

Overview of Formative and Summative Assessments

Presenter: Alfred Borgonovo, Senior Financial Management Specialist, The World Bank

Belgrade, 6-7 November 2019

Competency-based accounting education and integrative case studies



STAR-CFR

Serbia Technical Assistance for
Reform of Corporate Financial Reporting



Republic of Serbia
Ministry of Finance

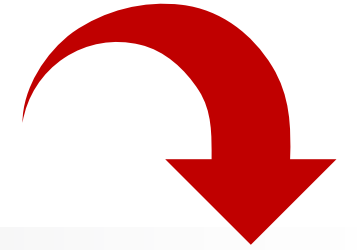


Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

STAR-CFR is financed from the Swiss State
Secretariat for Economic Affairs under the Swiss
Enlargement Contribution.



Purpose of this session



Formative and summative assessments are both important in professional education.

In particular, examinations are the key assessment tool for most professional accountancy education programs, both at the university level and for PAO certification.

The purpose of this session is to:

- » provide a brief overview of the purposes and uses of formative and summative assessment, with a focus on key development and administration processes for examinations.

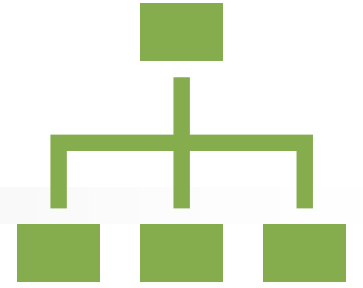
Learning Objectives for this session



Based on this session, you should be able to:

- » Differentiate between formative and summative assessments and explain the purpose of each
- » Outline the key development and administration processes for accounting education program examinations
- » Illustrate how the assessment process supports compliance with the requirements of IES 6
- » Explore when each type of assessment is best used

Structure of this session



- I. Formative and summative assessments
- II. Examination Development Process
- III. Administration of Examinations
- IV. Supporting compliance with IES 6
- V. Mixing it up: when to use each type of assessment



I. Formative and summative assessments



Formative and summative assessments

Formative assessment:

- » allow students to build competence and demonstrate progress, while receiving feedback
- » Helps students make corrections and adjustments to their application of concepts
- » mainly comprised of assignments and in-class quizzes



Formative and summative assessments

Summative assessment:

- » objectively evaluate a student's demonstration of competence
- » assessed at milestones and at the point of completion of a course or of the program overall
- » mainly comprised of examinations (oral or written)

Formative and summative assessments



Formative versus Summative:

“When the cook tastes the soup, that’s formative.

When the guests taste the soup, that’s summative.”

- Robert E. Stake, Professor Emeritus of Education at the University of Illinois



Formative and summative assessments

Objectives of Formative and Summative assessments:

Formative	Summative
<ul style="list-style-type: none">• reinforce learning• provide feedback on progress in the course• encourage self-discipline and good study techniques	<ul style="list-style-type: none">• ensure that students have developed and are able to demonstrate sufficient progress toward competence before qualifying them to move on to the next course



Formative and summative assessments

Typical assignments and in-class assessments may include:

- » MCQs
- » Short answer questions
- » Mini-cases (or longer cases)
- » Online or in-class discussions that are monitored and graded
- » Group or individual research projects, reports or presentations
- » Role play, debates that are graded

Beneficial to use a variety of assessments, not just individual assignments



Formative and summative assessments

Use of assignments for formative assessment:

- » Frequency and format should be based on the course content
- » Consider workload and timing
- » Levels of proficiency should reflect levels required for success in the course (based on Competency Statements, Learning Outcomes, etc.)
- » Assignments may provide some indication of the form and content of the examination



Formative and summative assessments

Types of summative assessment:

- » Written exams (most common)
- » Oral exams
- » Final projects/reports (individual or group)
- » Final presentations (individual or group)

Beneficial to use a variety of assessments, not just individual exams



Formative and summative assessments

Determining final grades:

- » Some programs allow formative assessments to “count” towards final grades
- » Some programs count mid-term and final exams/reports, but not assignments
- » Some require a minimum performance on formative assignments to qualify to write the final exam

100% finals are higher stakes, and are under more pressure to meet IES 6 quality characteristics individually



II. Examination development process

Examination Development Process

Development processes differ based on the context for the exam:

- » At the university level, exams are typically developed and administered by the professor for their own cohorts of students.
- » For PAO certification, examinations are normally developed by an exams group (which is different from the organization's education development team).



Examination Development Process

Goals of examinations include:

- » Assessing competencies
- » Ensuring minimum standards are met
- » Providing verifiable evidence of assessment



Required minimum standards come from:

- » IEASB's IESs (particularly IES 6)
- » the PAO's *Competency Framework*
- » Local laws and regulations



Examination Development Process



1. **Develop the specifications for the exam:**
 - a) **What should be assessed**
 - » competencies to be covered are based on the *Competency Framework*
 - » material within each course is classified as examinable or non-examinable and tied to required levels of proficiency

Examination Development Process

b) Determine *weightings* of competencies/topics:

- » weightings are assigned to topic areas based on importance or essentiality (e.g., as informed by Practice Analysis results)



c) Determine *how* content should be examined:

- » appropriate assessment types are specified (multiple-choice, short-answer/directed response, case analysis, etc.)

d) Determine *appropriate length of exam time*:

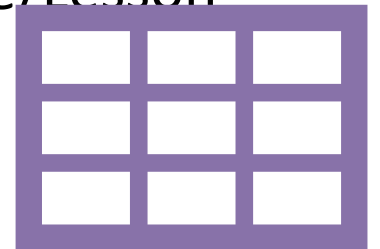
- » length of exam is determined



Examination Development Process

e) Prepare Test Specification (“Blueprint”) to specify:

- » Learning Objectives/Competencies/topics that are examinable
- » Weightings based on levels of proficiency/depth (e.g., no more than 20% of exam can be based on Foundation material)
- » types of questions to be used (MCQ, short-answer, case analysis) and % weighting of each type
- » minimum and maximum % of content coverage from each Module/Lesson
- » for integrative capstones, where examinable prerequisite content comes from



Examination Development Process

2. Select and contract Exam Author (Examiner):

- » Requires extensive subject matter expertise
- » Normally an academic (e.g., PhD university professor)
- » Beneficial if examiner is also a professional accountant



Examination Development Process

3. Develop the exam:

- » exam questions based on Blueprint
- » suggested solutions and sample answers (for any required memos or reports in response to case simulations or mini-cases)

Exams may be developed in sets (preferred) or one at a time.



Examination Development Process

4. Complete review process:

- » Check for errors (information and calculations)
- » Editorial review (grammar, wording)
- » Cultural bias review (to ensure wording is neutral and not confusing)



Level of formality depends on course and how “high stakes” the exam is

Examination Development Process

5. Exam is approved and prepared for delivery:

- » final formatting and checks
- » final signoffs (internal or external review committee)
- » secure photocopying or secure electronic transmission, if exam is computer-based
- » distributed to Exam Invigilators for exams administration process (if applicable)





III. Administration of Examinations



Administration of Examinations

Simple or complex:

- » In university setting, administration is typically done by instructor, potentially with Teaching Assistants
- » For high-stakes PAO exams, administration may require a highly-secure examination centre

Administration of Examinations



Security is essential:

- » Policies regarding allowable exam room materials (e.g., calculators, time-keepers, dictionaries, etc.)
- » No communications devices at desks
- » Exam writers carefully spaced/alternate exam forms used
- » Identities verified
- » All materials controlled (including blank working papers)
- » Student numbers or serial numbers used on exams (to keep identities unknown)
- » Adequate supervision

Administration of Examinations



For professional exams/final exams held in an exam hall:

- » maintain control over exam papers until delivery to Exam Invigilators/exam site
- » Invigilators administer the exams (may be accounting body staff or trained and trusted professional member volunteers)
- » Strict standards and processes for invigilation to maintain control of exam questions and blank and completed papers



Administration of Examinations

Exam marking depends on context:

- » For university exams, marking is usually done by the instructor, potentially with assistance from teaching assistants.
- » For high-stakes PAO certification exams, the marking process is generally much more extensive, with marking teams focusing on specific questions, and a lead marker responsible for oversight and quality control.



Administration of Examinations

Marking quality:

- » Marking must be consistent, fair and unbiased.
- » Special care needed if several markers are involved.
- » Regular reference to marking grids and spot reviews of previously marked papers can help ensure that marking drift is not occurring.
- » Statistical analysis and psychometric evaluation may be done concurrently to ensure reliability of results.
- » Exam marks and the marked papers should be maintained for sufficient periods of time, to serve as objective evidence of the assessments and results.



IV. Supporting compliance with IES 6

Supporting compliance with IES 6



Objective and Scope:

- » IES 6 prescribes the requirements for the **assessment of professional competence** of aspiring professional accountants that need to be achieved by the end of IPD
- » Ties to related requirements in IESs 2 to 4, which all require assessment.
- » Assessment activities need to be based on verifiable evidence (para 10).



Supporting compliance with IES 6



- » Examples of assessment activities may include, but are not limited to (para A6):
 - » **written and/or oral examinations**
 - » objective testing
 - » computer-assisted testing
 - » workplace assessment of competence by employers
 - » review of a portfolio of evidence on completion of workplace activities

Key Characteristics of Quality Assessment



Assessment activities should be designed to have high levels of (para 9):

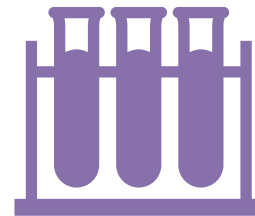
» Reliability

» Validity

» Equity

» Transparency

» Sufficiency



Exams: Summary of Key Aspects



To meet IES 6 criteria:

- » Choice of competent and experienced developers and reviewers ensure reliability and validity.
- » Strict security processes support reliability.
- » For sufficiency and validity, exams must cover the range of technical competence, as well as professional skills, values, ethics, and attitudes.
- » For reliability, validity and sufficiency, exams occur throughout the program, with capstone exams covering the majority of competencies at the end of the certification program.

Exams: Summary of Key Aspects



To meet IES 6 criteria:

- » For reliability, psychometric evaluation is performed:
 - » Analysis of results – statistics used to assess any outliers (e.g., questions that didn't differentiate strong and weak candidates or effectively contribute to the “pass/fail” decision)
- » To reflect high-stakes nature, special processes are used for integrative capstone exams – fully competency-based, questions developed, and marked by teams.

Exams: Summary of Key Aspects



To meet IES 6 criteria:

- » For equity: national consistency is imposed – same exam in all regions.
- » To support equity: bias reviews are performed to ensure certain candidates are not advantaged.
- » For transparency: requirements, Blueprints, timing etc. are disclosed.
- » For transparency: sample exams are provided.
- » Meeting all criteria works best when using a mix of assessment types.



V. Mixing it up: when to use each type of assessment



Mixing it up

When to use each type of assessment question:

Type	Strengths and Notes for Using
Multiple-choice questions	Particularly suited to covering breadth of materials and topics; efficient means of testing low-to- mid cognitive levels.
Short-answer questions	Good for balancing breadth and depth in coverage; can assess full range of cognitive levels; testing integration and enabling competencies is possible, but more limited.



Mixing it up

When to use each type of assessment question:

Type	Strengths and Notes for Using
Short or Mini-cases	Good for assessing enabling competencies such as critical thinking and analysis with some integration; most suitable for Foundation and Intermediate-tier courses where students would be overwhelmed by long cases.
Long cases	Best for assessing higher- level cognitive skills, enabling competencies and extensive integration; best for Advanced and Professional-tier courses.



Mixing it up

When to use each type of assessment question:

Type	Strengths and Notes for Using
Group projects	Important for demonstrating collaborative skills and leadership
Oral exams and presentations	Effective means of assessing verbal communication skills



Mixing it up

One approach to deciding on assessment types:

1. Determine (based on Blueprint) how much time should be allocated to higher-order cognitive skills and enabling competencies
2. Design cases and scenario-based questions to cover these requirements.
3. Plan to use a mix of short-answer questions and MCQs to achieve sufficient breadth across the remaining topic areas.

By planning assessments fully and designing them to take advantage of the strengths of each question type, higher quality assessments can be achieved.



Questions?

Thank you!