techne
- Fronesis



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In planning the examination - we need to define what is to be assessed!


- Construct = The ability or characteristic to be assessed
- The construct is defined based on a network of theoretical constructs. The definition is made by identifying so-called indicators of the construct that we later can assess appropriately (Messick, 1989).
- Constructs of under- and over-representation (jfr Messick, 1989)
- The choice of examination is motivated partly by the construct, partly by a specific mode's potential of representing knowledge (Rosnow & Rosenthal, 2005; Bezemer & Kress, 2016).

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		The cognitive process dimension					
		1	2	3	4	5	6
The knowledge dimension		Remember recognizing recalling	Understand interpreting exemplifying classifying summarizing inferring comparing explaining	Apply executing implementing	Analyze differentiating organizing attributing	Evaluate checking critiquing	Create generating planning producing
Factual knowledge							
A	terminology, specific details or elements						
Conceptual knowledge							
B	classifications and categories, principals and generalizations, theories, models and structures						
Procedural knowledge							
C	subject-specific skills and algorithms, subject-specific techniques and methods						
Metacognitive knowledge							
D	strategic knowledge, cognitive tasks, self-knowledge						

Anderson och Krathwohls utökade taxonomi (Anderson & Krathwohl, 2001; Bloom et al., 1956)

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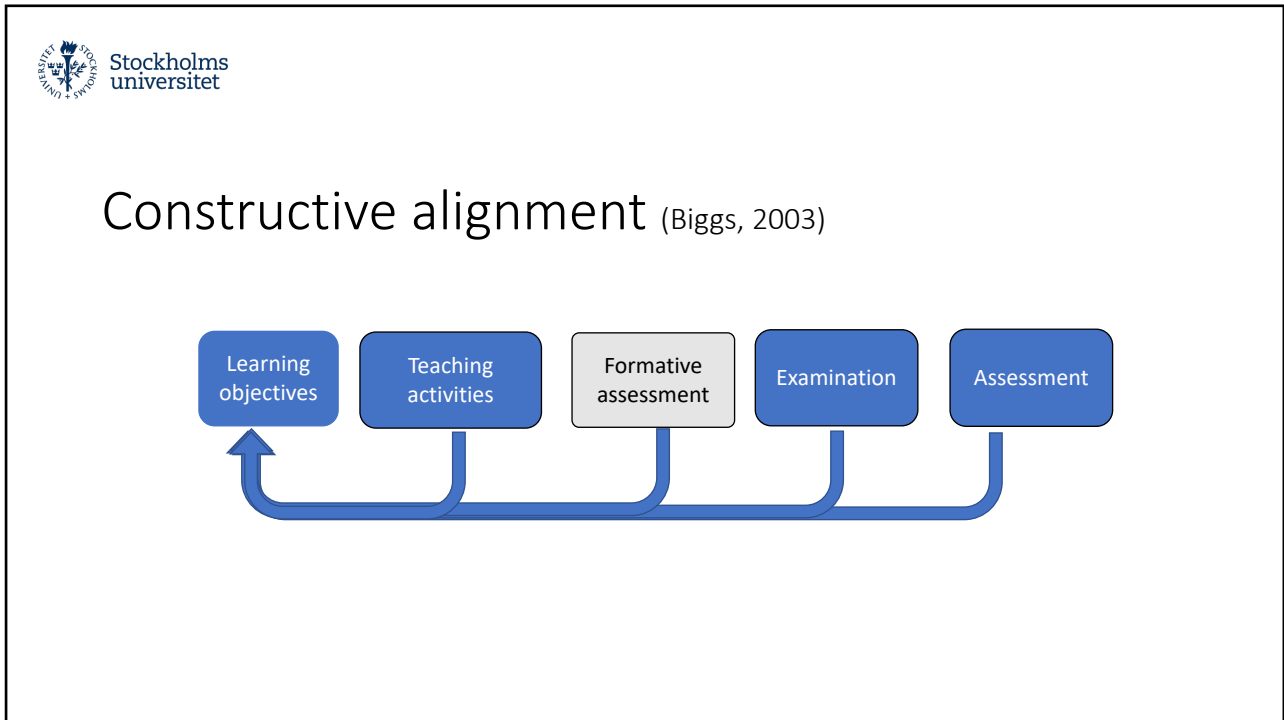


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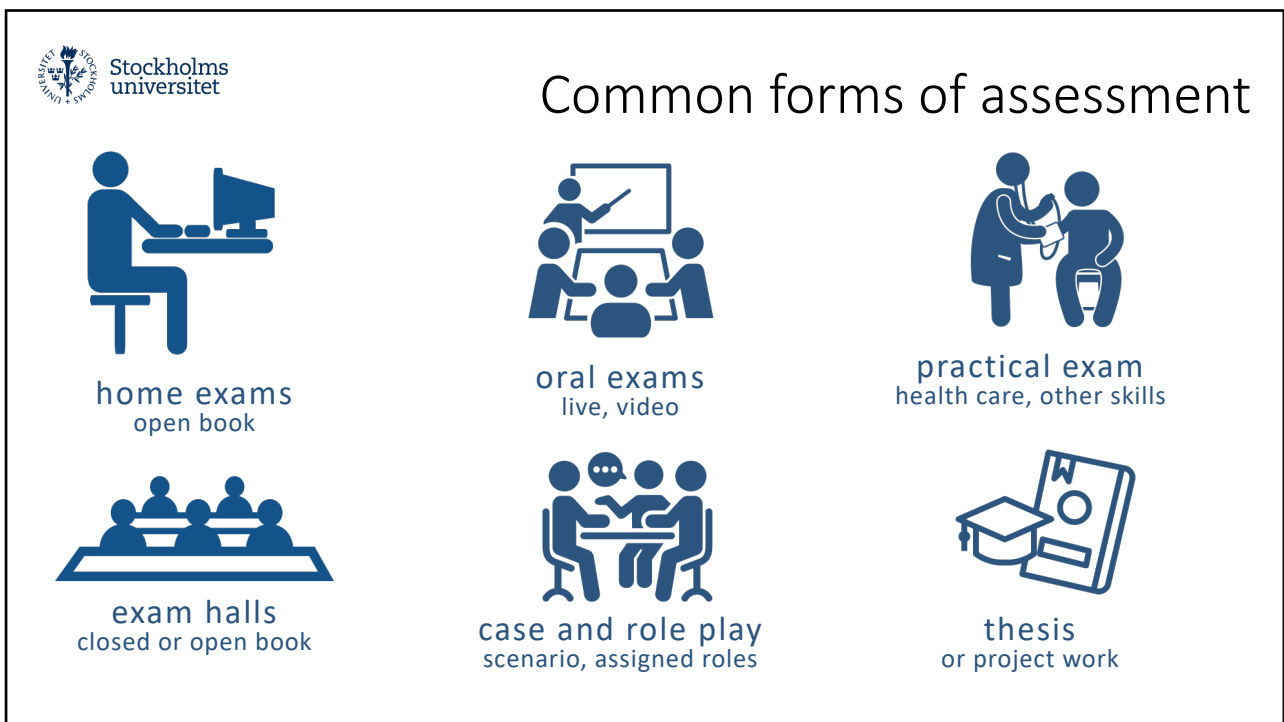
Assessment planning

Learning objective	Knowledge content	Cognitive process	Examination form/tasks	Grades/Criteria
The student demonstrates understanding of conceptual knowledge	Theories/studies about x	Remember and Understand	Digital true/false multiple-choice	P/F The student demonstrates understanding of conceptual knowledge by....
The student critically analyzes and interpret implications of the usage of x in the environment	Theories/studies about x	Analyze Evaluate	Digital examination Essay-questions (written or oral)	The student performs analytical reasoning according to the grade scale A-F

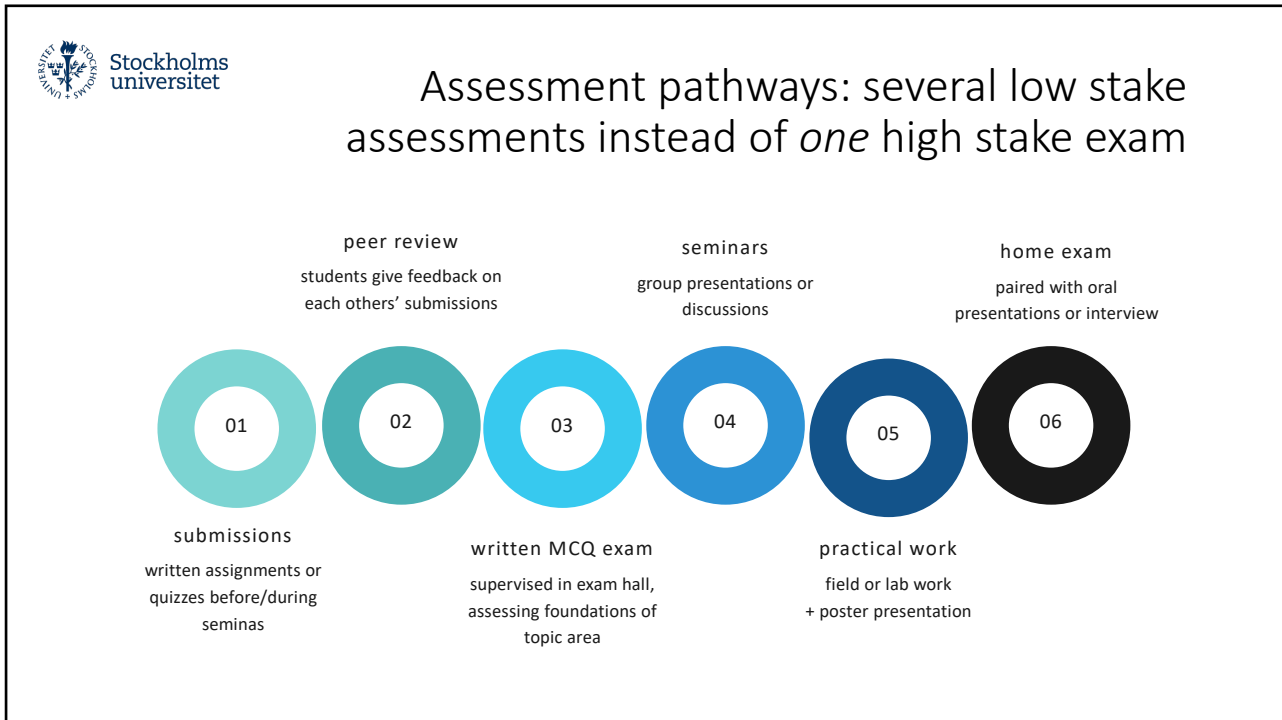
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The purpose of oral examinations?

...is to assess varied types of knowledge (epistemic, procedural and meta-cognitive knowledge) e.g.

- to demonstrate understanding of facts and concepts
- to argue for different knowledge content and perspectives
- to demonstrate linguistic and communication skills
- to apply procedures and problem solving
- to apply theory in practice, depth of knowledge (rather than breadth)
- to demonstrate problem-solving or critical thinking skills

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Oral examination

Pros:

- Students with poor writing skills can be given the opportunity to demonstrate knowledge auditorily and/or audiovisually
- Enhanced communication skills
- Assess varied types of knowledge
- Follow-up questions can easily be asked directly in connection with the presentation.
- Assess in-depth knowledge and skills, enabling a more comprehensive picture of students' abilities, clarification can be shared about conceptual misunderstandings.
- Opportunity for clarification of ambiguous issues in the present.
- Formative assessment can be organised
- Performance and assessment can be carried out on site - time-efficiently
- Increased motivation to learn and understand - decreased cheating

Cons:

- Oral exams can be particularly stressful.
- Stress, speech difficulties can be sources of error in assessment. Students may be unfamiliar with the format, which can lead to fear and anxiety.
- Students who do not master the ability to speak, both in groups and in dialogue with teachers, may find it more difficult to show ILO compared to communicatively strong students.
- Distinguish individual efforts in oral group examination.
- The examination format can be time-consuming for assessing teachers.
- More time to administer than written exams and usually not suitable for larger groups.

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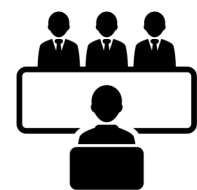
Types of oral assessment



presentation
on prepared topic or topic assigned
during seminar
individual or in group
live or recorded



interview
examiner interviews student or students
interview each other
role plays: students are assigned a role and should use argumentation based on that role
student discussions: students discuss among each other on a given topic



interrogation
individual examiner or panel ask questions



simulations
demonstration of skills,
students speak out loud their reasoning

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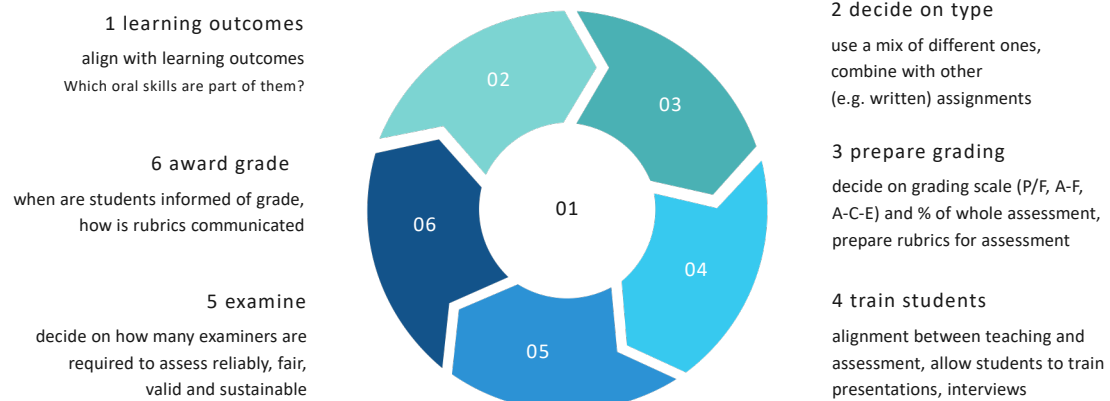
Oral assessment can be organised in different ways

- Presentation on a prepared topic (individual or group, live or recorded)
- Interviews, role-plays or discussions
- Interrogations by examiner or panel
- Simulations or demonstrations of skills individually or with others (eg. teacher-student, doctor-patient, study counselor-student, manager-employee)


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PRACTICAL IMPLEMENTATION


of oral assessment




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Grading of oral assessment – example 1


RUBRICS

ORAL COMMUNICATION VALUE RUBRIC
For more information, please contact value@aacu.org




Definition
Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.


	4 Capstone	3 Milestones	2	1 Benchmark
Organization	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is intermittently observable within the presentation.	Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not observable within the presentation.
Language	Language choices are imaginative, memorable, compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are mundane and commonplace and partially support the effectiveness of the presentation. Language in presentation is appropriate to audience.	Language choices are unclear and minimally support the effectiveness of the presentation. Language in presentation is not appropriate to audience.
Delivery	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation understandable, and speaker appears tentative.	Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the understandability of the presentation, and speaker appears uncomfortable.
Supporting Material	A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/authority on the topic.	Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that partially supports the presentation or establishes the presenter's credibility/authority on the topic.	Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make reference to information or analysis that minimally supports the presentation or establishes the presenter's credibility/authority on the topic.
Central Message	Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported).	Central message is clear and consistent with the supporting material.	Central message is basically understandable but is not often repeated and is not memorable.	Central message can be deduced but is not explicitly stated in the presentation.

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Grading of oral assessment – example 2




Bedömningen görs i ett rättningsprotokoll


Uppgift 1: Budgetprioriteringsproblemet

	Helt rätt	Lätt fel	Fel i sakans	Kort o/ bristande	
NP-fulständighet: principer					skryfligt muntligt
Förklarar vilka steg som behöver ingå i NP-fulständighetsbevis, och vad varje steg är bra till.					
NP-tillhörighet					skryfligt muntligt
Formulerar problemet som beslutproblem					
Förklarar vad en lösning består av		M			skryfligt muntligt
Beskriver hur man verifierar en ja-lösning eller visar NP-tillhörighet på ett annat acceptabelt sätt		M			skryfligt muntligt
Motiverar att verifikationsalgoritmen (motst.) är polynomisk		M			skryfligt muntligt
Reduktionsalgoritmen					skryfligt muntligt
Beskriver reduktionen övergripande i ord och eventuellt i bild					
Beskriver reduktionen tillräckligt tydligt					skryfligt muntligt
Bra strukturerad pseudokod (lätt att tyda, detaljnivå, symbolval, layout)					skryfligt
Reduktionen är korrekt		M			skryfligt muntligt
Tidskomplexitet för reduktionen					skryfligt muntligt
Anger komplexitet(-sklass) för reduktionen, eller vilken som krävs för NP-reduktioner i allmänhet.			M	M	skryfligt muntligt
Motiverar tidskomplexitet (överensstämmer med algoritmen, angiven komplexitet och beräkningsmodellen)					skryfligt muntligt
Korrekthetsresonemang					skryfligt muntligt
Förklarar vad man behöver visa i ett korrektshetsbevis för en NP-reduktion		M			skryfligt muntligt
Genomför ett korrekt resonemang som omfattar alla nödvändiga delar					skryfligt muntligt

KTH Session om muntlig examination vid nationella minikonferensen om examination 2023-10-11 (in Swedish), https://play.kth.se/media/Session+om+muntlig+examination+vid+nationella+minikonferensen+om+examination+2023-10-11/0_tamk1ok2

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Grading of oral assessment – example 3

Bedömningskriterier för betyg A, C och E


Grade	Requirements to get a certain grade on ILO for Part 1: Rotational kinematics You must be able to:	Requirements to get a certain grade on ILO for Part 2: Rigid body dynamics You must be able to:	Requirements to get a certain grade on ILO for Part 3: Nonlinear control You must be able to:
E	Define all of the attitude descriptions and their relations for simple problems .	Formulate the fundamental equations and relations for rigid body dynamics motion in three dimensions, use them to solve simple problems , evaluate the results and orally present them.	Explain the principles behind control of spacecraft, design control laws for simple problems , solve the problems, evaluate the results and orally present them.
C	Select and implement the attitude descriptions for basic problems , solve the problems, evaluate the results and orally present them.	Use the equations of motions to solve basic problems of rigid body dynamics in three dimensions, graphically presents, evaluate the results and orally present them. *	Design control laws for basic problems , solve the problems, evaluate the results and orally present them.
A	Select and implement the attitude descriptions for advanced problems , solve the problems and evaluate the results and orally present them.	Use the equations of motions to solve advanced problems of rigid body dynamics in three dimensions, graphically presents, evaluate the results and orally present them.	Design control laws for advanced problems , solve the problems, evaluate the results and orally present them.


Explanation:

- To fulfill the requirements for grade C you must fulfill the requirements for grade E and the additional requirements for grade C.
- If you fulfill all the requirements for grade E, but not all the requirements for grade C, you will get grade D.
- To fulfill the requirement for grade A you must fulfill the requirements for grades E and C and the additional requirements for grade A.
- If you fulfill all the requirements for grades E and C, but not all of the requirements for grade A, you will get grade B.

KTH Session om muntlig examination vid nationella minikonferensen om examination 2023-10-11 (in Swedish), https://eliv.kth.se/media/Session-om-muntlig-examination-vid-nationella-minikonferensen-om-examination-2023-10-11/0_tmh1ok2

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Usability index (van der Vleuten, 1996)

Reliability	How reliable is the exam? Over/underrepresentation of constructs? Inter-rater reliability
Validity	What kind of knowledge do you want to check? Are the forms of knowledge aligned with the learning objectives?
Cost effectiveness	What does the assessment cost? (hours, resources)?
Acceptance	What acceptance is there for existing or new forms of assessment? Is there an awareness among teachers of how and why they examine as they do?
Pedagogical impact	What can the students possibly learn during the examination itself? What knowledge, skills, and attitudes can they develop through the examination and assessment?

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Assessment planning

Learning objective	Knowledge content	Cognitive process	Examination form/tasks	Grades/Criteria

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Resources

- Huxham, M., Campbell, F., & Westwood, J. (2012). Oral versus written assessments: a test of student performance and attitudes. *Assessment & Evaluation in Higher Education*, 37(1), 125–136. <https://doi.org/ezp.sub.su.se/10.1080/02602938.2010.515012>
- Joughin G, 'A Short Guide to Oral Assessment', 2010 https://www.researchgate.net/publication/228844594_A_Short_Guide_to_Oral_Assessment
- Akimov, A., & Malin, M. (2020). When old becomes new: A case study of oral examination as an online assessment tool. *Assessment & Evaluation in Higher Education*, 45(8), 1205–1221. <https://doi.org/10.1080/02602938.2020.1730301>
- McGill University's Teaching and Learning Services, part on oral assessment: <https://deptkb.mcgill.ca/display/TLK/Choosing+Assessment+Strategies?src=contextnavpagetreemode>
- McGill University's Teaching and Learning Services, podcast Teach.Learn.Share, episode Using authentic assessments and flexible grading schemes in a large science course, <https://www.podbean.com/ew/pb-qmud4-15e0f4c>
- Cornell University, Learning Outcome Types and Recommended Assessment Methods, <https://canvas.cornell.edu/courses/1848/pages/learning-outcome-types-and-recommended-assessment-methods>
- KTH Session om muntlig examination vid nationella minikonferensen om examination 2023-10-11 (in Swedish) https://play.kth.se/media/Session+om+muntlig+examination+vid+nationella+minikonferensen+om+examination+2023-10-11/0_tamk1ok2

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Tack!