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IMPROVEMENT OF SCHOOL BASED ASSESSMENT

Skopje, Macedonia
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Improvement of School Based Assessment

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INTRODUCTION

WHAT IS SCHOOL-BASED ASSESSMENT AND WHY IS IT IMPORTANT?

Recent research highlights the important role of formative assessment - assessment for learning carried out be teachers and students during teaching and learning - in raising learning standards. Formative assessments include performance based assessments. Activities associated with formative assessment include:

- ✓ The types of questions asked by teachers, and the nature of the feedback provided to students
- ✓ Interviews involving the teacher and one or more students to identify student strengths and weaknesses
- ✓ Portfolios of student work that demonstrate development over time
- ✓ Writing and other tasks completed by students, and graded in a way that provides useful feedback to students
- ✓ Projects completed by students, that often include an oral presentation of the results
- ✓ Checklists, teacher-made tests and other instruments that gather information about ongoing learning processes

An important principle of assessment is the involvement of the student. Therefore the current module emphasises:

- ✓ Student self-assessment, where the student assesses his or her own learning
- ✓ Peer-assessment, where the student is trained to evaluate and comment on the work of other students, in a formative way
- ✓ Assessment of metacognitive skills, where the student's approaches to learning are identified and developed.
- ✓ Assessment and development of students' self-regulated learning strategies.

The focus of the current module is on providing teachers with skills that they can apply in classroom and work-experience settings to engage in formative assessment activities, and involve students in such activities on an ongoing basis.

COURSE ORGANISATION:

Focus on Learning Targets

Throughout the module there will be a focus on communicating learning targets, and considering the extent to which learning targets have been achieved. This will be achieved through:

- Explicitly presenting learning targets before each unit
- Reviewing learning targets at the end of the unit.
- Enabling participants to reflect on targets through use of a learning log.

Maintaining a Learning Log

Participants will be expected to maintain a learning log throughout the course, as an example of an approach to student self-assessment. It is planned to set aside 5 minutes at the end of each module for participants to complete their learning logs. Participants will be asked to note achievement targets they have mastered, targets they have found useful and important, and targets they are having difficulty achieving and why). It is intended that participants will employ this methodology in their own teaching the future.

Interactive Group Work

An important learning principle is that students interact during the learning process. Several of the activities in this module involve participants working interactively and collaboratively in small groups (4-5 persons), to complete suggested activities. Each group should identify a leader, and a reporter.

UNIT 1

BACKGROUND CONCEPTS - INSTRUCTIONAL DECISION MAKING AND DIFFERENCES BETWEEN FORMATIVE AND SUMMATIVE ASSESSMENT

SUMMARY: What is formative assessment and why is it important? How does it differ from summtive assessment?

Objectives/Learning Targets:

Participants will:

- Describe the role of decision making in teaching
- Define assessment and how it can be linked to teaching and learning
- Distinguish between formative and summative assessment
- Recognise that validity and reliability are important attributes of all assessments.
- Reflect on their own assessment practices in terms of the balance between formative and summative.

Phase 1 Activate Background Knowledge

- Facilitator presents the learning objectives for the session.
- Facilitator explains that teaching involves decision making. Facilitator invites groups to list the decisions they make during teaching and learning. [App 1.1]
- Group members report back on the key decisions they make with respect to teaching and student learning.
- Facilitator indicates that assessment should play a key role in decision making.

What is assessment?

Assessment involves gathering and using information to optimize your teaching and your students' learning. Assessment is an integral part of teaching. [Nitko, 2004]. . . . .

Sound teaching decisions require sound information. . . Sound assessment procedures gather sound information.

- Participants, working in groups, are invited to list examples of assessment activities they have implemented, and the frequency with which they are implemented. [App 1.2, first and second column]
- Groups share lists of common assessment activities.
- Facilitator asks participants to reflect on each assessment activity, and to identify some decisions that may be taken, on the basis of information gathered during assessment. [App 1.2, third column]
- Groups report (via spokesperson) on how they use existing assessments to make decisions.
- Facilitator asks group to reflect on whether current assessment activities are satisfactory from
  - (a) the point of view of teachers;
  - (b) the point of view of students;
- Facilitator asks groups to reflect on the nature and frequency of feedback provided to students about their learning.
- Groups discuss and report on the types of feedback provided to students. [App 1.3]

Phase 2 Construct Meaning

- Facilitator explains the concept of 'formative assessment' to participants, providing some examples. Summative assessment is also explained. [App. 1.4]

Key Elements of Formative Assessment

1. Establishment of a classroom culture that encourages interaction and use of assessment tools
2. Establishment of learning goals and tracking of individual student progress towards those goals
3. Use of varied instruction methods to meet the needs of students
4. Use of varied approaches to assessing student understanding
5. Feedback on student performance and adaptation of instruction to meet identified student needs
6. Active involvement of students in the learning process.

- Participants are asked to categorise various assessment activities as 'formative' or 'summative' and to give reasons, first with a partner, and then with a small group. [App 1.5]

- Facilitator draws distinction between classroom/workplace information needs (mainly supported by formative assessment), and needs of schools and systems (supported by summative assessment).

Potential benefits of formative assessment include . . .

1. Raising levels of student achievement though adapting teaching
2. Implementing differentiation and meeting diverse student needs
3. Achieving greater equity on student outcomes
4. Improved learning to learn skills

- Facilitator summarises recent research findings on effects of formative assessment, especially for lower-achieving students.
- Facilitator outlines characteristics of effective assessments: validity and reliability, and notes that these themes will be revisited throughout the module.

Reliability **-**Reliablility refers to the degree to which a test or other assessment is consistent and stable in measuring what it is intended to measure. Most simply put, an assessment is reliable if it is consistent within itself and across time.

Validity **-** validity refers to the degree to which an assessment actually measures what it claims to measure. Validity is also the extent to which inferences, conclusions, and decisions made on the basis of scores or other measures of performance are appropriate and meaningful.

Phase 3 Evaluate and Apply

- Facilitator distinguishes between classroom-based assessments and external assessments. Examples to include: surveys, interviews, checklists, observation measures, teacher-developed tests, student self-assessment, portfolios, performance-based assessments etc.
- Facilitator provides some **guiding principles** for assessment:

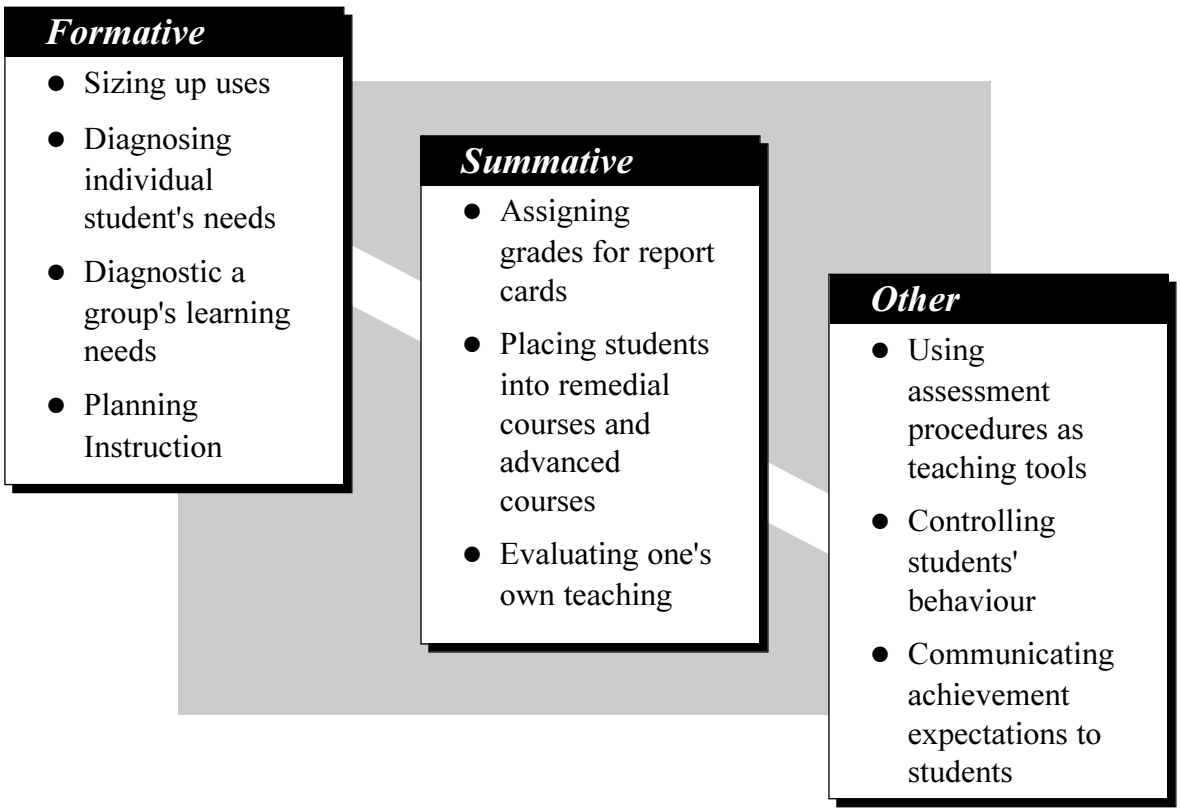
Principles of assessment

1. Pupil involvement in learning
2. Effective feedback and feed-forward
3. Rigorous systems developed

4. High support for all is provided
5. Expectations set by level descriptions/targets/learning objectives
6. Consistency (reliability) is central
7. Assessment is an integrated part of teaching and learning
8. Assessment outcomes are used to adjust teaching

- Participants rate principles of assessment in terms of
  (i) importance; and
  (ii) the extent to which they reflect current practice. [App. 6.1]
- Participants invited to suggest additional principles that may have been omitted from the list.
- Facilitator summarises unit:

Principles of assessment



Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Assessment **-** a process for obtaining information that is used for making decisions about students, curricula and programmes, and educational policy.

Formative assessment **-** judgements about the quality of students' achievement, while the students are still in the process of learning. Such judgements help guide the next steps in learning. . . . Formative assessment [is] used to support the learner developmentally and to feed back into the teaching/learning process.

Ongoing informal formative assessment is designed to monitor and encourage learning progress, providing guidance to the learner in the form of self-assessment and teacher assessment; most importantly, this kind of diagnostic assessment guides the teacher's planning and encourages the setting of appropriate differentiated tasks depending on the learner's responses. This element should be internally assessed and might or might not, be moderated (Lubisi et al., 1997: 14-16)

Ongoing formal formative assessment which provides for a variety of ways of demonstrating competence across a range of contexts; these should be structured so that they can lead to the award of marks or grades which can be recorded and included in summative assessment; they should also be based on interesting and demanding tasks which motivate and support learning and should be accompanied by helpful feedback to the learners as well as formal recording of results. This element should be internally assessed and may be externally moderated when appropriate (Lubisi et al., 1997: 14-16)

Summative assessment - judgements about the quality or worth of a student's achievement after the instructional quality is completed. In general, summative assessment is less useful in terms of planning day-to-day learning activities than formative assessment.

Test - an instrument or systematic procedure for observing and describing one or more characteristics of a student, using either a numerical scale or classification system

Evaluation - the process of making a value judgement about the worth of a student's product or performance. (for example, judging a student's writing relative to the writing of other students).

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2 UNIT

INSTRUCTIONAL GOALS AND OBJECTIVES

SUMMARY: What are objectives and learning targets?

Objectives/Learning Targets:

Participants will:

- Distinguish between different types of goals and objectives, including broad goals, general learning targets and specific learning objectives.
- Distinguish between mastery and developmental learning targets
- Recognise the importance of communicating performance targets to students
- Identify strengths and weaknesses in learning objectives
- Categorise learning objectives according to Bloom's taxonomy.
- Use semantic mapping and semantic feature analysis as tools for assessing students' background knowledge, and involving students in setting learning targets
- Write appropriate learning targets for a subject area or work setting of their choice

Phase 1 Activate Background Knowledge

- Facilitator overviews objectives (learning targets) for the lesson and emphasises the importance of setting and communicating learning targets before each lesson.
- Facilitator differentiates between educational goals and instructional objectives
- Participants work in groups, reflect on a teaching task they performed recently, the instructional targets for the task, and whether or not the targets were achieved. [App. 2.1]
- Facilitator provides rationale for distinguishing between different types of instructional goals and objectives.

Phase 2 Construct Meaning

- Facilitator presents a model of teaching involving three basic processes, and explains the importance of educational goals and learning targets in this context.

Three-process model of teaching

1. Deciding on what the student is to learn
2. Carrying out the instruction
3. Evaluating the learning

- Facilitator explains other reasons for setting learning goals and targets, including ***communicating to students*** the performance they are expected to learn; Helping teachers and/or curriculum designers to make their own educational goals explicit
- Facilitator distinguishes between broad educational goals, general learning targets, and ***specific learning targets***
- Participants work in pairs to categorise statements as
  - (i) broad educational goals;
  - (ii) general learning targets; and
  - (iii) specific learning objectives. [App 2.2]
- Facilitator distinguishes between
  - (i) ***mastery*** and
  - (ii) ***developmental*** learning targets, providing examples of each. [App. 2.3]
- Facilitator distinguishes between
  - (i) learner objectives;
  - (ii) behavioural objectives; and
  - (iii) instructional (teaching) objectives.
- Participants are given a set of poorly written targets and are asked to work together to improve them. [App. 2.4]
- Facilitator distinguishes between ***cognitive***, ***affective*** and ***psychomotor*** [App. 2.5].
- Participants categorise learning outcomes according to this framework [App. 2.6]

- Participants categorize objectives according to Bloom's taxonomy. [App. 2.7]
- Facilitator notes the importance of involving students in learning and assessment, including ***goal-setting to create shared learning outcomes.*** Student involvement in lessons is also stressed.
- Participants engage in developing a semantic map and in doing a semantic feature analysis. These are presented as interactive strategies for assessing a student's background knowledge ***before*** new content is presented. [App. 2.8 & App. 2.9]

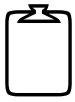
Phase 3 Evaluate and Apply

- Facilitator reviews identification of effective learning objectives. [App. 2.9]
- Participants, working in groups, review the learning targets developed in App. 2.1, and make any changes they feel are necessary. [App. 2.10 & 2.1]
- Participants categorize their learning targets according to Bloom's taxonomy.
- Facilitator discusses how learning targets might be communicated to students.

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:



Educational goals - statements of 'those human activities which contribute to the functioning of society (including the functioning of an individual in society) and which can be acquired through learning' (Gagne, Brigs & Wagner, 1988). Educational goals tend to be broader than learning targets (or performance objectives). Example of educational goal: Every student should acquire skills in mathematical problem solving.

Learning target (also performance target, specific learning target)- A clear statement of what students are to achieve by the end of the unit of instruction. (Nikto, 2004). Learning targets may be general or specific.

General learning target - a statement of an expected learning outcome that is derived from an educational goal. General learning targets are more specific than educational goals, and are usually clear enough for planning of a course. Example: Acquire the skills needed to use common instruments to measure length, volume, and mass in metric units.

Specific learning target - a clear statement of what students are to achieve by the end of a unit of instruction. Example: Measure the volume of liquids to the nearest tenth of a tenth of a litre, using a graduated cylinder.

Semantic mapping - an approach to developing vocabulary knowledge in which words are organised in meaningful clusters, emanating from a central theme. Can be used as an individual or group activity, before or after an instructional unit. Can be used to assess vocabulary knowledge, and to promote student involvement in learning.

Semantic feature analysis - an approach to developing vocabulary knowledge that draws attention to the similarities and differences among a group of events, people, objects or ideas. Can be used to assess vocabulary knowledge, and to promote student involvement in learning.

Taxonomy - a comprehensive outline of a range of cognitive abilities that one might teach. Bloom's Taxonomy classifies performance into six major headings, ranging from simple to complex (knowledge, comprehension, application, analysis, synthesis, evaluation).

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3 UNIT

RESPONDING TO AND EVALUATING ORAL WORK - ASKING QUESTIONS TO ASSESS LEARNING

SUMMARY: How can questions be used effectively to assess learning?

Objectives/Learning Targets:

Participants will:

- Identify formative assessments in the area of oral language
- Identify aspects of questions that make them easy or difficult
- Implement a strategy designed to teach and assess different levels of student thinking
- Discuss how a taxonomy of question types might influence formative assessment in their classrooms

Phase 1 Activate Background Knowledge

- Facilitator recaps differences between formative and summative assessment.
- Participants meet in groups to identify oral classroom activities that might be assessed in a formative way. [questions and answers; discussion groups; oral presentations/reports; describing how to do something, or how something was done] [App 3.1]
- Participants contribute suggestions to master list, and suggest ways in which the activities can provide formative information
- Facilitator indicates that the focus of the session will be on answering questions, and helping students to reflect on questions they are asked to answer, or which they compose themselves.
- Participants are asked to examine a text and to generate questions designed to assess students' understanding. Then they are asked to work in pairs to rank order their questions in terms of difficulty, from most difficult to least difficult. , and to rank order the questions in terms of difficulty. [App 3.2]
- Facilitator asks participants why some questions are more difficult than others.

Phase 2 Construct Meaning - Question-Answer Relationships

- Facilitator explains that questions can be categorised according to the types of thinking in which students are likely to engage. While there are many frameworks for classifying questions, one strategy - Question-Answer Relationships - can be used to help students in schools to think about the questions they answer.
- Facilitator explains that having students think about questions develops their ***'metacognitve knowledge'*** or their ability to 'think about thinking'. This means that, when they read other texts on their own in the future, they will be more likely to take actions to improve their understanding and memory for the texts.
- Facilitator distinguishes between questions whose answers may be found directly in the text, those that require readers to link information in the text, and those that require the integration of background knowledge and information in the text. The QAR strategy is introduced (lower-level vs. higher-level questions). [App. 3.3]
- Groups implement QAR strategy. One person in each group takes the role of the teacher. 'Students' are asked to reflect on the questions they are asked and to label them, according to where the answer is located. [App. 3.4]

Phase 3 Evaluate and Apply

- Facilitator discusses situations in which QARs might be applied and how metacogntive knowledge can be developed.
- Participants discuss other ways in which questions may be classified - e.g., open-ended vs. closed;
- Facilitator reviews Bloom's Taxonomy as a tool for developing questions. [App. 3.5]
- Participants work in groups to study a short text (preferably a documents text of the type students would encounter in work situations) and write questions at different levels of complexity, based on Bloom's taxonomy. [App. 3.6]
- Facilitator reviews assessment activities in which questions might be used (Teacher-made tests; Homework etc.)

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Metacognition - Higher order thinking which involves active control over the cognitive processes engaged in learning. Activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature. Metacognition is often defined as "thinking about thinking." A related idea is self-regulated learning.

Question-Answer Relationships - A framework for developing and assessing reading comprehension that enables students to locate the answers to comprehension questions (whether based on an oral or written text).

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Nitko, A. J. (2004). *Educational assessment of students.* Pearson Merrill-Hill, NJ: Upper Saddle River. [see especially page 115 - Advantages, limitations and pitfalls of questioning students during instruction].

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UNIT 4

RESPONDING TO AND EVALUATING ORAL WORK - EVALUATING STUDENTS' ORAL PRESENTATIONS (SPEECHES)

SUMMARY: Assessing students' oral presentations (speeches)

Objectives/Learning Targets:

Participants will:

- Identify performance-based assessments, and consider their purposes, strengths and weaknesses.
- Identify criteria for developing a rubric to assess oral presentations
- Implement the scoring rubric.
- Compare their ratings using the scoring rubric, and identify ways to improve reliability.

Phase 1 Activate Background Knowledge

- Facilitator identifies key elements of 'performance-based assessment' and authentic assessment'. [App. 4.1]
- Facilitator proposes students' oral presentations as an example of a performance-related authentic assessment.
- Participants provide examples of topics for oral presentations linked to objectives for their subject areas (Module 2). [App. 4.2; App. 4.3]
- Facilitator asks participants to consider ways in which students might be prepared for an oral presentation (e.g., accessing background knowledge; presenting criteria for an effective presentation (speech)

Performance Assessment = Performance Task + Scoring Rubric

Examples of performance assessments

- Projects
- Portfolios
- Performance tasks (e.g. making a piece of furniture)
- Computer simulations
- Scientific enquiries or investigations
- Oral presentations

Phase 2 Construct Meaning - Discussing Criteria for an Oral Speech

- Facilitator invites groups to 'brainstorm' criteria for evaluating an oral presentation (speech) [App. 4.4]
- Participants work within groups to 'prioritize' criteria, identifying those they view as being most important and those they identify as being least important.
- Groups report on their rankings. [App 4.4]
- Facilitator takes one criterion (e.g., organisation) and discusses how different levels of organisation might be identified in a student's presentation, and rated using a 5-point scale. Facilitator introduces notion of proficiency. [App. 4.5]
- Groups are invited to identify levels of proficiency for other criteria they suggest: (e.g., relevance of content, oral presentation skills) [App 4.5]
- Facilitator demonstrates how to develop scoring rubric based on input of groups.

Many people feel uncomfortable with making and using subjective judgments and find that a good set of scoring guidelines or "rubric" provides a way to make those judgments fair and sound. It does so by setting forth a uniform set of precisely defined criteria or guidelines that will be used to judge student work.

Phase 3 Evaluate and Apply

- Facilitator assigns topic for oral presentation to each group.
- Each group outlines a short presentation, and selects a group member to present.
- Participants rate each presentation, using pre-defined criteria (i.e., a scoring rubric). [App. 4.6]
- Participants sum ratings across criteria. [App. 4.6]
- Facilitator describes how bands of ratings might be used to define proficiency levels [App 4.6]
- Participants compare ratings and discuss reasons why differences in ratings arise
- Facilitator discusses reliability of teacher ratings, and describes ways in which reliability might be improved (team meetings, multiple marking etc.).
- Participants consider how scoring rubrics might be used for other assessment e.g., writing (to be covered in a later module)

Advantages of Performance-based Assessments

1. Performance tests clarify the meaning of complex learning targets
2. Performance tasks assess the ablity to do
3. Performance assessment is consistent with modern-day learning theory (e.g., constructing meaning for themselves from educational experience)
4. Performance tasks require integration of knowledge, skills and ability.
5. Performance assessments may be linked more closely with teaching activities
6. Performance tasks broaden the approach to student learning
7. Performance tasks let teachers assess the processes students use as well as the products they produce.

Nitko (2004)

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Authentic assessment - Assessment strategies that require students to directly reveal their ability to think critically and to apply and integrate their knowledge. Examples include assessment of oral presentations, essays, portfolios and project work.

Scoring rubric - judgements about the quality or worth of a student's achievement after the instructional process is completed. Using involves application of a set of scoring criteria.

Oral presentation - a performance assessment that permits students to verbalise their knowledge and use their oral skills in the form of interviews, speeches, or other spoken activities (Nitko, 2004, p. 251).

Performance assessment - Any assessment technique that requires students to carry out a complex, extended process (e.g., present an argument orally, play a musical piece, write an essay about democracy), or produce an important product (e.g., write a poem, report on an experiment, or create a painting). The complexity of the task distinguishes performance assessments from short answers, decontextualised maths problems, or brief (one class period) essay tasks found on typical paper-and pencil assessments. [see 'authentic assessment' above]

Some examples of ***performance assessment tasks*** include written compositions, speeches, works of art, science fair projects, research projects, musical performances, open-ended math problems, and analysis and interpretation of a story the student has read

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Nitko, A. J. (2004). *Educational assessment of students.* Pearson Merrill-Hill, NJ: Upper Saddle River. [see especially page 116 - Advantages, limitations and pitfalls of classroom assessment techniques] .

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UNIT 5

RESPONDING TO AND EVALUATING ORAL WORK - USING STRUCTURED STUDENT INTERVIEWS

SUMMARY: How can interviews be used to assess students' learning and provide relevant feedback?

Objectives/Learning Targets:

Participants will:

- Identify strengths and weaknesses of the structured interview as a formative assessment tool
- Identify criteria evaluating student learning during interviews
- Consider how 'follow-up' questions can be used to probe student learning in greater detail.
- Implement a 'think aloud' and consider its value in assessing learning.

Phase 1 Activate Background Knowledge

- Facilitator makes distinction between informal and structured interviews, and details characteristics of 'structured' interviews (App. 5.1]
- Group members identify aspects of learning that might be assessed using structured interviews; groups share lists; Facilitator adds as necessary (assessment of language skills, assessment of problem solving, feedback on course structure etc) [App 5.2]
- Facilitator contrasts individual and group interviews

Phase 2 Construct Meaning - Discussing Criteria for an Oral Speech

- Facilitator discusses steps .ess understanding.
- Participants, working in pairs, select a topic in a subject or work situation of their choice, and identify appropriate activities and/or questions that

might be used in an interview situation; responses are shared. [App. 5.3 and 5.4]

- Facilitator discusses use of interviews for formative and summative purposes (including, where appropriate, use of scoring rubrics). [App. 5.5]
- Facilitator discusses use of 'follow-up' questions during interviews.

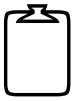
Phase 3 Evaluate and Apply

- Participants split into pairs. Facilitator distributes a set of texts. One participant in each group engages in a 'think aloud', identifying his or her thought processes as they read the text. Participants discuss insights they gained from this process, including formative and summative information. [App. 5.6]
- Participants read a second text. One person in each pair interviews the other on aspects of their understanding, using 'follow-up' questions as needed. Participants discuss formative and summative assessment information that they gained from this.
- Participants contrast 'think alouds' with 'questions and answer' style interviews.
- Participants, working in groups, list strengths and limitations of interviews for assessing students' knowledge and misconceptions. [App. 5.7 & 5.8]
- Groups share their conclusions.

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:



Interview (formal) - A formal interview consists of a series of well-chosen questions (and often a set of tasks or problems) which are designed to elicit a portrait of a student's understanding about a scientific concept or set of related concepts (Southerland, Smith & Cummins, 2000). The interview may be videotaped or audiotaped for later analysis.

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6 UNIT

MULTIPLE METHODS OF ASSESSMENT: STUDENT SELF-ASSESSMENT AND PEER ASSESSMENT

SUMMARY: Strategies for Student Self-Assessment and Peer Assessment

Objectives/Learning Targets:

Participants will:

- Identify aspects of student learning that students can asses themselves.
- Identify several approaches to student self-assessment.
- Consider ways in which inferences about student progress can be made from learning logs and journals.
- Describe ways in which peer assessment can be used in classrooms or work settings.

Phase 1 Activate Background Knowledge

- Facilitator asks participants to read two examples of self-assessment styles, and introduces the concept of self assessment. [App. 6.1]
- Participants work in groups to consider aspects of learning that students might assess themselves as well as ways in which students might become involved in self-assessment. They are encouraged to reflect on previous teaching experiences in which students reflected on their own work. Why did students do this? Outcomes shared.
- Facilitator discusses rationale for engaging students in self-assessment (increased involvement of students in learning process; developing sense of ownership; following self-assessment, students may set new goals for themselves; With practice, students who self-assess become more conscious learners, able to apply knowledge of their learning needs and styles to new areas of study etc.)

Phase 2 Construct Meaning

- Facilitator explains value of 'self-questioning' and describes a reading activity in which students engage in self-questioning. [App. 6.2 and App. 6.3]
- Facilitator explains strategies that students can use to assess their own background knowledge about a topic. Includes KWL. [App. 6.4]
- Facilitator asks participants to reflect on the value of ***learning logs*** (including ***'double-entry' learning logs*** as an approach to promoting self-assessments.
- Participants work in groups to identify benefits of learning logs. [App. 6.5]
- Participants are asked to suggest ways in which they might evaluate the quality of students' learning logs (e.g., development and application of scoring rubrics; application of Bloom's taxonomy to assess quality of thinking). [App. 6.5]
- Facilitator discusses use of ***portfolios*** to promote student self-assessment. [App. 6.6]
- Facilitator introduces concept of ***'peer assessment'*** and suggests aspects of learning (e.g., writing, project work) that might be assessed using peer assessment. Facilitator points out that peer assessment can be seen as a learning experience in exercising judgment and assessment, and a first step in developing [the] … ability to assess [one's] … own work and [one's] … own strengths and weaknesses in a realistic manner.

Phase 3 Evaluate and Apply

- Participants are asked to work in groups to develop a ***self-assessment checklist*** for students. (App. 6.7)
- Participants, working in groups are invited to share insights from their learning logs since the beginning of the course, as well as any questions they might have.
- Facilitator summarises value of learning logs and contrasts learning logs with other forms of assessment such as portfolios (which could include learning logs).

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Portfolio refers to a limited collection of a student's work used for assessment purposes either to present the student's best work, or to demonstrate the student's educational growth over a given time span. (Examples: Writing portfolio; art portfolio; problem-solving portfolio; mathematics portfolio). (Nitko, 2004)

Peer assessment. Assessment of a student's work by one or more peers, such as other students on the same course. Such assessment should focus on the positive, and should be done under the supervision of the teacher.

Self-assessment refers to opportunities given to learners to assess their own progress or learning. This implies that criteria for an outcome has to be defined and learners are asked to assess their own efforts to determine the extent to which the criteria have been met. Self-assessment can lead to effective learning. It leads to the ability to reflect on and to criticise one's own learning. Self-assessment "provides learners with an opportunity to take responsibility for their own learning and it gives learners greater ownership of the learning which they undertake" (Gravett, 1996: 81).

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UNIT 7

MULTIPLE METHODS OF ASSESSMENT: ASSESSING STUDENTS' METACOGNITIVE KNOWLEDGE AND SELF-REGULATED LEARNING

SUMMARY: Participants consider ways in which metacognitive knowledge and self-regulated learning might be assessed.

Objectives/Learning Targets:

Participants will:

- Explain the terms 'metacognitive knowledge' and 'self-regulated learning' and identify their implications for student learning.
- Identify ways in which approaches to formative assessment already covered might be modified to promote metacognitive knowledge and self-regulated learning.
- Identify components of the learning cycle
- Design a rating scale that could help students to become more aware of their own learning.

Phase 1 Activate Background Knowledge

- Participants, working in groups, read short paragraphs describing students who are not performing successfully at academic tasks, and suggest how their situations might be improved. [App. 7.1]
- Facilitator distinguishes between aspects of knowledge and learning that are ***cognitive*** and ***metacognitive.*** [App. 7.2]
- Facilitator identifies components of metacognitive functioning:
  - (i) self-regulated learning;
  - (ii) attitude towards a task; and
  - (iii) control of attention towards the task. [App. 7.3]

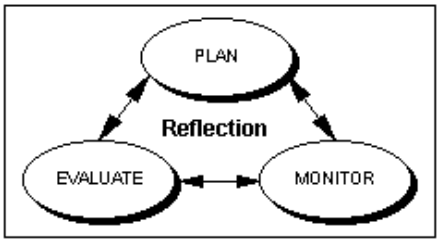
Learners who reflect on their learning establish a link between what they know about learning (metacognitive knowledge) and what the they do about learning (self-regulated learning). Self-questioning facilitates the reflective process.

- Participants, working in groups, suggest 2-3 learning targets for each of these aspects of functioning. [App. 7.4]

Phase 2 Construct Meaning

- Facilitator introduces the cycle of self-regulated learning, outlining each component of the cycle including planning (analyzing the learning task, setting learning goals, planning learning strategies); monitoring (am I using the strategy as planned? Is it working?); and evaluate (did I use the strategy(ies) properly? Did they work? Did the strategy match the learning task?)

CYCLE OF
SELF-REGULATED LEARNING



- Facilitator discusses strategies that might be used to develop self-regulation: rehearsal strategies, elaboration strategies, organizational strategies, comprehension monitoring strategies, affective strategies. (Contrast 'deep' vs.; 'shallow' learning). [App. 7.5]
- Facilitator explains that high- and low achieving students differ in terms of their self-regulated learning skills.
- Participants are asked to list any metacognitive strategies or self-regulated learning activities in which they engage themselves. [App. 7.6]

Phase 3 Evaluate and Apply

- Participants, working in groups, identify assessment strategies (already covered) that could promote metacognitive monitoring and self-regulated learning. [self-questioning; self-assessment; semi-structured interviews; application of scoring rubrics; portfolio assessment etc.) [App. 7.7]
- Facilitator demonstrates how to construct a measure of self-regulated learning that might be administered to students, to help develop their awareness of their own learning strategies). Facilitator provides 3-4 sample items to which students might respond, on a four-point scale (never or almost never, sometimes, often or always/almost always) [App. 7.8]
- Participants, working in pairs, develop additional items, relevant to subject areas or tasks with which they are familiar

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Self-reglated learning - refers to some rather specific ways that *learners take control of their own learning*. According to Schunk and Zimmermann (1998), self regulated learning... occurs largely from the influence of students' self-generated thoughts, feelings, strategies, and behaviors, which are oriented toward the attainment of goals.

Self-regulated learning involves the active, goal-directed, self-control of behavior, motivation and cognition for academic tasks by an individual student. (Pintrich, 1995).

Self-regulated learning is a way of approaching academic tasks that students learn through experience and self-reflection. It is not a characteristic that is genetically based or formed early in life so that students are "stuck" with it for the rest of their lives. (Pintrich, 1995)

Metacognitive knowledge - is one's defined as one's knowledge concerning one's own cognitive processes and products or anything related to them (Flavell, 1976)

Metacognition - refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes... usually in the service of some concrete goal or objective (Flavell, 1976)

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8 UNIT

MULTIPLE METHODS OF ASSESSMENT: DEVELOPMENT AND INTERPRETATION OF TEACHER-MADE TESTS (MULTIPLE-CHOICE AND SHORT ANSWER)

SUMMARY: Participants construct two types of teacher-made tests, based on the same text, and compare them.

Objectives/Learning Targets:

Participants will:

- Distinguish between teacher-made tests and norm-referenced standardised tests, in terms of structure and purposes
- Recognise issues of test ***reliability*** and ***validity*** as they relate to classroom assessment (teacher-made tests) and externally-developed tests
- Engage in development of a teacher-made test that includes multiple-choice and short-answer items.
- Identify ways in which the test could be used for
  - (i) formative; and
  - (ii) summative purposes.

Phase 1 Activate Background Knowledge

- Facilitator distributes multiple-choice test, based on previous modules on formative assessment
- Facilitator discusses 'standardised procedures' for administering the test, including conditions under which the test is to be administered.
- Participants complete the 10-item test independently (time limit: 5 minutes). [App. 8.1]
- Facilitator provides participants with a 'scoring key' and asks them to score their tests. [App. 8.1]
- Facilitator shows how score bands might represent levels of achievement (proficiency levels).
- Facilitator discusses the structure of the test, and asks participants whether it represents 'formative' or 'summative' assessment (pointing out that, ultimately, this judgement rests on how the results will be used)
- Facilitator discusses features of multiple-choice tests [App. 8.2]
- Participants discuss the quality of the multiple choice questions used in Appendix 8.1 [App. 8.3]

Phase 2 Construct Meaning

- Facilitator makes distinction teacher made vs. externally-developed tests
- Facilitator shows example of standardised, norm-referenced test and tables of norms. Reference to normal distribution. The norm group may be all students nationally at the same class level, or in the same age range. [App. 8.5]
- Facilitator introduces key concepts associated with norm-referenced, standardised tests - validity and reliability. Validity is explained with reference to the relatedness of items to learning targets (content validity) and uses of assessment outcomes (consequential validity).

Validity is a matter of degree, not all or none.

- Participants read through a list of purposes for testing, and consider when standardised, norm-referenced test might be appropriate (e.g., a psychological assessment), and when teacher-made tests might be suitable. [App. 8.6]
- Facilitator explains that both norm-referenced and teacher-made tests can consist of multiple-choice items, short-answer items, or some combination of both.
- Facilitator discusses key features of short-answer tests. [App. 8.7]

Phase 3 Evaluate and Apply - Developing a Teacher-made Test

- Participants read a sample text (preferably a document, of the type students would be expected to read, either in everyday life, or in employment situations)
- Participants work in pairs to identify key learning targets for understanding the text (i.e., information that students would be expected to know and remember). Learning targets can be categorised according to Bloom's Taxonomy.
- Participants develop, first a multiple-choice test, and then a short-answer test, based on the text. [App. 8.4, 8.8]
- Participants check for quality of responses to multiple choice items.
- Participants combined short-answer and multiple-choice items to create a 'hybrid' test in which there is no overlap between questions.

- Participants suggest ways in which the test(s) they have constructed could be used for
  - (i) formative and
  - (ii) summative purposes.

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:



Reliability -Reliablility refers to the degree to which a test or other assessment is consistent and stable in measuring what it is intended to measure. Most simply put, an assessment is reliable if it is consistent within itself and across time.

Validity - validity refers to the degree to which an assessment actually measures what it claims to measure. Validity is also the extent to which inferences, conclusions, and decisions made on the basis of scores or other measures of performance are appropriate and meaningful. Messick (1989) points out that validity is a matter of degree, not absolutely valid or absolutely invalid. He advocates that, over time, validity evidence will continue to gather, either enhancing or contradicting previous findings.

Relationship between Reliability and Validity - Test validity is requisite to test reliability. If a test is not valid, then reliability is moot. In other words, if a test is not valid there is no point in discussing reliability because test validity is required before reliability can be considered in any meaningful way. Likewise, if as test is not reliable it is also not valid.

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UNIT 9

MULTIPLE METHODS OF ASSESSMENT: ASSESSMENT OF WRITING

SUMMARY: What approaches are there to assessing students' writing?

Objectives/Learning Targets:

Participants will:

- Recognise learning targets that can be assessed using restricted or extended writing tasks
- Develop writing prompts designed to assess higher-level thinking.
- Apply an analytic scoring rubric to a writing sample
- Discuss threats to reliability of writing scores, and approaches to enhancing reliability.
- Identify ways of providing substantive qualitative feedback about their writing to students

Phase 1 Activate Background Knowledge

- Facilitator contrasts ***restricted and extended writing tasks***, and suggests ways in which writing can assess aspects of learning that cannot be accessed by other assessments (e.g., oral questions, multiple-choice questions, short-answer questions) [App. 9.1]
- Participants examine a list of approaches to assessing writing (designed to provide varying levels of quantitative and qualitative feedback), and decide whether these can assess any of the identified learning targets.
- Participants decide whether the information likely to be generated by each assessment approach is primarily
  - (i) formative;
  - (ii) summative.

Skills that can be assessed by extended writing tasks include:

- Recall of knowledge
- Organizing
- Summarizing
- Classifying
- Comparing
- Relating
- Analyzing
- Synthesizing
- Evaluating
- Generating
- Inferring
- Predicting
- Concluding
- Applying
- Solving
- Creating

Some writing genres

- Descriptions (of persons, places, things)
- Narration (stories, reports, news articles)
- Exposition (essays, definitions, explications, summaries)
- Argumentation/Persuasion (comment, scientific argumentation)
- Injunction (instructions, rules, regulations, statutes)
- Advertisements (invitations, summonses, warnings, notices)
- Charts and graphs
- Forms
- Maps
- Schematics (diagrams accompanying texts)
- Tables (timetables, spreadsheets, indexes)
- Electronic texts

Phase 2 Construct Meaning

- Facilitator distinguishes between tasks that are primarily designed to assess students' ***general writing ability*** and tasks designed to assess ***subject matter knowledge***. [also App. 9.1]
- Working in groups, participants examine a set of subject-matter writing tasks, and decide which dimension of Bloom's taxonomy each one assesses. [App. 9.2]

- Facilitator provides guidelines for writing subject-matter essay questions. [App. 9.3]
- Participants, working in small groups, construct writing questions (prompts) relevant to the needs of students in vocational schools. [App. 9.4]
- Facilitator refers to 7 traits that can be examined in students' writing (ideas, organization, voice, word choice, sentence fluency, conventions, presentation). Discusses how these may be assessed using an analytic scoring rubric, by reviewing an earlier rubric for assessing an oral presentation. [App. 9.5]

Phase 3 Evaluate and Apply

- Participants apply the scoring rubric to a writing sample provided by the facilitator, or by the course organizers) [App. 9.7; App. 9.8]
- Participants, working in pairs, discuss the scores they have assigned, and reasons for those scores.
- Facilitator indicates threats to the reliability of writing scores, and suggests ways in which these can be addressed.

The degree of agreement between the scores assigned by two independent scorers is a measure of the reliability of an assessment. This type of consistency is needed for a performance assessment to yield good data that can be meaningfully combined across classrooms and used to develop school improvement plans.

- Facilitator discusses ways in which qualitative (or formative) assessment information arising from a writing task can be given to students (including written feedback on their achievement of key learning targets).
- Facilitator provides a writing prompt related to vocational education students (e.g., The quality of life for young people in Macedonia has improved in recent years).
- Participants are asked to work in pairs to develop a ***holistic scoring rubric*** (a five point scale) that could be applied to students' completed texts.
- Facilitator summarises guidelines for providing formative written feedback to students about their writing and learning.

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:



Writing prompt - a writing prompt provides background information on the writing task, briefly describing the a problem or situation to be considered. This information sets the stage for writing, and is written in a way that captures students' interest in the topic.

Scoring rubric - a scoring rubric is a descriptive scoring schemes that is developed by teachers or other evaluators to guide the analysis of the products or processes of students' efforts (Brookhart, 1999). Scoring rubrics are typically employed when a judgement of quality is required and may be used to evaluate a broad range of subjects and activities. One common use of scoring rubrics is to guide the evaluation of writing samples.

Elements of a scoring rubric

- One or more traits or **dimensions** that serve as the basis for judging the student response
- **Definitions and examples** to clarify the meaning of each trait or dimension
- A **scale** of values on which to rate each dimension
- **Standards** of excellence for specified performance levels accompanied by models or examples of each level

-- Herman, Aschbacher, and Winters (1992)

Holistic scoring rubric - Occasionally, it is not possible to separate an evaluation into independent factors. When there is an overlap between the criteria set for the evaluation of the different factors, a holistic scoring rubric may be preferable to an analytic scoring rubric. In a holistic scoring rubric, the criteria are considered together on a single descriptive scale (Brookhart, 1999). Holistic scoring rubrics support broader judgments concerning the quality of the process or product.

Analytic (trait) scoring rubric - A scoring rubric or scale that can be used to assess multiple aspects of a subject. For example, a writing trait rubric might assess conventions, ideas and content, organisation, sentence fluency, voice and word choice.

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10 UNIT

MULTIPLE METHODS OF ASSESSMENT: PORTFOLIO ASSESSMENT

SUMMARY: Participants consider ways in which portfolios of students' work can be used as assessment tools.

Objectives/Learning Targets:

Participants will:

- Distinguish between the use of portfolios for formative assessment (demonstrating the student's educational growth over time), and for summative purposes (student's best work)
- Become familiar with the components of growth and learning portfolios.
- Identify ways in which students might assess their own portfolios (student self-assessment)
- Identify criteria for assessing student portfolios

Phase 1 Activate Background Knowledge

- Facilitator defines portfolios, and gives examples of portfolios in different teaching and learning contexts (e.g., portfolios being used as part of a state-wide writing assessment in Kentucky; portfolios being used for adult certification, such as teacher certification in the US;).
- Facilitator explains that a portfolio is a ***limited collection*** of a students' work used mainly in order to: present the students' best work; or to demonstrate the student's educational growth over time.
- Facilitator outlines main purposes of ***best work*** portfolios:
  - (i) a student's best works are selected as providing convincing evidence that the student has achieved specific learning targets; and
  - (ii) communication. [App. 10.1]

Portfolios, because of their depth and necessary time commitment, are excellent tools to support integrated learning across a range of academic and interpersonal skills.

- Facilitator outlines purposes of ***growth and learning*** portfolios and outlines components of same.
- Participants suggest how portfolios might be used for assessment purposes in subjects with which they are familiar.[App. 10.2]

In contrast to projects that typically require students to produce one product related to a few standards or themes, portfolios generally require a variety of student work related to multiple standards or themes.

Six steps for crafting a portfolio system (Nitko, 2004)

1. Identify portfolio's purpose and focus
2. Identify the general achievement dimensions to be assessed.
3. Identify appropriate organization
4. Decide on portfolio's use in practice.
5. Evaluation of portfolio and entries.
6. Evaluation of scoring rubrics.

Phase 2 Construct Meaning

- Facilitator describes characteristics of a good portfolio (taken from McMillan, 1997) [App. 10.3]
- Participants work in pairs to identify what might be included in a portfolio based on a work placement, or a course of their choice. Ideas are shared in plenary session. [App. 10.4]
- Facilitator discusses ways in which students in schools might be engaged in developing their portfolios. [App. 10.5]

Assessment of portfolios can involve the application of multiple scoring rubrics.

Phase 3 Evaluate and Apply

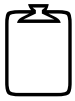
- Facilitator presents a sample table of contents and score distribution that includes marks to be assigned by the teacher (80%) and the student (20%). [App. 10.6]
- Participants discuss how portfolios linked to student participation on work experience might be assessed. [App. 10.7]

- Facilitator presents 'Student Artifact Reflection Form' which can be used to rate objects/artifacts that are included in a portfolio. [App. 10.8; App. 10.9]
- Facilitator discusses other criteria for assessing portfolios, such as the growth and development in relation to key curriculum expectancies and indicators; understanding and application of key processes; completeness, correctness and appropriateness of products and processes presented in the portfolio; diversity of entries.
- Participants, working in groups, identify some advantages and disadvantages of portfolios as assessment tools. Facilitator supplements list. [App. 10.10]

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:



Portfolio - a portfolio is a limited collection of a students' work used mainly in order to present the students' best work; and to demonstrate the student's educational growth over time.

Portfolio assessment - A portfolio assessment involves the structured collection of student work that documents students' application of knowledge and skill in a variety of authentic contexts.

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UNIT 11

MULTIPLE METHODS OF ASSESSMENT: PROJECT WORK

Objectives/Learning Targets:

Participants will:

- Become familiar with the steps in implementing individual and group projects
- Develop a written plan for a project in a subject area of their choice
- Identify ways in which the project can lend itself to formative evaluation
- Develop a scoring rubric for the project they have planned, that includes attention to completed products and an oral presentation of the project.
- Compare and contrast portfolios and projects as tools for assessment.

Phase 1 Activate Background Knowledge

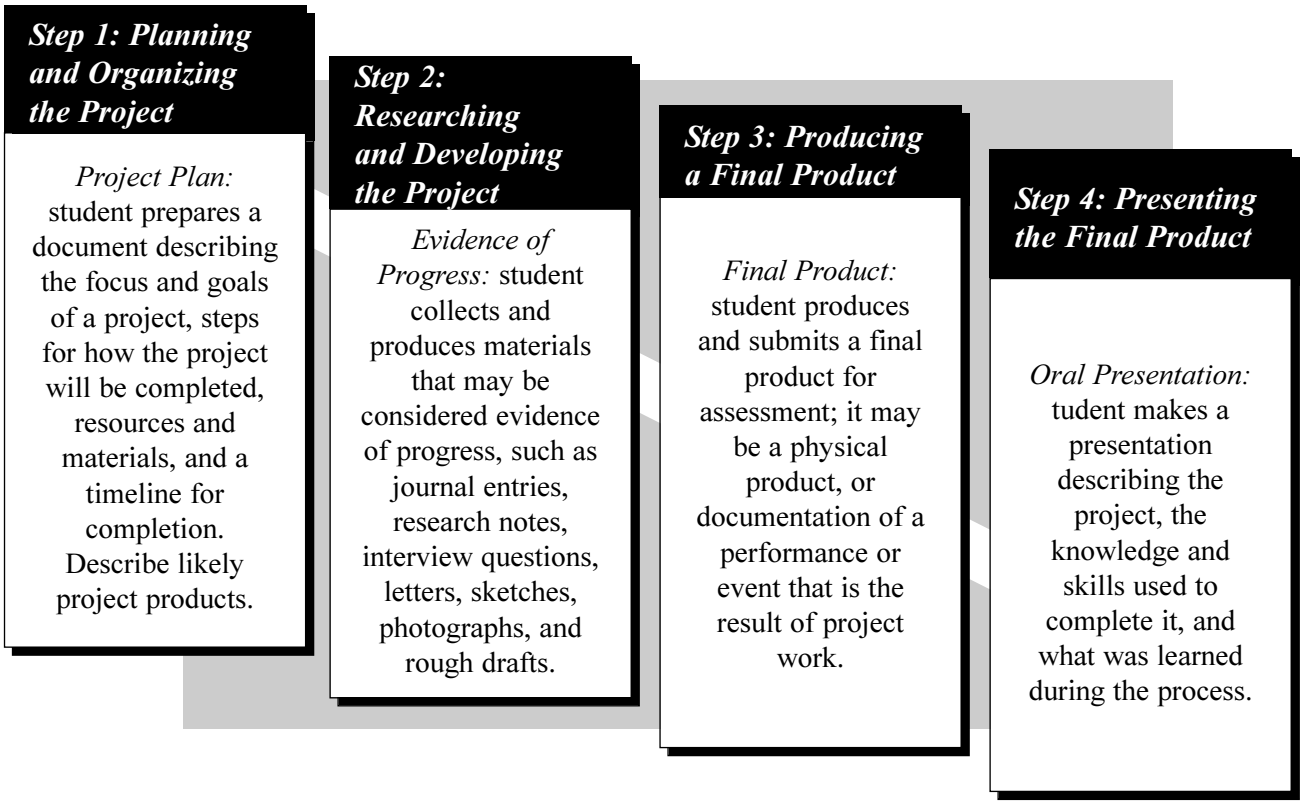
- Facilitator identifies project work as an example of performance-based assessment and provides examples of the types of projects that students in this age group might undertake. [App. 11.1]
- Participants suggest additional projects suitable for students in this age range.

A project is an in-depth, hands-on exploration of a topic, theme, idea, or activity, resulting in a product, performance, or event for assessment.

Project assessments can measure students' standards-based knowledge and skills as applied in authentic situations. They can also assess how well students are able to evaluate their own work, solve problems, plan and carry out complex activities, and communicate findings to an audience. Perhaps the most important feature of project assessments is that they involve hands-on applications.

Phase 2 Construct Meaning

- Facilitator presents four basic components of a project: These four parts are: (1) planning and organizing the project; (2) researching and developing the project; (3) producing a final product, performance, or event; and (4) presenting the final product.
- Facilitator outlines need to provide students in schools with a structure for the project, to help them organize and demonstrate their learning and allow for teacher intervention or support along the way, as necessary.
- Facilitator emphasizes importance of having students produce evidence of progress during the research and development phase, so that progress can be demonstrated, and teachers can offer feedback to the students regarding their work, and make suggestions for improvement, if needed.
- Facilitator and participants examine stages of a project.



Source: Anada, S. (2000), page 12

- Participants complete project plan (App. 11.2)

Using a predetermined structure, projects can be conducted by individual students or by groups of students working in collaboration

- Facilitator recommends that, in addition to the final product, students make an oral presentation, as this provides an opportunity to receive public acknowledgement for their hard work, as well as to reflect on their project work and experiences. It also helps develop their communication skills.

Specifically, group projects:

- mirror real-world activities, which often call for collaboration;
- allow students to undertake significant efforts that are beyond the scope of any one individual (e.g., specific community projects); and
- reinforce important interpersonal skills (e.g., cooperate with others, advocate and influence, resolve conflict and negotiate, guide others).

Phase 3 Evaluate and Apply - Assessment of Project Work

- Participants are asked to consider how to assess projects in which a group of students are involved. Facilitator notes that one approach used to address this is to carve out specific roles for team members from the onset of a group project. This helps ensure that all team members participate meaningfully in the process and provides a basis for scoring an individual's performance.

Should everyone who worked on a group project receive the same score? How do you ensure that each student has a meaningful role in the group project? One approach used to address these questions/issues is to carve out specific roles for team members from the onset of a group project. This helps ensure that all team members participate meaningfully in the process and provides a basis for scoring an individual's performance.

- Participants examine approaches to assessing projects, drawing on previously introduced assessment strategies (App. 11.3, 11.4).
- Participants work in groups to complete project assessment and evaluation plan. (App. 11.5)
- Facilitator compares content of project assessment and evaluation plans, and asked for evidence of student self-assessment.

Questions and Answers.

Participants complete an entry in their learning logs:

Glossary of Terms:

Project - A project is an in-depth, hands-on exploration of a topic, theme, idea, or activity, resulting in a product, performance, or event for assessment (Katz & Chard, 1989). It takes place over a substantial period of time (e.g., weeks, months) and is valued because it represents the best of what a student can do given constructive feedback and opportunities to revise his or her work. Projects focus on depth of knowledge and result in substantial work products.

Individual student project - a long-term activity that results in a student product: a model, a functional object, a substantial report, or a collection (e.g., Build a small piece of furniture using the hand tools used in class this term; Using resources in the school library, write a research paper on why the current state of the German economy, and projections for the future.).

Group project - a project that requires two or more students to work together on a longer project. The major purpose of a group project as an assessment tool is to evaluate whether students can work together co-operatively and create a high-quality project. (e.g., Using resources on the Internet, study racism in football in Europe, and the effectiveness of efforts to address it.).

Portfolios or Projects?

In contrast to projects that typically require students to produce one product related to a few standards or themes, portfolios generally require a variety of student work related to multiple standards or themes (e.g., reports, work samples, awards and certificates, career development documentation, self-reflection and evaluation pieces). As such, portfolio assessments can usually provide a more comprehensive view than projects of students' standards-based knowledge and skills.

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UNIT 12

DISSEMINATING INFORMATION ON FORMATIVE ASSESSMENT- PREPARING TO DELIVER A WORKSHOP

This module is intended to prepare participants to deliver a course to teacher trainers on the implementation of formative assessment procedures in schools and classrooms.

Objectives/Learning Targets:

Participants will develop a plan for a 3-day workshop to disseminate the assessment techniques to other teacher trainers, taking into account the following:

- Involvement of whole-school staffs in formative assessment through regular meetings to review strategy implementation
- Emphasis on the importance of setting appropriate learning targets - both lower and higher order (c.f., Blooms Taxonomy).
- Recommendations to build up approaches to formative assessment by adding new assessment strategies gradually over time
- Emphasise the need to provide positive and constructive feedback to students about their learning
- Emphasise the value (in terms of increasing understanding, as well as reliability of outcomes) of teachers in schools participating in 'conferences' to develop and apply scoring rubrics for different assessments (oral presentations, essays, portfolios, projects etc.)

Phase 1 Activate Background Knowledge

- Facilitator provides participants with a list of strategies that could covered in the course. Participants work in groups to identify those that would be most useful in the short term, according to the needs of teachers and the requirements of the current curriculum.
- Facilitator discusses issues around ongoing professional development of teachers, including active involvement, provision of professional reading, and regular meetings.

Phase 2 Construct Meaning

- Participants work in groups to outline a three-day workshop on formative assessment techniques that link to course content, curriculum requirements, and current status of teachers, with respect to assessment. [App. 12.1]
- Groups make brief presentations on their workshop plans.

Phase 3 Evaluate and Apply - Assessment of Project Work

- Facilitator discusses models for evaluating a three-day course on formative assessment methods. [App. 12.2]
- Participants work in groups to develop a series of statements related to understanding and usefulness of course content, and create multiple-choice items using the distractors: strongly agree, agree, disagree, strongly disagree. [if time is available. . . .]
- Groups make brief presentations on their evaluation templates.
- Facilitators discuss provision of formative information (e.g., learning log), which could also be implemented.

APPENDICES

IMPROVEMENT OF SCHOOL BASED ASSESSMENT

APPENDICES

UNIT 1: BACKGROUND CONCEPTS - INSTRUCTIONAL DECISION MAKING AND DIFFERENCES BETWEEN FORMATIVE AND SUMMATIVE ASSESSMENT

Phase 1 Activate Background Knowledge

Following a brief introduction about the types of decisions that teachers make during teaching, participants are invited to extend the list (First column below).

Appendix 1.1

Decisions made during teaching and learning

Directions: Think about the decisions made by teachers before, during and after teaching. List some key decisions that are made, and the basis for these decisions.

Timing	Decision	Basis of Decision (Information Used)
Before teaching	Content I am going to teach	
Before teaching		
Before teaching		
During teaching	Whether students have mastered content	Students' responses to questions that I ask
During teaching		
After teaching		
After teaching		

Appendix 1.2

Current assessment activities in schools

Directions: List some current assessment activities in Macedonian schools/educational programmes, and circle the frequency with which each one occurs. Then, refer to any decisions taken on the basis of information obtained from each type of assessment.

Assessment Activity	Frequency (circle one)	Decision Taken Using This Information
Teacher asks questions to students to check their understanding of a lesson.	Annual (once a year) Every few months Monthly Fortnightly Weekly Daily Several times a day	
	Annual (once a year) Every few months Monthly Fortnightly Weekly Daily Several times a day	
	Annual (once a year) Every few months Monthly Fortnightly Weekly Daily Several times a day	
	Annual (once a year) Every few months Monthly Fortnightly Weekly Daily Several times a day	
	Annual (once a year) Every few months Monthly Fortnightly Weekly Daily Several times a day	

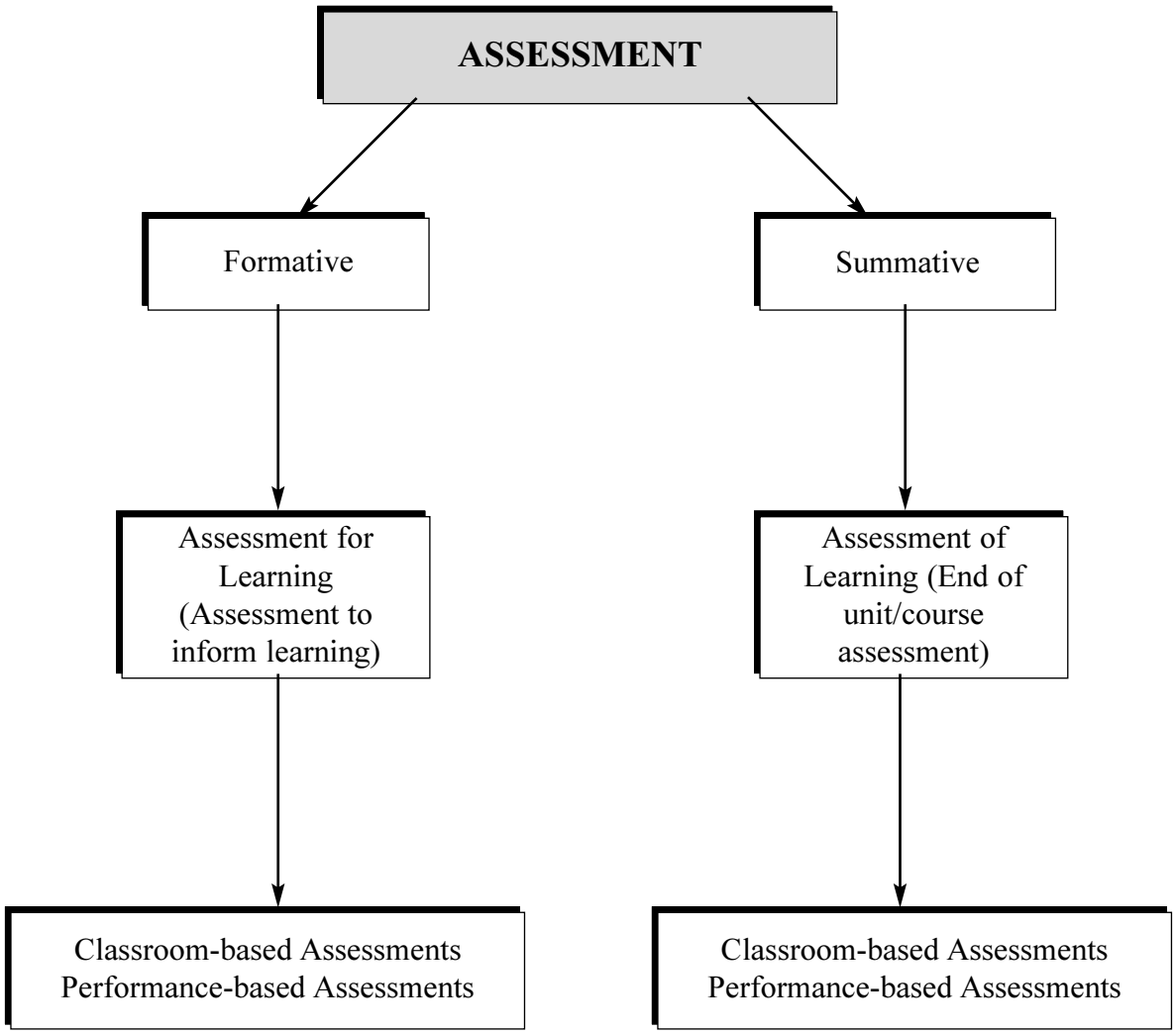
Amount and nature of feedback offered to students

Directions: For each of several current assessment activity, indicate the nature of feedback offered to students . . . . . .

Activity	Nature of Feedback Provided to Students
End-of-term writing assessment	Overall grade (A to E)
Grading of homework	

Appendix 1.4

Different Purposes of Formative and Summative Assessment in Classroom Assessment Contexts



Distinguishing between formative and summative assessment

Directions: For each of the classroom assessments scenarios listed below, indicate whether it is primarily formative, summative, or both

Assessment Scenario	Formative (F), Summative (S), or both (F & S)
The teacher administers a teacher-made test in mathematics at the end of the school year. He uses the results to assign grades to students. These grades will reported to parents and kept on file at the school.	
A teacher interviews each of her students about their interests outside of school. She plans to use this information to identify books and magizines in which students in her language class might be interested.	
Children in 9th year are asked to grade their own essays (writing) using a 5-point grading scale (excellent, very good, good, fair, poor), and this counts as part of their end-of-term grade.	
The teacher completes a checklist indicating which experiments have been completed by each student in her science class. She wants all the students to complete all of the experiments before the end of term.	
Students in an art class keep a portfolio of their work, completed at various times during the school year. For each piece of work, they have written why they like it and how they could improve it.	
The teacher administers a teacher-made test in mathematics at the end of the term, and uses the results to identify students who need extra support in mathematics.	
A teacher asks students to read a text about democracy in Europe in the twentieth century. Then she asks the students to write their own questions about the text.	
Students on a work assignment were asked to maintain a journal or diary describing their experiences. The teacher read the diary at the end of each week, and wrote comments and questions that she expected the students to answer.	

Appendix 1.6

Fundamental Principles of Assessment

Rate the following principles in terms of
(i) importance; and
(ii) use in current practice.

Please use the following scales;

Importance	Current Practice
4 = essential	4 = our practice mirrors statement
3 = very important	3 = our practice has room for minor improvement
2 = quite important	2 = our practice requires some development
1 = of limited importance	1 = our practice requires re-thinking

Importance		Current Practice
	Assessment offers all students an opportunity to show what they know, understand and can do	
	Assessment practice helps students to understand what they can do and identify where they need to develop further and how this can be done	
	The key learning outcomes for each subject have been identified so that assessments can be made against these.	
	Assessment of progress relates to all aspects of the curriculum.	
	Sharing of learning intentions and success criteria is routine practice	
	Assessment practice in the school enhances the learning process	
	Assessments made by the teachers inform planning and allow learning to be matched to the needs of the students	
	Assessment of students' learning is reported to parents in a way which identifies achievements and what the student needs to do to improve	
	Students are involved in assessing their own work and that of their peers	
	Students and teachers work together identifying targets for learning and ways of achieving these.	
	Assessment records including data on each student are updated regularly and passed to the next teachers to aid future planning.	

Source: (UK) Association of Assessment Inspectors and Advisers (www.aaia.org.uk)

Write any additional principles of assessment that you believe are important:

1. _____

2. _____

Appendix 2.1

Identification of learning targets

Directions: **Select a lesson you taught, or a presentation you made, recently. Describe the learning targets (objectives) you set. Then indicate whether or not each target was achieved. For those targets that were achieved, please cite the evidence you drew on.**

Lesson or presentation: _____

Learning targets:

1. _____
2. _____
3. _____

Which of these targets were achieved? For each target, circle on of 'yes', 'no', or 'don't know'. If yes, cite evidence used.

Target 1
yes
no
don't know

evidence: _____

Target 2
yes
no
don't know

evidence: _____

Target 3
yes
no
don't know

evidence: _____

Appendix 2.2

Categorisation of goals and learning targets

Directions: **For each statement below, indicate whether it is**

(i) a general learning goal;
(ii) a general learning target; or
(iii) a specific learning target (objective).

Statement	**Category** (i), (ii) or
Acquire the skills to deliver an effective oral presentation to a group (Language Arts)	
Learn essential life skills (General)	
Discover important principles of mathematics (Math)	
Identify and state the properties of an isosceles triangle (Math)	
Participate in science experiments. (Science)	
Conduct an experiment to show that electricity produces magnetism. (Science)	
Using ingredients provided by the school, prepare a lunch for four people. (Home Economics)	
Write a 2-page report on racism in football in European national leagues. (Civics education)	
Foster an understanding of, and concern for, the interdependence of all humans, all living things and the earth on which they live (History)	
Participate in four classroom activities to improve oral language skills (Language Arts)	
Choose verbs (active or passive) appropriate for the audience and purpose of their writing (Language Arts)	
Predict the effects of nutrition on body functions, performance and disease prevention (Health)	
Read text confidently and summarize the main ideas with supporting details (Language Arts)	
Respond to visual arts experiences in a variety of imaginative ways (Visual Arts)	

Mastery and Developmental Targets

Teacher examines the specific learning targets and points out how some can be classed as mastery targets, while others can be described as developmental targets. Mastery learning targets are statements of what students can do at the end of instruction, and have also been called specific learning outcomes or behavioural objectives. Developmental targets represent skills that that continuously develop to higher levels of achievement.

Samples of mastery learning targets include:

- (Biology) The student can draw models of various types of cells and label their parts.
- (Biology) The student can list the parts of a cell and describe the functions of each part.

Samples of developmental learning targets include:

- Combine information and ideas from several sources to reach conclusions or to solve problems
- Analyse and make critical judgements about the viewpoints expressed in certain passages
- Write imaginative and creative stories

Appendix 2.4

Making Learning Targets More Explicitet

Directions: **Re-write each of the learning targets below so that they are at more explicit, and more useful to a teacher wishing to use them as a basis for assessment.**

1. The student will operate a telephone.

   _____

   _____

   _____

2. The student will appreciate differences between artists.

   _____

   _____

   _____

3. The student will solve algebraic equations in mathematics

   _____

   _____

   _____

4. The student will cooperate with other students in woodwork class.

   _____

   _____

   _____

5. The student will play basketball properly.

   _____

   _____

   _____

Classifying objectives as cognitive, affective and psycho-motor

Teacher explains that objectives can be categorised in different ways that help us make them more specific, achievable and measurable. Learning targets can generally be divided into three domains:

Cognitive: Targets focus on knowledge and abilities requiring memory, thinking and reasoning processes.

Affective: Targets focus on feelings, interests, attitudes, dispositions, and emotional states.

Psychomotor: Targets focus on motor skills and perceptual processes.

Directions: **Classify each of these learning targets as**

(i) cognitive;

(ii) affective; or

(iii) psychomotor.

Remember that some targets can include three aspects. Identify the aspect that the target is mainly about.

	Learning target	Cognitive, Affective or Psychomotor
1	Identify 5 key principles of a market economy.	
2	Practice dribbling skills in basketball.	
3	Identify three difficulties that older people in the community experience.	
4	Complete in a 3 kilometre track race in under 13 minutes. .	
5	Make a presentation to report on the results of a survey of fellow-students about their interests.	
6	Develop an poster to encourage students not to drop out of school.	
7	Develop a positive attitude towards reading by selecting material that is of interest.	
8	Complete a short quiz on 'interests in music'.	
9	Write a letter of complaint to a newspaper about the noise level in the village on Friday nights.	
10	Compare and contrast two pieces of music by Beethoven.	

Appendix 2.6

Bloom's taxonomy

Knowledge
Recalling specifics and universals, the recall of methods and procedures, or the recall of a pattern, structure or setting. Measuring this type of objective requires little more than remembering the appropriate material.
Sample learning target for a short story: Recall the main characters in the story and what they did.
Sample words for knowledge objectives: Define, memorise, list, recall, repeat, relate, name
Comprehension
The lowest level of understanding, where the individual knows what is being communicated and makes use of the material or idea without relating it to other material or seeing its full implications.
Sample learning target for a short story: Explain the main ideas and themes in the short story.
Sample words for comprehension objectives: Restate, discuss, describe, identify, locate, report, explain, express
Application
Using abstractions in particular and concrete situations, which may be in the form of general idea, rules of procedures or generalised methods. They may be technical principles, ideas, or theories which must be remembered and applied.
Sample learning target for a short story: Relate the problems of the characters in the story to the real-life problems people face.
Sample words for application objectives: Translate, interpret, apply, illustrate, operate, sketch, employ
Analysis
The breakdown of a communication into its parts such that the ideas are made clear and the relations between ideas are explicit. Analysis can clarify the communication, indicate how the communication is organised.
Sample learning target for a short story: Identify the literary tools the authors use to convey the characters' feelings to the reader.
Sample words for analysis objectives: Distinguish, differentiate, appraise, analyse, compare, contrast

Synthesis
Putting together of parts to form a whole. This involves working with parts and arranging them to form a pattern or structure.
Sample learning target for a short story: Describe across a number of stories read, the general approach the characters use to resolve their problems.
Sample words for synthesis objectives: Compose, plan, formulate, organise, manage, construct, set-up
Evaluation
Judgements about the value of material and the methods for given purposes. Use of standards for appraisal - they may be determined by the student or given to him or her.
Sample learning target for a short story: Develop one's own set of three or four criteria for judging the quality of a short story. Use the criteria to judge new stories the class reads.
Sample words for evaluation objectives: Judge, evaluate, score, select, value, choose, compute, assess

Appendix 2.7

Activity Based on Bloom's Taxonomy

Directions: **For each of these learning targets, identify whether it mainly involves knowledge, comprehension, application, analysis, synthesis, or evaluation.**

	Learning target	Component of Bloom's Taxonomy (see above)
1	Use scientific principles to make a simple machine	
2	Determine what the rule is that underlies the results obtained from a number of experiments	
3	Show how scientific principles or concepts can be applied when designing a refrigerator	
4	Identify and label the parts of insects	
5	Use standards to evaluate the conclusions drawn from research findings	
6	List known causes of the war in Iraq.	
7	Explain how humans digest food.	
8	Compare and contrast capitalism and socialism.	
9	Write the formula for the area of a circle.	
10	State whether you agree or disagree with the conclusions in a text. Give reasons for your answers.	
11	Based on the text you have read, identify a message that all young people should take note of.	
12	Give examples of propaganda usage in a current newspaper.	

Using semantic mapping as a basis for estimating students' background knowledge about a topic and engaging them in student goal-setting

Teacher explains it is important that students are involved in goal-setting to create shared learning outcomes. An important aspect of learning is the student's ownership over his or her learning. Therefore it is important for the teacher to consider the student's involvement in target setting, which will be dealt with in a later module. However, for the time being, we can focus on student involvement in the lesson. One way of setting or modifying targets during a lesson to suit the students' needs is by examining and activating their background knowledge about the topic. This is an important means of helping students make clear links between what they already know and what they are about to learn, helping higher order learning.

Teacher describes some strategies for activating background knowledge:

Semantic Mapping

- Select a word central to the topic.
- Display the target word.
- Invite the student to generate as many words as possible that relate to the target word.
- Have the student write the generated words in categories. Have the student label categories.
- From this list, construct a map.
- Lead the class in a discussion that focuses on identifying meanings and uses of words, clarifying ideas, highlighting major conclusions, identifying key elements, expanding ideas, and summarizing information.

Participants are then asked to work in groups to develop a semantic map on the concept of assessment.

- Participants identify learning targets based on the outcomes of the semantic map (e.g., based on gaps in learning).

Appendix 2.9

Using semantic feature analysis as a basis for estimating students' background knowledge about a topic and engaging them in student goal-setting

Teacher describes semantic feature analysis as a variant of semantic mapping, where the group must explore their knowledge of a topic in order to examine what goals they need to set in order to learn more about the subject:

- Identify the general topic to be analyzed e.g. nations around the Pacific Rim.
- Make a list of typical examples or ideas related to the topic. Let's look at the U.S, Russia, Japan, Australia, New Zealand, Indonesia, Singapore, and China.
- Put five to 10 of the elements in your list across the top row of the chart.
- Make a list in the leftmost column of the grid some features or characteristics that some of the elements might have.
- Place a + in cells in which a given element has that feature, a - where it doesn't, and leave it blank if you don't know. Here is how the grid might look at this point:

	USA	Russia	Japan	Australia	Indonesia	China	Singapore
Democratic Government	+	+	+		-	-	-
Population							
Size of army							

- Add more columns and rows as ideas for additional features and elements occur to you.
- After completing the grid, summarize what you've found and what you still don't know.

Appendix 2.10

Checklist for evaluating leaning targets

- Does the learning objective stem from a course goal or objective?
- Is the learning target measurable?
- Does the learning objective target one specific aspect of expected performance?
- Is the learning objective student-centered?
- Does the learning objective utilize an effective, action verb that targets the desired level of performance?
- Do learning objectives measure a range of educational outcomes?
- Does the learning objective match instructional activities and assessments?
- Does the learning objective specify appropriate conditions for performance?
- Is the learning objective written in terms of observable, behavioural outcomes?

Directions: **Considering the learning targets developed in App. 2.1, review them and modify as needed. Then classify each learning target according to Bloom's taxonomy. Indicate if it mainly describes knowledge, comprehension, application, analysis, synthesis or evaluation.**

Appendix 3.1

Identifying oral classroom activities that can generate formative assessment information

Directions: List any oral language classroom activities with which you are familiar that could lead to useful formative assessment information.

Oral Language Activity
1. Teacher questions / student responses
2. Student presentations (speeches)
3. Discussion groups
4.
5.
6.
7.
8.

Classifying the questions that accompany a text

[Provide a text in Macedonian that would be suitable for students attending secondary/vocational schools in the target age range - e.g., instructions for cooking food; directions for doing something]

Directions: **Read the text carefully and then write 5 questions designed to assess students' understanding of the text.**

	Question
1	
2	
3	
4	
5	

After you have written your questions, rank order them in terms of difficulty.

Difficulty Level	Question number (see above)
Most difficult	
Second most difficult	
Medium difficulty	
Second easiest	
Easiest	

Criteria for judging difficulty: _____

Appendix 3.3

Explaining Question-Answer Relationships (QARs)

Outline of QAR lesson (from http://www.readwritethink.org)

Student objectives

Students will . . . . .

- Develop an understanding of asking and answering different levels of questions
- Understand that there are four types of questions for a text: On My Own, There, Think and Search, and Author and Me.
- Develop more effective reading comprehension skills by learning and applying the QAR strategy.
- Become more reflective and, subsequently, more aware of their internal reading processes.

Overview

Middle school is a time when students move from reading for literal comprehension to developing inferential comprehension strategies. This lesson provides a foundation for building reflective reading habits, which enables students to develop these higher-level comprehension strategies. Students are introduced to a variety of question-answer relationships (QARs), in an effort to increase comprehension during reading and increase personal awareness of their own reading processes. Using the QAR strategy, students identify different types of questions and learn how to determine the appropriate response for each question type. With continued practice, this process becomes automatic and students ask questions of themselves while reading to monitor comprehension.

Key aspects of the strategy are:

- Metacognition---maintaining an internal dialogue while reading---is important for developing comprehension.
- Introducing question-answer relationships (QARs) as a comprehension strategy motivates students to attend to the text more carefully.
- There are two general categories in the QAR paradigm: In the book (i.e., questions require use of the text) and In my head (i.e., questions that draw on the personal experiences of the reader and author).

- In each category, there are two types of questions. In the book includes Right There questions (i.e., the answer can be found in one specific place in the text) and Think and Search questions (i.e., the answer requires piecing together different parts of the text). In my head includes Author and Me questions (i.e., the answer is related to the reader's personal experiences as well as the author's perspective) and On My Own questions (i.e., the answer is related to the reader's personal experiences).
- Involving students in the process of developing QARs motivates reading interest.

Explain the strategy

Explain to students that there are essentially two kinds of information:

- In the book: the answer can be found in the text
- In my head: the answer cannot be found in the text and must come from the readers' own experiences and knowledge

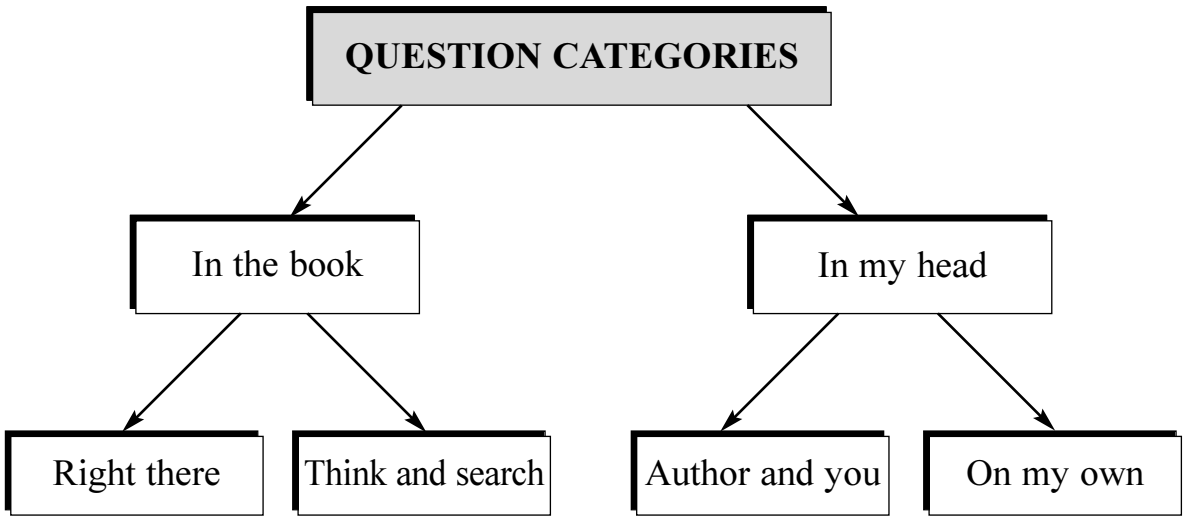
For each kind of information, there are two types of questions.

- In the book

(1) Right There: the answer is clearly stated in the text
(2) Think and Search: the answer is in the text, but the reader has to look for it and synthesize several pieces of information

- In my head

(1) On My Own: the answer can be found by synthesizing information that the reader already possesses
(2) Author and You: the answer is inferred in the text, but the reader must use a combination of information in the text and his or her own knowledge



Appendix 3.3

Right There

The answer is right in the text and usually easy to find.

The words used to make up the question and the answer are usually the same.



Question:

What year did the Civil War end?

Answer:

The Civil War ended in 1865.

Think and Search

The answer is in the text, but you need to put different parts together to answer it.

Words for the question and words for the answer are not usually the same.



Question:

What are the primary organs of the digestive system?

Answer:

The esophagus, stomach and intestines make up the digestive system.

Author and You

The answer is not in the text, but the text will be used to find an answer.

Think of what you already know and link it to what you know from the text. See how they fit together.



Question:

Using the graph, explain why you think there was a sharp dip in sales during 1991?

Answer:

I think 1991 sales were down because there was less income made by households that year.

On My Own

The answer is not in the text so prior knowledge and experiences must be used.

The question can be answered without having read the text.



Question:

Why is it a good idea to conserve water?

Answer:

I think water should be conserved because...

Appendix 3.4

Implementing Question-Answer Relationships (QARs)

Directions: Each group appoints a 'teacher', who passes out a short text (perhaps an informational text) and asks students to read it silently. Then students are asked to identify one question in each QAR category, linked to the text. The teacher records the questions, using a chart such as the following:

QAR	Corresponding Question
Right there	
Think and search	
Author and you	
On my own	

Review of Bloom's Taxonomy

Competence	Skill Generated
Knowledge / Remembering	• observation and recall of information • knowledge of dates, events, places • knowledge of major ideas • mastery of subject matter • *Question Cues:* list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc.
Comprehension / Understanding	• understanding information • grasp meaning • translate knowledge into new context • interpret facts, compare, contrast • order, group, infer causes • predict consequences • *Question Cues:* summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend
Application	• use information • use methods, concepts, theories in new situations • solve problems using required skills or knowledge • *Questions Cues:* apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
Analysis	• seeing patterns • organization of parts • recognition of hidden meanings • identification of components • *Question Cues:* analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
Synthesis	• use old ideas to create new ones • generalize from given facts • relate knowledge from several areas • predict, draw conclusions • *Question Cues:* combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what if?, compose, formulate, prepare, generalize, rewrite
Evaluation	• compare and discriminate between ideas • assess value of theories, presentations • make choices based on reasoned argument • verify value of evidence • recognize subjectivity • *Question Cues:* assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

Appendix 3.6

Use of Bloom's Taxonomy to Develop Questions for Assessment Purposes

Directions: Group leader distributes a short text to participants, who then work together to develop a set of questions, based on the taxonomy, with at least one questions in each category.



Bloom's Taxonomy	Corresponding Question
Knowledge	
Comprehension	
Application	
Analysis	
Synthesis	
Evaluation	

Advantages, limitations, pitfalls of using questions during Instruction to Assess Students

Advantages for Teachers	Disadvantages for Teachers	Suggestions for Improved Use
(a) Permits judgements about students' thinking and learning processes during the course of teaching; gives teacher immediate feedback. (b) Permits teachers to ask questions regarding higher-order thinking and elaborated response (c) Permits student-to-student interaction to be assessed (d) Permits assessment of students' ability to discuss issues with other orally and in some depth	(a) Some students cannot express themselves orally in front of other students (b) Requires education in how to ask proper questions and to plan for asking specific types of questions during a lesson (c) Information obtained tend to be only a small sample of the learning outcomes and of the students in the class (d) Some learning targets (objectives) cannot be assessed by spontaneous and short oral responses; they require longer time frames in which students are free think, create and respond. (e) Records of students' responses are kept only in the teacher's mind, which may be unreliable.	(a) Be sure to ask questions of students who are reticent or slow to respond. Avoid focusing on verbally aggressive and pleasant 'stars'. (b) Wait 5-10 seconds for a student to respond before moving on to another. (c) Avoid limiting questions to those requiring facts or a definite correct answer, thereby narrowing the focus of the assessment inappropriately. (d) Do not punish students for failing to participate in class question sessions or inappropriately reward those verbally aggressive students who participate fully. (e) Remember that students' verbal and non-verbal behaviour in class may not indicate their true attitudes/values.

(from Nitko, 2004; Educational Assessment of Students. Upper Saddle River, New Jersey: Pearson/Merrill/Prentice Hall. (p. 115).

Appendix 4.1

What is a performance assessment?

A performance assessment . . . . . .

- presents a hands-on task requiring students to do an activity that requires applying knowledge from several learning targets;
- uses defined criteria to evaluate how well the student has achieved this application.

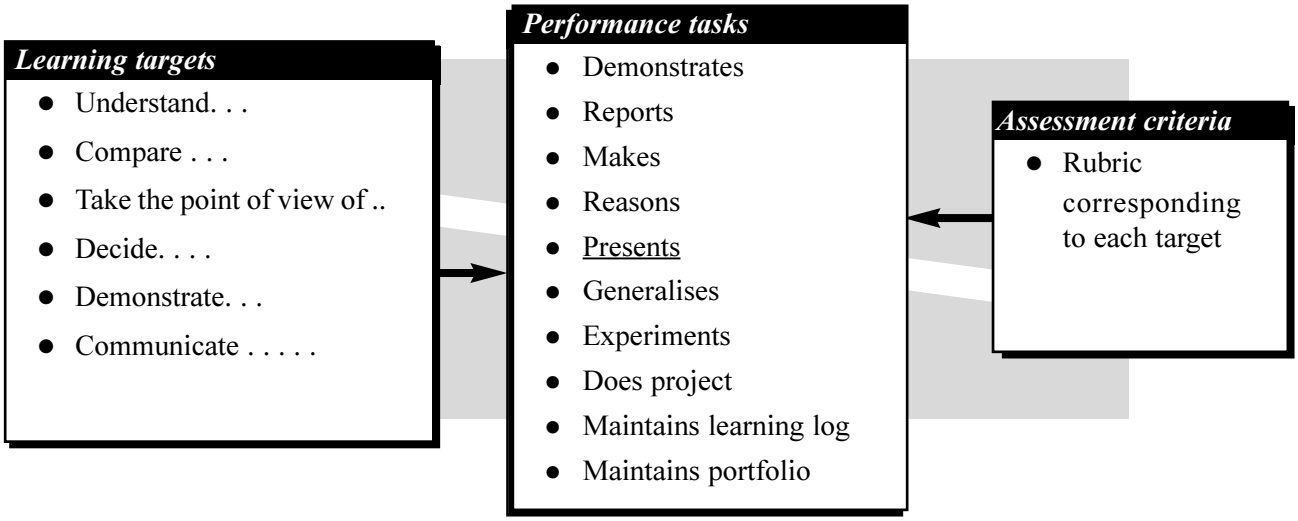
Examples of performance-based assessment:

- building a bookshelf
- producing a report (e.g., report of a group project)
- giving a demonstration (e.g., measuring mass in science)
- engaging in a decision-making task (e.g., you are president of a country that is at war; you must decide what to do to get your enemy to surrender).

Not all learning targets should be assessed using performance assessment; for example:

- learning facts (e.g., structure of a country's constitution)
- comprehending an event or theory
- comparing two concepts (e.g., death, fear)

Simple learning targets require simple assessment formats; complex learning targets require complex assessment (Arter, 1998)



Linking learning targets to performance assessments

Here are some examples of performance assessments:

- Complete a job application form.
- Take part in a telephone interview for a job
- Create a newsletter (group project)
- Using resources in the library, compare, in writing, two candidates who are running for election.
- Demonstrate the proper way to knead dough for bread.
- Communicate (orally or in writing) the results of a science experiment.

Directions: For a subject area of your choice, list five learning objectives in the area of problem solving and/or critical thinking, and identify a suitable performance-based task that might be used to assess it.

Subject area = _____

	Target	*Performance-based Assessment*
1	Students contrasts information about methods of farming in three texts (or websites)	Student writes a short essay contracting the three texts.
2	Students construct an advertisement designed to encourage young people to drink more soft drinks.	
3		
4		
5		
6		

Appendix 4.3

Checklist for judging the quality of performance tasks

	Question	Yes or No
1	Does the task focus on an important aspect of the unit's learning targets?	Y N
2	Does the task actually require the student to do something rather than writing (telling) about how to do something, or simply to recall or copy information?	Y N
3	Do you allow enough time so all of your students can complete the task under your specified conditions?	Y N
4	Is this an open response task? (Can students use a variety of approaches or strategies, that you will accept more than one answer is correct, and that they need to fully elaborate their response?)	Y N
5	If the task is intended to be authentic or realistic, do you present a situation that your level students will recognise as coming from the real world?	Y N
6	If the task requires using resources and locating information outside the classroom, will all your students have fair and equal access to the expected resources?	Y N
7	Is the task appropriate to the educational maturity of your students?	Y N
8	Are the purpose or goals of the task clear?	Y N
9	Are the drawings, graphs, diagrams, charts, manipulatives and other task materials clearly drawn, properly constructed, and appropriate their intended performance, and in good working order?	Y N
10	Are students aware of the basis on which their work will be evaluated?	Y N

Identifying criteria for assessing a speech and rank ordering of criteria in terms of importance

Scenario: Students in Grade 11 (17 years of age) in a secondary school were asked to prepare and deliver speeches for or against the topic: There are no winners when countries go to war.

Directions (1): If you, as a teacher, were asked to assess students' speeches, what criteria would you apply? The criteria are the aspects of a speech that you might take into account in your assessment. [Leave the first column blank for now.] Hint: What learning targets are to be assessed? What about content?

	Criterion
	Content. The speech includes important content related to the topic.

Directions(2): Return to the list, and order your criteria in terms of importance. Write 1 in first column before the most important idea, 2 before the second most important idea and so on.

Appendix 4.5

Designing a scoring rubric.

Scoring rubric for ***organisation:***

Score	Organisation
4 points (Exceptional)	Well organised presentation. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised presentation. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised presentation. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no orgnisational features present. Random collection of loosely-related ideas.

Directions: Now work as a group to develop a scoring rubric for the content of a presentation and for speaking skills of the presenter. Use the grids below.

Score	Content
4 points (Exceptional)	
3 points (Strong)	
2 points (Acceptable)	
1 point (Beginner)	

Score	Presentation Skills
4 points (Exceptional)	
3 points (Strong)	
2 points (Acceptable)	
1 point (Beginner)	

Using a Scoring Rubric to Evaluate an Oral Presentation

Directions: Each group is to prepare a short presentation on the following topics. Indicate whether your group agrees or disagrees with the proposal, and on what basis you reach agreement. Identify a group member who will present the speech.

Score	Organisation
4 points (Exceptional)	Well organised presentation. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised presentation. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised presentation. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no orgnisational features present. Random collection of loosely-related ideas.

Score	Content
4 points (Exceptional)	Well organised presentation. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised presentation. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised presentation. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no orgnisational features present. Random collection of loosely-related ideas.

Score	Presentation Skills
4 points (Exceptional)	Well organised presentation. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised presentation. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised presentation. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no orgnisational features present. Random collection of loosely-related ideas.

	Organisation	**Content**	**Presentation**	**Total***
Group 1				
Group 2				
Group 3				
Group 4				

Total = sum of scores on organisation, content, presentation

Descriptors for levels of competence (proficiency levels):

10-12 points: Exceptional performance (A grade)
8-10 points: Strong performance (B grade)
4-8 points: Acceptable performance (C grade)
< 4 points Beginner (D grade)

Appendix 4.7

Example of Completed Scoring Rubric

	Exceptional (4)	Admirable (3)	Acceptable (2)	Beginner (1)
Content	An abundance of material clearly related to thesis; points are clearly made and all evidence supports thesis; varied use of materials	Sufficient information that relates to thesis; many good points made but there is an uneven balance and little variation	There is a great deal of information that is not clearly connected to the thesis	Thesis not clear; information included that does not support thesis in any way
Coherence and Organization	Thesis is clearly stated and developed; specific examples are appropriate and clearly develop thesis; conclusion is clear; shows control; flows together well; good transitions; succinct but not choppy; well organized	Most information presented in logical sequence; generally very well organized but better transitions from idea to idea and medium to medium needed	Concept and ideas are loosely connected; lacks clear transitions; flow and organization are choppy	Presentation is choppy and disjointed; does not flow; development of thesis is vague; no apparent logical order of presentation
Creativity	Very original presentation of material; uses the unexpected to full advantage; captures audience's attention	Some originality apparent; good variety and blending of materials/media	Little or no variation; material presented with little originality or interpretation	Repetitive with little or no variety; insufficient use of multimedia
Material	Balanced use of multimedia materials; properly used to develop thesis; use of media is varied and appropriate	Use of multimedia not as varied and not as well connected to thesis	Choppy use of multimedia materials; lacks smooth transition from one medium to another; multimedia not clearly connected to thesis	Little or no multimedia used or ineffective use of multimedia; imbalance in use of materials-too much of one, not enough of another
Speaking Skills	Poised, clear articulation; proper volume; steady rate; good posture and eye contact; enthusiasm; confidence	Clear articulation but not as polished	Some mumbling; little eye contact; uneven rate; little or no expression	Inaudible or too loud; no eye contact; rate too slow/fast; speaker seemed uninterested and used monotone voice
Audience Response	Involved the audience in the presentation; points made in creative way; held the audience's attention throughout	Presented facts with some interesting "twists"; held the audience's attention most of the time	Some related facts but went off topic and lost the audience; mostly presented facts with little or no imagination	Incoherent; audience lost interest and could not determine the point of the presentation
Length of Presentation	Within two minutes of allotted time +/-	Within four minutes of allotted time +/-	Within six minutes of allotted time +/-	Too long or too short; ten or more minutes above or below the allotted time

Copyright Pearson Education (2006).
http://www.phschool.com/professional_development/assessment/rub_oral_presentation.html

APPENDICES

UNIT 5: RESPONDING TO AND EVALUATING ORAL WORK - USING STRUCTURED STUDENT INTERVIEWS

Appendix 5.1

Characteristics of structured interviews.

IInterviews can give insights into students' thinking and learning difficulties. Interviews are most beneficial if they are organized around key concepts or specific problem-solving tasks. Interviews can provide information about ***students' conceptual knowledge,*** and (less often) about their ***procedural knowledge***.

Examples of structured interviews:

- Work with the student to create a semantic map at the beginning of a unit and discuss how the concepts are related to one another
- Talk with a student after he/she has completed an experiment, and ask what conclusions were drawn (and why)
- Set a mathematics problem for a student, and interview him/her as they solve the problem to gain insights into how they go about solving it.

Characteristics of structured interviews:

- Conducted with an individual, or with a group of students
- Attention focused on a given issue.
- Detailed information is gained on issue discussed.
- Insight into ***declarative knowledge*** used is provided.
- General rules and problem-solving strategies can be uncovered.
- Follow-up questions tailored to a student's responses can be used.

Purposes of structured interviews:

- to investigate how well students understand a concept; to identify misconceptions, areas of confusion, and/or gaps in understanding that may be common among a group of students;
- to document how students can apply their knowledge in concrete settings (e.g., problem solving, trouble shooting);
- to document the general and content-specific procedures that students employ in such application tasks and the sequences and manner in which these processes are employed;
- to document how student understanding and problem-solving skills change over time or with instruction;

Appendix 5.1

Stages in Interviewing a Student

1. Preparing for an interview - Time is required to develop a set of good questions, tasks and problems sets. Additional time to locate appropriate props and recording equipment, if desired.
2. Preparing the student - Interviews are most fruitful when the student has developed a good rapport with you. It is essential that the student feels relaxed and at ease.
3. Setting aside time - One-on-one or small group interviews may be conducted in less than an hour in your office or other convenient "private space." Some practice will reduce the time required to conduct a good interview.
4. Deciding on individual or group involvement - The most useful interviews are those conducted with individuals or small groups outside of class time.

Formative vs. Summative Assessment

Interviews are often used to provide the teacher with insight into students' understandings in order to refine and target instruction ("formative assessment") rather than to evaluate the knowledge of individual students for purposes of assigning a grade ("summative assessment").

Where interviews are used for formative assessment, it may be helpful to tape them and play them back later, so that you can review students' understanding. Where interviews are used for summative assessment purposes, it may be helpful to develop a scoring rubric.

Appendix 5.2

Types of interviews.

Instances Interviews
In Interviews about Instances, a student is presented with a specific set of examples and counterexamples of the concept of interest and is asked to identify which cases are examples of the concept, and then to explain that decision. For practical reasons the examples are usually graphics such as line pictures, drawings, or diagrams.

Prediction Interviews
Prediction Interviews require students to anticipate an outcome of a situation and explain or justify that prediction. The strength of this kind of interview is that it focuses on the ways a student can apply her personal meanings of the concept. And because they require application, prediction interviews are very useful in teasing out what has been learned by rote with minimal understanding from what is meaningful knowledge.

Sorting Interviews
In a Sorting Interview, the student is presented with a group of objects and asked to sort them according to specific instructions. This exercise can be structured in many different ways to match the purpose of the assessment. For example, the interviewer may present a series of graphics depicting some natural phenomenon. The student may then be asked to select any number of cards to be used in any order to explain the phenomenon. Alternatively, a student may be presented with a set of genetics, physics or chemistry problem cards and asked to sort them according to similarity (e.g., Smith, 1992). As with other kinds of interviews described in this CAT, the student is encouraged to talk about her reasoning as she attempts to construct an explanation for her sorting.

Problem Solving Interviews
In a Problem Solving Interview, a student is asked to attempt to solve a problem while "***thinking aloud***," explaining as much as possible about what she is doing, why she is doing it, and what her symbols and actions mean. Problem solving interviews focus more on a student's performance as a means to assess knowledge, although understanding the student's conceptual framework remains the overarching goal in conducting the interview.

Source: http://www.uccs.edu/~irpage/IRPAGE/Assessment_Index/cat_interview.htm

Appendix 5.3

Possible interview topics

Example:

(i)	A science class has learned about the skeletal and muscular systems. Using a picture of a skeleton, you decide to interview 2 students (selected at random) to gain information about their understanding of the functions of the skeleton. In addition to expecting that the students know the main parts of the skeleton, you expect them to tell you what the purpose of each part is, and how the parts interact.

Directions: For each of these learning targets, identify whether it mainly involves knowledge, comprehension, application, analysis, synthesis, or evaluation.

Subject area: _____

	Interview Topics
1	
2	
3	

Preparing for an interview

Directions: You are preparing to interview a student around one of the topics referred to in Appendix 5.3. Write a series of questions that you could ask the student during the course of the interview.

Subject area or project: _____

Topic of interview: _____

Learning targets to be assessed: _____

_____

Interview questions:

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

Directions: For each question you have written, categorise it according to Bloom's Taxonomy (knowledge, comprehension, application, analysis, synthesis, evaluation), and according to whether it is open or closed.

Question	Category (Bloom)	Open or closed?
1		
2		
3		
4		
5		

Appendix 5.5

Recording Interview Outcomes

Student: _____ **Date of Interview:**

Subject area / project:
_____

Topic of interview:
_____

Learning targets to be assessed: _____
_____

Strengths:
_____
_____
_____

Areas of need (misunderstandings, misconceptions):
_____
_____
_____

Implications for future teaching:
_____
_____
_____
_____

Comments:
_____
_____

Signed: _____

Think-Aloud Interview Activity

Directions: Using the text provided, work in pairs, where one partner 'thinks aloud' through the text, and the other asks questions and takes notes. At the end of the activity, summarise three things learned from the think-aloud activity.

The topic of the text we used was: _____

_____

Three things I learned from listening to the think-aloud were:

1. _____
2. _____
3. _____

Appendix 5.7

Strengths, Weaknesses of Structured Interviews

Directions: Think about the use of structured interviews as an assessment tool. Then document 3 strengths of interviews and 3 weaknesses.

Strengths:

1. _____

2. _____

3. _____

Weaknesses:

1. _____

2. _____

3. _____

Interviews (Structured, In-depth interviews involving individual students

Advantages for Teachers	Disadvantages for Teachers	Suggestions for Improved Use
(a) Permit in-depth probing of students' understandings, thinking patterns, and problem-solving strategies (b) Permit follow-up questions tailored to a student's responses and allow a student to elaborate answers (c) Permit diagnosis of ability thinking and errors in performance.	(a) Require a lot of time to complete (b) Require keeping the rest of the class occupied while one student is being interviewed (c) Require learning skills in effective educational achievement interviewing and diagnosis	(a) If assessing students' thinking patterns, problem solving strategies etc. avoid prompting student toward a prescribed way of thinking (b) Some students need their self-confidence bolstered before they feel comfortable revealing their mistakes.

(from Nitko, 2004; Educational Assessment of Students. Upper Saddle River, New Jersey: Pearson/Merrill/Prentice Hall. (p. 115).

Appendix 6.1

Self-Assessment Styles (Introduction to Self-Assessment)

Teacher asks the group to consider the following two statements:

A. "I don't take ideas for granted; I am a thinker. My opinions are pretty well thought out, are based on objective experience, and have solid reasons supporting them. When somebody else offers an opinion, I like to play the devil's advocate and, for the purpose of uncovering and testing my thoughts, I often take the opposite position. I am sincerely willing to open my ideas to others for scrutiny and critique. I enjoy a good argument and often learn a great deal from thinking about and responding to the tough critique of a worthy opponent."

B. "When I hear people voice opinions very different from my own, I seek first to understand why and how they could possibly think that way. I try to look at the issue from their perspective, to get inside their heads, to walk in their shoes, to see how their culture or worldview could prompt them to express such values. Then, only after I can mirror back to them their view stated in my own words, do I try to explain my position. I learn a lot just from listening to people explain why they think and act as they do. They usually have good reasons for adopting a stance different than mine, and I find that so attractive that I often find myself rethinking my own position."

Teacher asks the group in fours to answer the following questions:

1. Which of the two statements above, A or B, more closely describes the person you really are inside?
2. Which type of communicating, A or B, do you actually do more in your "professional" (business, classroom, conferences, studio/office) life? Why?
3. Which kind of individual would you rather talk with in a purely social situation: A or B? Why?
4. How often do we get students to analyse their thoughts in this way? What might be the importance of it for learning?

Self-assessment and student engagement in learning

Teacher then asks the group to think of earlier discussions on learning goals and the taxonomy of objectives (cognitive, affective and psychomotor). Munns and Woodward (2003) suggest that self-assessment that brings in the cognitive (thinking) affective (feeling) and operational (doing) aspects of learning enhances student engagement. Teacher states they suggest student self assessment should not just be about the task of assessing learning, it should involve thinking about learning and ways it can be improved. Asking students what they know, learned and want to know may produce only limited results. Teacher describes their framework for student self assessment:

Appendix 6.1

Dimension	Affective	Cognitive	Operative
Conceptual- translating into concepts	What other feelings do you have about this work? How can you generate some specific feelings about you work e.g. empathy, curiosity. Why is it important to acknowledge this feeling in your work?	Why is it important for you to know/understand/be able to do this?	Why is being able to do this important?
Relational- relational to other areas/processes	Have you every felt this way about something else? When, What was it?	How do these processes/content relate to something else you know. When else could you use this information?	Where else could you do this?
Multidimensional– content plus process	Why did you like/dislike?	How did you learn this? What else did you learn? How did you arrive at the conclusion/answer? How do I know when I have learnt something?	How did you do it?
Unidimensional - content - basic	Did you like or dislike this work/ unit?	What did you learn? Why is this my best work?	What did you do?

(Source: Woodward and Munns, 2003)

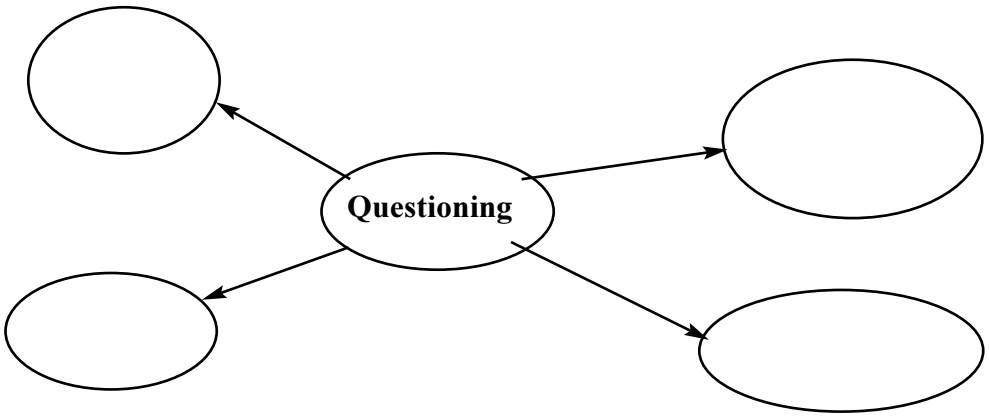
Appendix 6.2

Self-Assessment of Knowledge about Self-Assessment!

Directions: Use the KWL chart below to indicate
(a) what you know about student self-assessment at this time; and
(b) what questions about self-assessment you expect to have answered in this unit.

What I Know about Student Self-assessment(My topic knowledge)	What I Want to Know About Student Self-assessment(My questions)	What I've Learned (Complete after unit)

Directions: Use the semantic map below to illustrate your knowledge ***questioning*** as an assessment strategy.



Types of Self-Assessment and Rationale

Teacher explains that it is important to make students active partners in their own assessment as part of an ongoing learning-assessment cycle. Teacher explains that student self-assessment can take a number of forms. Students may be involved in a variety of self- and peer-assessment activities using their individual efforts, their participatory efforts in a group, their own end products of written assignments and presentations, or their performance of skills and processes. Students may also be involved in assessing their efforts on quizzes and tests. Some self-assessment tasks include:

- Self-questioning and metacognition
- Writing conferences / Teacher-student interviews
- Discussion (whole-class or small-group)
- Reflection logs/ student journals
- Weekly self-evaluations
- Self-assessment checklists and inventories
- Peer assessment

Self-assessment and student engagement in learning

Teacher then asks the group to think of earlier discussions on learning goals and the taxonomy of objectives (cognitive, affective and psychomotor). Munns and Woodward (2003) suggest that self-assessment that brings in the cognitive (thinking) affective (feeling) and operational (doing) aspects of learning enhances student engagement. Teacher states they suggest student self assessment should not just be about the task of assessing learning, it should involve thinking about learning and ways it can be improved. Asking students what they know, learned and want to know may produce only limited results. Teacher describes their framework for student self assessment:

Dimension	Affective	Cognitive	Operative
Conceptual- translating into concepts	What other feelings do you have about this work? How can you generate some specific feelings about you work e.g. empathy, curiosity. Why is it important to acknowledge this feeling in your work?	Why is it important for you to know/understand/be able to do this?	Why is being able to do this important?
Relational- relational to other areas/processes	Have you every felt this way about something else? When, What was it?	How do these processes/content relate to something else you know. When else could you use this information?	Where else could you do this?
Multidimensional– content plus process	Why did you like/dislike?	How did you learn this? What else did you learn? How did you arrive at the conclusion/answer? How do I know when I have learnt something?	How did you do it?
Unidimensional - content - basic	Did you like or dislike this work/ unit?	What did you learn? Why is this my best work?	What did you do?

(Taken from Woodward and Munns, 2003)

Appendix 6.3

Evaluating and applying learning

Teacher then asks the group to use this self-assessment grid to take one aspect of the modules and assess it in pairs using the above grid. Teacher then asks the pairs to feedback to the entire group. Teacher then states that this exercise needs to be completed many times before students become familiar with and proficient at using it.

Advantages of self-assessment

Teacher then asks the group to come up with five advantages for student self-assessment, and then adds (some of) the following (from Sluijmans, Dochy, and Moerkerke, 1999)

Student Self-Assessment:

(1) Can foster students' feelings of ownership for students' own learning
(2) Can motivate students and encourage their active involvement in learning,
(3) Makes assessment a shared activity rather than a lone one (i.e. more objective),
(4) Promotes a genuine interchange of ideas,
(5) Leads to more directed and effective learning,
(6) Encourages students to become more autonomous in learning,
(7) Signals to students that their experiences are valued and their judgements are respected,
(8) Develops transferable personal skills,
(9) Produces a community of learning in which students feel that they have influence and involvement
(10) Reduces the teacher's workload and
(11) Makes students think more deeply, see how others tackle problems, pick up points and learn to criticise constructively.

Sluijmans, D., Dochy, F. and Moerkerke, G. (1999) Creating a learning environment using self, peer and co-assessment Learning Environments Research, Vol. 1, 293 - 319.

Woodward, G. and Munns, H. (2003) Insider's Voices: Self-Assessment and Student Engagement Paper presented at New Zealand Association for Research in Education (NZARE) and Australian Association for Research in Education (AARE) Joint Conference, Auckland 2003. Available at http://www.aare.edu.au/03pap/mun03451.pdf. Last accessed 12/11/06.

A Strategy for Developing Self-questioning during Reading

Teacher explains that self-questioning is a self-assessment tool that can be used at any stage of the learning process to enhance learning and make students more aware of and take ownership of their progress. Teacher explains that student self-questioning is a strategy often used in reading to help students monitor their own comprehension of a piece of text - this is thinking about thinking or 'metacognition'.

Self-questioning for reading expository texts

(i) The student answers the question "For what purpose are you studying this passage?" with a self-reminder that he or she is reading the passage in order to answer key questions about its content.

(ii) The student locates all main ideas in the passage and underlines or highlights them.

(iii) For each main idea that the student highlighted, he or she generates a question.

(iv) The student reads through the passage again to answer each question that he or she generated.

(v) The student reviews all main ideas, questions, and answers in the passage.

Self-Questioning 'Stems' (from King, 1992)

- Explain why…
- Explain how…
- What is the main idea of …?
- How would you use … to …?
- What is a new example of …?
- What do you think would happen if …?
- What is the difference between … and …?
- How are … and … similar/different?
- What conclusions would you draw about …?
- How does … affect …?
- What are the strengths and weaknesses of …?
- What is the best … and why?
- How is … related to … that we studied earlier?

Appendix 6.5

Self-Assessment of Background Knowledge about a Topic: the K-W-L Strategy

KWL (Ogle, 1986) is an instructional reading strategy that is used to guide students through a text. Students begin by brainstorming everything they *Know* about a topic. This information is recorded in the *K* column of a KWL chart. Students then generate a list of questions about what they *Want to Know* about the topic. These questions are listed in the *W* column of the chart. During or after reading, students answer the questions that are in the *W* column. This new information that they have *Learned* is recorded in the *L* column of the KWL chart.

As using KWL as a teacher-led strategy, the teacher:

- Elicits students' prior knowledge of the topic of the text or unit
- Sets a purpose for reading.
- Helps students to monitor their comprehension.
- Allows students to assess their comprehension of the text.
- Provides an opportunity for students to expand ideas beyond the text.

When used for self-assessment purposes, the student:

- Documents his/her prior knowledge of the topic of the text.
- Sets a purpose for reading, through setting questions for which answers will be sought during reading (or in the course of studying a unit)

KWL Chart

What I Know (My topic knowledge)	What I Want to Know (My questions)	What I've Learned
My knowledge of the topics is: (i) High (ii) Medium (iii) Low		My understanding of the text or unit is: A. very good B. good C. fair D. poor

For the K column, ask students to write down the key information they have about a topic. Then ask students to rate their knowledge of the topic as

(i) high;
(ii) medium; or
(iii) low.

For the W column, ask students to generate questions that they expect to be answered in the text or unit:

- "What do you think you will learn about this topic from the text you will be reading?"
- Choose an idea from the K column and ask, "What would you like to learn more about this idea?"

For the L column, ask students to:

- Summarise what they have learned in the unit or text.
- Write the answers to the questions they have posed.
- Rate their understanding of the text or unit as very good, good, fair or poor.

Encourage students to search other sources for information that they could not find in the text.

Extending KWL to Incorporate Reflections (Suitable for Older Students)

For older students, the KWL can be extended as follows:

What I Know (My topic knowledge)	What I Want to Know (My questions)	What I've Learned	Connections I've Made with Other Studies	How I can apply these ideas to my own life?	My insights

This entails students considering:

- Connections I can make with other studies:
- How I can apply these ideas to my own life:
- My insights or reflections from these ideas:

PMI Strategy

This strategy helps students evaluate their learning by asking them in individuals or groups to write either individually or in groups what were the

positive points (pluses or Ps),
what were the negative points (minuses or Ms), and
what was interesting (I) about the topic.

Appendix 6.6

Learning Logs / Journals for Self-Assessment

Learning logs can be maintained by individuals for. . .

- A particular subject e.g. mathematics
- Reading or writing (in which they 'respond' to the texts they have read or written)
- A project, where one or more students might keep a log

If maintained on a regular basis (i.e., on a daily basis or two or three times a week), they can provide valuable formative assessment information to both student and teacher. In addition, logs can be used for summative purposes. For example, they can form part of the grade for a course or project: e.g..

Learning log = 20% of grade (graded on the basis of quality of ideas)
Structured interview mid-way through project = 20%
Final written report on project = 60%
Oral presentation to class group = 20%

For a group project, consider the following:

Learning Log = 20% of grade
Group project mark = 50% of grade
Your contribution to project = 30% of grade (calculated relative to contribution of other members)

A learning log can consist of following components:

Context (e.g., class, topic, project) and date	Immediate Reaction	Reflection (delayed reaction and comment)

A learning log linked to a course or project can tell:

- what you have been doing
- how much time it took you
- what you have found out
  - ▶ the routine - what you expected to discover
  - ▶ the unexpected - so that the team can follow up the new findings
- what difficulties you have encountered

The 'reflection' component can include

The key idea from this discussion/. . .
Connections to other ideas/. . .
Questions still unanswered/. . .
Where I might find more information/. . .

Grading Learning Logs:

- When used for formative purposes, add a comment or a question for the student to answer
- When graded for summative purposes, examine the level of critical thinking using a taxonomy such as Bloom's Taxonomy.

Finally, teachers may wish to write their own responses in students' learning logs, as in the following example:

Summary	Reaction	Teacher Comment
Achilles chased Hektor and strode off the chase to tell about springs they were running by.	A great chase going on like a child running away from a monster in a nightmare. Then it nose dives into a flowery meadow of boredom when the part about the springs arise.	This student obviously understood this section of The Iliad because he is able to accurately summarize what happened. The reaction shows the student is making connections between the text and the real word. In addition, he is able to express his opinion ("flowery meadow of boredom").

Source: http://www.wku.edu/3kinds/mfllmpg.html#Daily%20Logs

Appendix 6.7

Writing Portfolio Conferences (Interviews)

Student-Teacher Portfolio Conferences and Interviews
(adapted from Farr & Tone, 1998)

Teacher explains that the portfolio is one of the most direct ways of involving students in the assessment process. A portfolio conference is one way of ensuring the self-assessment process is on track. The following describes a portfolio conference that deals with writing.

Writing Portfolio Conference

Teacher explains a portfolio conference is the primary opportunity for the vital discussions and review of ideas that are the heart of the portfolio process. The key to conferencing is creating a comfortable environment in which the student can ask questions on a one on one basis with their teacher.

Things to think about conferencing:

- conferencing brings up questions about the portfolio content and brings the portfolio into clearer focus;
- conferencing settles organizational problems and gives the student and teacher time to work on this skill;
- conferencing encourages analysis, comparisons of pieces of student's own work;
- conferencing provides for individualized learning and lends itself to the development of Individual Education Plans;
- conferencing can generate clear goals for both the student and teacher.

Getting Clear Direction out of the Conference
With the conference, you want to:

- Help the student to reflect about his/her own reading and writing activities; to understand language use as a process; and to assume responsibility for his/her own improvement.
- Learn all you can about a student's ideas, reading and writing interests, habits, overall abilities, attitudes toward language, and development as a language learner.
- Establish some self-directed goals for language development and set instructional priorities that will help them meet those goals.

Conference Schedules
Create a time schedule where the students can sign up to meet with the teacher. 10-15 minutes would be the goal for beginning conferences.
However, a quick discussion on a regular basis with each student, this can be as short as a minute, ensures the students are on the right track with their learning.

Some Questions to consider about writing:

How did you organize your portfolio?

- ▶ Why did you organize it this way?
- ▶ How did you decide what pieces should be submitted?
- ▶ What ideas did you consider as important?

Tell me about a piece of writing:

- Why did you select this piece?
- Why is this piece of writing important to you?
- Why did you decide to write this?
- Where did you get this idea?
- Would you like to read it to me?
- Did you have any problems writing this?
- Did anyone help you with your writing?
- In what way did they help you?
- What was the easiest/hardest part when writing this piece?
- Who did you write this for?
- Have you tried writing any different pieces (genres) such as stories, letters, notes, journals?
- Did you try something new this term?
- Did you seek any help when writing this?

How have you progressed as a writer since your first submission?

- Tell me about one new thing that you have learned about writing
- What is different about the things that you wrote this time?
- Have you tried any different types of writing?

What are you intending to write next?

- How can I help you with this?
- How do you plan to start?
- Is there someone with whom you would like to work?

Did you work on your goal this term?

Some suggestions in relation to managing conferences:

- Conference with a few students each week, this will prevent the end of term backlog.
- Include the resource teacher, s/he can work with larger groups while you conference.
- Conference with small groups of students instead of one-on-one.
- Conferencing during library periods (if available), where the students understand their role and can be assisted by the librarians and you are then free to have a few moments to meet with various students.

Appendix 6.8

Constructing a Self-assessment Checklist

The following is an example of a self-assessment checklist for proofing-reading a text.

		Check if 'yes'
1	Are all words spelled correctly?	❒
2	Have you written in complete sentences (all sentences have a subject and verb)?	❒
3	Have you used tenses correctly?	❒
4	Is your vocabulary and language choice suitable for this context?	❒
5	Are your commas and full stops used effectively?	❒
6	Are full stops used correctly?	❒

Discussion questions:

- What information is necessary in order to construct this checklist?
- Who might you consult in creating a checklist like this?
- For what purposes might checklists be useful?
- What are the advantages and disadvantages of using checklists?

Directions: Select a subject area of your choice, and consider a typical task (e.g., Science, performing an experiment). Construct a checklist to help students in assessing whether or not key steps have been addressed:

Subject area: _____

Task: _____

		Check if 'yes'
1		❒
2		❒
3		❒
4		❒
5		❒
6		❒

Appendix 7.1

Identifying Students' Learning Processes

Directions: Read the following texts about students and their learning processes. For each text, identify the student's main problem, and suggest what might be done.

Text 1: Gabor is a hard-working student. He completes his homework on a regular basis, and participates in most activities at school. However, his grades are consistently low. His teacher has noticed that Gabor often reads text without being able to explain what it is about. Only last week, he was asked to read a passage about World War II, and remembered just a few unimportant details. His written work is also disappointing in that he rarely sticks to the topic he is asked to write about.

What is Gabor's problem? _____

_____

What might be done to support Gabor's learning? _____

_____

_____

Text 2: Anica is doing a project about national history. Her teacher has noticed that Anica is good at identifying source material such as textbooks and webpages. However, she reads all these texts from beginning to end. She does not seem to be able to identify what is important, and what can safely be skipped over because it is not important. Her writing is also poor, because she does not make organise here ideas very well, or relate them to the topic.

What is Anica's problem? _____

_____

What might be done to support Anica's learning? _____

_____

_____

Appendix 7.1

Text 3: Mikail has a lot of ability. However, he often misses the deadline for projects and other tasks. He doesn't seem to be able to organise his work or stay focused when asked to work independently. Only last week, he spent over one hour writing the introductory session of an essay, and never got to the main part. His friends are frustrated because he does not contribute enough to the projects of which he is a part. Yet he comes across as being interested.

What is Mikail's problem? _____
_____

What might be done to support Mikail's learning? _____
_____
_____

Contrasting Cognitive and Metacognitive Processes

Cognitive knowledge	*Cognitive Processing*
• Knowledge (facts, ideas)	• Recalling / recognising information
• Comprehension	• Understanding meaning/ restating in own ideas
• Application	• Applying knowledge, put theory into practice, use knowledge in response to real circumstances
• Analysis	• Interpret elements, organisation, structure, interpret quality, reliability of internal components
• Synthesis	• Develop new systems, models, structures, approaches, creative thinking operations
• Evaluation	• Assess effectiveness of whole concepts, critical thinking, strategic comparison and review; judgement relating to external criteria

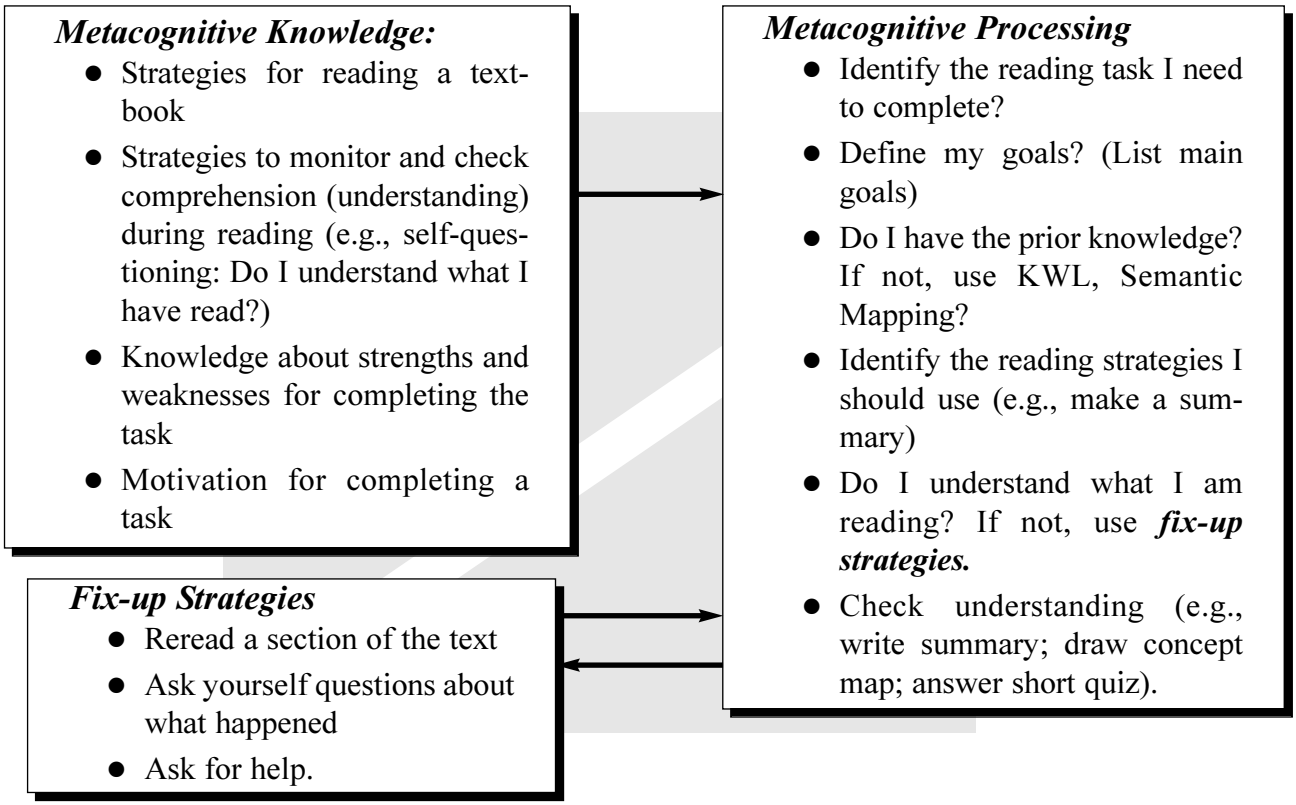
Metacognitive knowledge - is defined as one's knowledge concerning one's own cognitive processes and products or anything related to them

Metacognitive Knowledge	*Metacognitive Processing / Self-Regulated Learning*
• Knowledge about cognition (thinking) in general	• Knowledge about cognition (thinking) in general
• Knowledge of which strategies work, and when to use them	• Awareness of, and knowledge about one's own thinking
• Knowledge of self as learner	• Monitoring, controlling and regulating thinking
• Motivation for completing the task (interest in learning)	

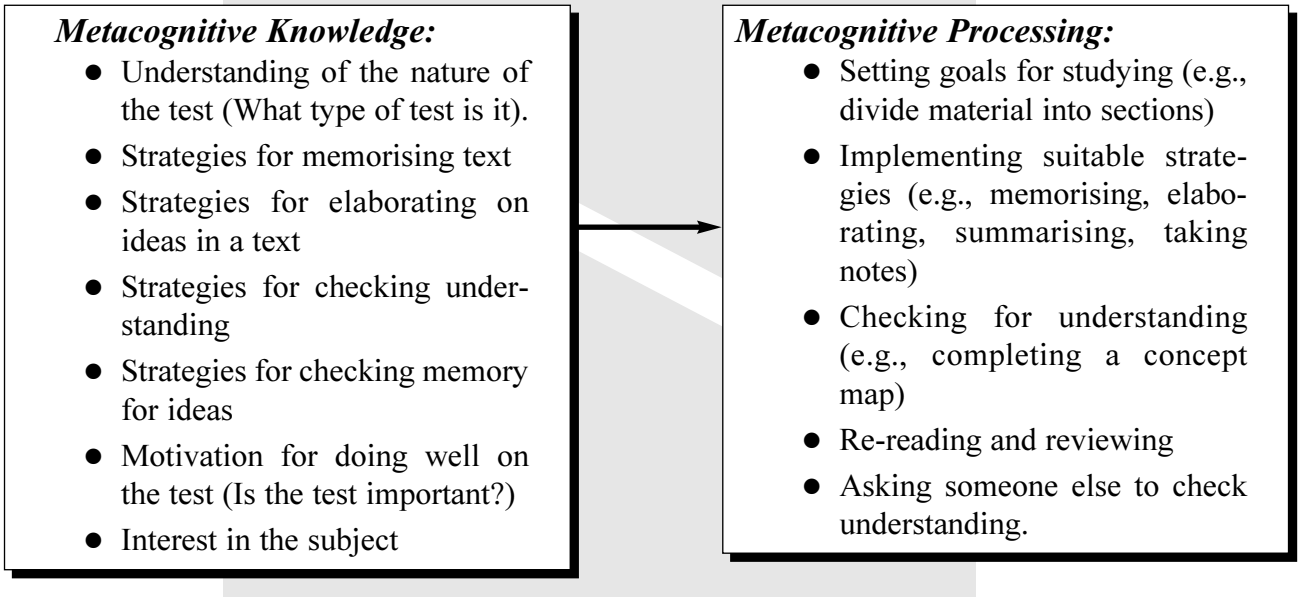
Appendix 7.3

Examples of Metacognitive Knowledge and Metacognitive Processing (Self-regulated Learning)

Reading Text



Studying for a Test



Identifying Metacognitive Knowledge and Metacongitive Process that Students Might Use

Directions: You ask your students to prepare for a debate: 'Young people have too many material goods nowadays.' Work in your group to identify the types of metacognitive knowledge and metacognitive processing that students might use to prepare for the debate.

Metacognitive knowledge (what knowledge about debating, about their opponents, and about themselves might students draw on?)

_____

_____

_____

Metacognitive processing (What learning processes might students apply in preparing for the debate?)

_____

_____

_____

_____

Directions: **You have been asked to set up a workshop designed to improve the metacognitive processing of students in your class. Identify 3 learning targets for the workshop, that emphasise various aspects of Metacognitive Knowledge and Metacognitive Processing.**

1. _____

2. _____

3. _____

Appendix 7.5

Some Activities that Might Help Develop Students' Self-regulated Learning Strategies.

Teacher introduces the cycle of self-regulated learning (metacognitive processes). Participants suggest ways in which each cycle can be developed:

> The most important way in which the teacher can develop students' cognitive monitoring and self-regulated learning is through modelling strategies.

Planning Stage:

- Teacher identifies learning targets for the lesson or unit
- Student sets learning targets or purposes (e.g., students establish a purpose for reading a particular text, or doing a project)
- Student identifies background knowledge (e.g., using KWL template, or Semantic Mapping)
- Students identify questions they hope to answer during learning
- Students review strategies they can use to check their learning (self-questioning, summarising, clarifying)
- _____
- _____

Monitoring Stage (Students Self-regulate their learning)

- Students rehearse / memorizes what they read or listen to (e.g., repeat, in correct serial order, the names of the colors in the spectrum)
- Students elaborate on what they are learning (for example, link an idea in the text to a new idea, using a sentence to relate a country and its major industrial product, saying something a different way, identifying the main ideas; underlying key ideas in a text; relating an idea or problem to everyday life). Elaboration is indicative of active learning.
- Students organise what they learn. This entails transforming information in one form to another (e.g., by outlining, note taking, developing a concept map)
- Students check the answer to a math problem
- Students implement repair strategies as needed (e.g., re-reading parts of a text).
- Students list key vocabulary words
- _____

Evaluating (Usually achieved through some form of self-questioning)

- Using a chapter summary to create questions to answer while reading
- Self-testing while reviewing a chapter
- Completing the 'L' component of KWL strategy
- Completing a concept map
- _____

Thinking About Your Own Metacognitive Strategies. . . . (how do you regulate your own learning?)

Directions: Think about your own learning and studying. Make a list of some of the metacognitive strategies that you use in each of the following areas: planning, monitoring, evaluating. . . . .

Planning

1. _____

2. _____

Monitoring

3. _____

4. _____

Evaluating

5. _____

6. _____

Appendix 7.7

Assessing Students' Metacognitive Knowledge

Areas to assess: Planning, Monitoring, Evaluating

Approaches to assessment:

- Think aloud protocol, where the student describes his or her thinking as they read a text, or engage in a practical activity, such as an experiment.
- Interview, where the teacher asks the student about his/her use of strategies when they are learning
- Multiple-choice test, where student indicates the frequency with which they implement various strategies

> In order to increase reliability, it is better to have more than one question designed to measure each aspect of metacognition.

Metacognitive Quiz: Reading a Text

For each question, read the question and mark once box only.

		Always/ almost always	Often	Some-times	Hardly ever/ Never
1	I think about what I have to do before I begin to study [Plan]	❒	❒	❒	❒
2	Before I read a text, I think about what I know already about the topic [Plan]	❒	❒	❒	❒
3	I set questions for myself before I begin to read [Plan]	❒	❒	❒	❒
4	During reading, I find the main ideas in the text. [Monitor]	❒	❒	❒	❒
5	During reading, I ask myself if what I am reading makes sense [Monitor]	❒	❒	❒	❒
6	During reading, I ask myself questions about the text. [Monitor]	❒	❒	❒	❒
7	During reading, I think about why I am reading. [Monitor]	❒	❒	❒	❒
8	After reading, I write a short summary about what I have read. [Evaluate]	❒	❒	❒	❒
9	After reading, I ask myself questions about what I have read. [Evaluate]	❒	❒	❒	❒

Appendix 7.8

Designing a Short test of Metacognitive Knowledge /Self-regulated Learning

Directions: You are planning to ask students in your class to do a project. Before they start, you want to be sure that they have the metacognitive knowledge they need to be successful, and to complete the project on time. Working as a group, write a short multiple choice test to find out if your students have the metacognitive knowledge they need.

		Always/ almost always	Often	Some-times	Hardly ever/ Never
1		❒	❒	❒	❒
2		❒	❒	❒	❒
3		❒	❒	❒	❒
4		❒	❒	❒	❒
5		❒	❒	❒	❒
6		❒	❒	❒	❒
7		❒	❒	❒	❒
8		❒	❒	❒	❒
9		❒	❒	❒	❒
10		❒	❒	❒	❒

APPENDICES

UNIT 8: MULTIPLE METHODS OF ASSESSMENT: ASSESSING STUDENTS' METACOGNITIVE KNOWLEDGE AND SELF-REGULATED LEARNING

Appendix 8.1

Multiple-choice Test on Assessment Concepts

Direction: Complete the following multiple-choice test about Assessment Concepts. Take 5 minutes to complete the test. Work independently. Mark one answer in each row.

1. Assessment that provides specific information to inform teaching is called
   (a) formative assessment
   (b) self assessment
   (c) summative assessment
   (d) peer assessment

2. Which of these describe Bloom's concept of 'synthesis'?
   (a) Restate, discuss, describe
   (b) Translate, interpret, apply
   (c) Compose, plan, organise
   (d) Select, value, choose

3. Telling students the learning targets for a lesson or project helps them to:
   (a) understand the purpose of the lesson
   (b) key ideas
   (c) monitor their understanding
   (d) all of the above

4. Learning objectives related to attitudes and interest can be classified as:
   (a) cognitive
   (b) affective
   (c) psychomotor
   (d) evaluative

5. Which of the following strategies is ***not*** recommended as a self-assessment strategy?
   (a) applying a scoring rubric
   (b) asking yourself questions
   (c) looking for main ideas
   (d) re-reading a text

6. The second stage in the KWL strategy refers to:
   (a) What I know about
   (b) What I want to know
   (c) What I've learned
   (d) What I don't understand

7. A student is learning the properties of matter (solids, liquids, gases). Which of these is an example of 'elaboration'?
   (a) Repeating the properties again and again.
   (b) Thinking about the principles as they apply to known solids and liquids
   (c) Making notes on the key properties of solids, liquid and gases.
   (d) Underlining the key properties of solids, liquids and gases in a textbook

8. Which of these assessment strategies allows the teacher to follow-up on a student's answers?
   (a) Multiple-choice test
   (b) Interview
   (c) Peer assessment
   (d) Application of scoring rubric

9. Students are about to do a science experiment that involves separating salt from water by evaporation. Which of these interviews would help the teacher to establish what students think will happen in the experiment?
   (a) Sorting interview
   (b) Problem solving interview
   (c) Instance interview
   (d) Prediction interview.

10. Think alouds are recommended as a method for assessing
   (a) students' cognitive knowledge
   (b) students' metacognitive knowledge
   (c) students' prior knowledge
   (d) students' memory of facts

Direction: Apply the following scoring key to determine your score out of 10:

1 - (a); 2 - (c); 3 - (d); 4 - (b); 5 - (d); 6 - (b); 7 - (b); 8 - (b); 9 - (d); 10 - (b)

Possible proficiency levels or standards:

Score	Level
9-10	High level
6-8	Average level
3-5	Minimum level
0-2	Developing level

Appendix 8.2

Multiple-choice Tests - Advantages, Disadvantages and Guidelines for Construction

Advantages

- Can be scored quickly
- Scores tend to be more reliable (less risk of teacher bias in scoring; unlike a scoring rubric, where teachers may differ in their interpretation of marking criteria)
- Test appears to be 'fair'. In theory, everyone has an equal chance.
- Test can be administered quickly (often takes less than one minute to answer a question)
- The test can easily be re-administered if students do poorly.

Disadvantages

- Assess lower-order skills (Bloom's Knowledge and Comprehension)
- Emphasise recognition over other cognitive skills (though there is debate about this)
- Reward students who memorise material in the texts
- Discourage creative or lateral thinking
- May have negative 'backwash' effect on teaching, where teachers teach 'disconnected information' rather than connections between ideas.
- May encourage students to focus on factual information in their study, and quickly forget this information after the test.
- May favour a 'didactic' style of teacher, rather than interactive teaching and learning.
- Test can only 'sample' important course content, rather than test everything.
- Essentially a passive mode of assessment.
- Students may guess answers.

Tips for Constructing a Multiple-choice Test

- First, decide on which information on the course is important for students to learn. The multiple choice test is only valid if it assesses key learning targets.
- In general, use negative stems infrequently. (Which of these is not a cause. . . . ?)
- Ensure that distractors (answers) are plausible. A poor distractor will easily be dismissed by students as being incorrect.
- Ensure that there is only one correct answer to each item.
- Vary the position of the correct answer (Students will quickly discover if the correct answer is always in the same position).
- Over time, develop an 'item bank' of questions, so that you can 'take out' and 'bring in' different questions every year.

Classifying Questions on a Multiple-choice Test and Identifying How the Results Can be Used for Formative Purposes

Work on your own to classify each of the questions on the multiple choice test in Appendix 8.1. Use the chart below to record your responses.

Then work with a partner (in pairs). Were there any discrepancies? Work in pairs to resolve any differences in your ratings.

Question Type	Question Number
Knowledge	
Comprehension	
Application	
Analysis	
Synthesis	
Evaluation	

What conclusion did you reach about the distribution of questions? In general, what type of thinking is assessed by the multiple-choice test in Appendix 8.1?

_____

_____

Identify and list two ways in which the multiple-choice test could be used by the course instructor for formative assessment purposes.

1. _____

2. _____

Appendix 8.4

Constructing a Multiple-choice Test

Participants read a sample text (preferably a document, of the type students would be expected to read, either in everyday life, or in employment situations)

Directions: Work in pairs to consider the attached text and:

(i) underline what you believe to be the most important content in the text and list any key learning targets
(ii) construct a 5-item multiple choice test covering the important content
(iii) ensure that the correct answers are distributed.

Key Learning Targets:

1. _____

2. _____

3. _____

Multiple-choice questions:

Question or stem:

Distractors: (Answers)

a) _____

b) _____

c) _____

d) _____

Write additional multiple-choice items here, using the same framework:

Some Characteristics of Standardised, Norm-referenced Tests

Example : Differential aptitude tests (for career guidance)
SAT (Scholastic aptitude test, for admission to US universities)

- Clear criteria for administering the test - the teacher or test administrator must not deviate from directions, such as the level of help to give to students, or the amount of time to be allocated to each part.
- Usually multiple choice; though may include short-answer or writing items.
- Test manual provides test norms for a country or a region. These allow you to describe the performance of a student relative to other students nationally at the same class level, or in the same age group.
- Scores may be scaled to:
  - an average of 100 and a standard deviation of 15
  - an average of 250 and a standard deviation of 50
  - an average of 500 and a standard deviation of 100

  (A standard deviation tells us the band into which 68% of the scores fall; if the average is set at 100 and the standard deviation at 15, then 68% of scores fall between 85 and 115. Scores below 85 can be considered as being below average; scores above 115 as above average).
- ***Percentile ranks*** may be provided. If a student is at the 25th percentile rank, it means his/her score is as good as or better than 25% of students in the norm group.
- The ***reliability*** (called internal consistency) is reported in the test manual. In general, standardised tests designed to provide information about the skills and abilities of individuals should have a reliability of about 0.95. Broadly, this means that, when students succeed on a difficult item, the do well on the test as a whole, and when they do poorly on a difficult item, they do poorly on the test as a whole. . . . . Longer tests (those with more questions) tend to be more reliable.
- Information on the ***validity*** of the test is given in the test manual. Example: content validity - where the content of the test is spelled out in detail, and a rationale is given for including specific content

Example of a conversion table:

Raw Score	Standard Score	Percentile
0	60	1
5	70	4
8	75	
15	100	53
20	115	72
25	130	97

Appendix 8.5

- Although mainly summative, norm-referenced tests can provide some formative information. For example, subtest scores may provide information on a student's strengths and weaknesses. Examples:
    - Analysis of subtest scores e.g., Does the student do better on numerical (number) tasks than on verbal or spatial tasks?; Does the student do better on vocabulary tasks than on comprehension tasks?
    - Analysis of individual test items to determine whether students in a class got them right or wrong (correct or incorrect).

When to Use Teacher-made Tests and Standardised, Norm-referenced Tests

Directions: For each of the following, indicate whether teacher-made tests or standardised, norm-referenced tests would be most suitable.

1. Assessing students numerical reasoning, with a view to identifying students with high potential in mathematics
   (a) teacher-made test
   (b) standardised, norm-referenced test

2. Checking students' understanding of the current unit in science.
   (a) teacher-made test
   (b) standardised, norm-referenced test

3. Assessing the intellectual potential of students for a range of careers
   (a) teacher-made test
   (b) standardised, norm-referenced test

4. Checking students' understanding of key steps in making a shelf.
   (a) teacher-made test
   (b) standardised, norm-referenced test

5. Assessing the mathematical ability of students in a school, relative to other students in the country
   (a) teacher-made test
   (b) standardised, norm-referenced test

6. A psychologist assesses a student to see if they have an intellectual disability.
   (a) teacher-made test
   (b) standardised, norm-referenced test

Appendix 8.7

Tests Consisting of Short-answer Items

Examples:

1. What is the capital city of Hungary? _____
2. What statistic does the Greek letter ? stand for? _____
3. How many states are in the European Union? _____
4. What is the distance from Zagreb to Skopje in kilometres? _____
5. Give one reason why Turkey may not be admitted the European Union.
   _____
6. 20% of 15 = _____

Abilities assessed

- Recall and comprehension of information (lower-order thinking skills).
- Ability to solve numerical problems in mathematics and science (may include higher-order thinking skills).
- Ability to manipulate mathematical symbols and balance mathematical and chemical equations (may include higher-order thinking skills).

Strengths

- Easy to construct
- Can usually be scored objectively (though some subjective judgements may have to be made) [Subjective judgements tend lower the reliability of the obtained scores]
- Possibility of guessing lowered (probability of guessing the answer to a short-answer item is zero)..
- Possible to give partial credit. e.g., award points as follows:

  2. Fully-correct answer
  1. Partially-correct answer
  0 Incorrect answer

If you decide to award partial credit, you should use a partial scoring key.

Shortcomings/weaknesses

- Unlike essays or projects, short-answers items typically do not assess 'deep' thinking. Instead, they typically assess 'shallow-processing' or 'lower-order' answers.
- Requires time to create and edit good-quality items
- Tend to focus exclusively on cognitive outcomes (no attention to affective outcomes such as attitude and interest)

Strategies for constructing a short-answer test:

- Focus the questions on important content
- Give priority to question format over completion format.

Some stems for short answer questions

Knowledge of terminology:

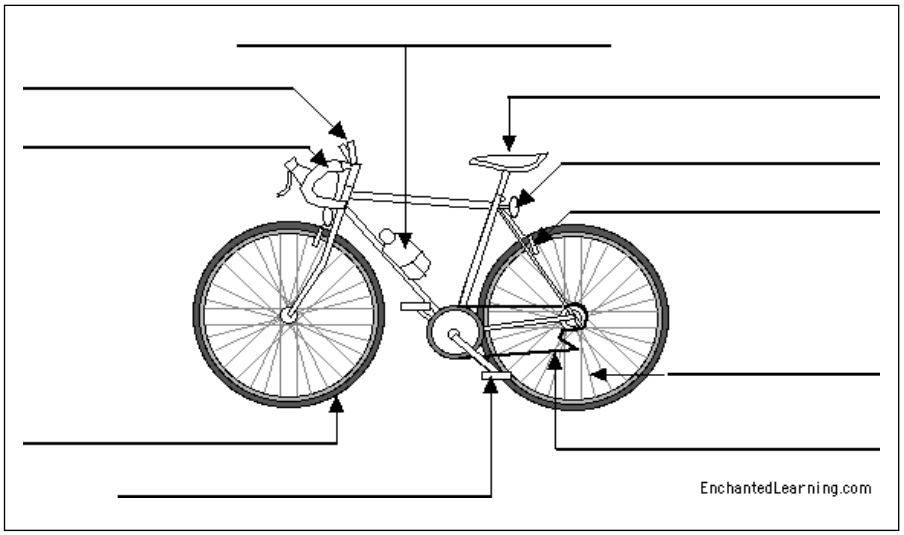
- What does _____ mean?
- What is a _____?
- Define the meaning of _____.

Knowledge of Comprehension

- Write _____in your own words.
- Explain _____in your own words.
- Draw a simple diagram to show _____.

Simple interpretations:

- Label the following:



Knowledge of trends and sequences

- In what order does _____ happen?
- List the causes of _____.
- Name the stages in _____.

Appendix 8.8

Constructing a Test Consisting of Short-answer Items

Directions: Re-read the text used in Appendix 8.4. Review key content (underlined) and key learning targets. Then, work in pairs to construct a 10-item short-answer test, based on the text. Be sure that you assess all the important learning targets.

Short answer items:

a) _____

b) _____

c) _____

d) _____

e) _____

Directions: Now develop a scoring (answer) key. This is a list of the correct answers. If you intend to offer partial credit, indicate what the student must do to be given full credit, and to be given partial credit.

Scoring key/answer key (Answer to the first, second, third question. . .)

1. _____

2. _____

3. _____

4. _____

5. _____

Appendix 9.1

Restricted and Extended Writing Tasks

Teacher asks group to consider:

- The benefits of using written tasks for assessment; and writes responses on an overhead transparency or chart sheet.
- Traditional methods of writing assessment: do they measure our learning targets well?
- How long should a good piece of writing be? What are we assessing when we give students a written task?

Teacher explains there are two main types of written or essay assessment: ***Restricted response items and extended response items***

1. Restricted response assessment

These items limit both the content of students' answers and the form of their responses. For example:

Write a paragraph comparing and contrasting the terms 'formative assessment' and 'summative assessment' as they relate to (i) the purposes of assessment, (ii) the process of obtaining information and (iii) the quality of the information gathered.

Teacher explains that restricted response items should measure more than lower level skills such as recall and comprehension. They should require students to apply their skills to solve new problems or analyse new situations.

Sample 'restricted response' questions based on a poem:

- What is the poet's view of poetry as shown in lines 1 to 8? Does he have a set view of what poetry should be?
- How would you describe the poet's concerns about poetry as evidenced by the last two verses? What words express how he feels?
- Describe the techniques the poet uses to express his frustration in the poem (e.g. repetition, etc.)

Teacher then asks the group to list what they see as the advantages and disadvantages of restricted response assessment, and writes the responses on an overhead transparency or chart sheet.

2. Extended response assessment

Teacher explains that with extended response essay items, students write essays in which they are free to express their own ideas and to use their own organisation of the answers. Usually no single answer is seen as correct. There are two broad uses for the extended response essay format:

(i) Assessing students' general writing ability
If the teacher's intention is only to assess writing ability, the essay must present students with a prompt. A prompt is a brief statement that suggests a topic to write about, provides general guidance to the student, motivates the student to write and elicits the student's best performance. You may assess your students' performance using a rubric, which defines various characteristics of good writing.

Sample prompt:
Brenda Ueland said "Listening is a magnetic and strange thing, a creative force". Today, stop what you're doing and listen for two minutes. Then write the new thoughts you had as a result of this simple activity.

(ii) Assessing students' subject matter knowledge
If the main purpose of the assessment is to evaluate students' knowledge, understanding and reasoning on a subject, a different kind of prompt is needed.

Sample prompt for subject matter knowledge:

Devise a plan to improve the quality of drinking water in a large city. Refer to the involvement of the local people, and give some indicating of how much the plan would cost.

3. Skill assessment using essay items

Teacher explains it is important to study different ways of phrasing questions so that items can be crafted that encourage students to use higher-level cognitive processes and skills. Teacher reminds the participants of Bloom's taxonomy of cognitive skills:

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Assessing the Knowledge and Skills Needed to Respond to Writing Prompts

Facilitator provides examples of prompts and asks the participants to work in groups to decide which skills each prompt is assessing (taken from Nitko, 2004):

Directions: Use Bloom's taxonomy to identify the main cognitive skills that students should use as they write an answer to each prompt.

1. Read the five mathematics problems attached. Group these problems into two groups. Explain why the problems in each group are similar and belong together. Explain how the two groups differ.

Cognitive process(es) assessed (from Bloom) _____

2. Suppose the government of South Africa ordered all of the white citrus farmers leave the country. Where would you expect them to go? Explain the principles you used to make these predictions.

Cognitive process(es) assessed _____

3. Read the attached statements of Politician A and Politician B. In what ways are their points of view similar? Explain the reasons for your conclusions.

Cognitive process(es) assessed _____

4. Study the data in the table above. What would you expect to happen to exports of wheat over the next five years? Explain the assumptions you made for your predictions to be valid.

Cognitive process(es) assessed _____

5. Look at the family photo attached. Describe the mood or feeling in the photo as well as the body language of the people. Use metaphors or similes to make these descriptions.

Cognitive process(es) assessed _____

Appendix 9.2

6. Complete the information in Table A with the information in Figure A. What conclusions do you draw about how successful rice farming will be in the region to which the data apply? Explain the reasons for your conclusions.

Cognitive process(es) assessed _____

7. Read the attached newspaper article. Which statements are opinions? Why?

Cognitive process(es) assessed _____

8. Study the pictures of the 10 paintings that are attached. Organise these paintings in two or more groups according to their style. Explain the reasons behind your grouping.

Cognitive process(es) assessed _____

9. Explain in your own words the meaning of the term prejudice. Give an example of prejudice from your own experience.

Cognitive process(es) assessed _____

10. Your friend was absent from metalwork workshop last week. Write about the object you made. Make sure the directions are clear, so that your friend can follow them.

Cognitive process(es) assessed _____

Appendix 9.3

Constructing Subject Matter Essay Prompts - Guidelines

Teacher explains there are some **clues for constructing writing prompts** that will help focus the students' work, namely:

Subject: Inform the student who or what the piece is supposed to be about

Occasion: Inform the student about the occasion or situation that requires the piece to be written.

Audience: Inform the student about who the intended audience is.

Purpose: Inform the student what the writing purpose is supposed to be - informative or narrative? Imaginative? Persuasive?

Writer's role: Inform the student of the role he/she is to play while writing (e.g. a friend, student, parent, etc.)

Example of a writing prompt:

Scenario: Ben's goal is to find work as a sales associate for a department store. He has never worked in a department store before but he feels that he has good interpersonal skills. Ben's strategy for finding a job is to look at the job ads in the paper every week and send his resume in response to the ads. It has been two months and Ben has not yet found a job or even been asked for a job interview. Because Ben is your friend, he comes to you for your advice on seeking work as a sales associate.

Instructions: What feedback would you give to Ben on his strategy for finding a job as a sales associate?
Specifically, describe two strategies you think that Ben should consider to be more effective in seeking work as a sales associate. Explain how you would present these strategies to Ben.

Your response will be evaluated on your ability to:

- Plan (evaluate a plan's effectiveness in achieving goals)
- Solve problems and make decisions (generate strategies of options for effective action)
- Convey ideas in writing

Appendix 9.3

Directions: Select a subject area or work situation of your choice. Prepare a prompt for students to write an essay.

Subject area or situation: _____

Prompt: _____

_____

_____

_____

_____

_____

_____

Evaluating a Writing Prompt

Facilitator restates the importance of ensuring that teachers focus on what skills they want their students to present in essay responses. Teacher then presents a checklist for evaluating the quality of essays on subject matter learning (from Nitko, 2004).

1. Does the essay assess the important aspect of the unit's instructional targets?

2. Does the essay match your assessment plan in terms of emphasis, performance, and a number of points?

3. Does the essay require students to apply their knowledge to a new or novel situation?

4. Is the prompt focused? Does it define a task with specific directions, rather than leave the assignment so broad that virtually any response can satisfy the question?

5. Is the task defined by the prompt within the level of complexity that is appropriate for the educational maturity of the students?

6. To get a good mark on the item is the student required to demonstrate more than recall of facts, definitions, lists, generalisations and ideas?

7. Is the prompt worded in a way that leads all students to interpret the assignment in the way you intended?

8. Does the wording of the prompt make clear to students all of the following:

    - Magnitude or length of the required writing?
    - Purpose for which they are writing?
    - Amount of time to be devoted to answering this item?
    - Basis on which their answers will be evaluated

9. If the essay prompt asks students to state and support their opinions on controversial matters, does the wording make it clear that the students' assessment will be based on the logic and evidence supporting their arguments, rather than on the actual position taken or opinion stated?

Directions: Switch your writing prompt with your partner's. Evaluate the writing prompt he or she has developed, using the above list.. Suggest changes for improvement, based on this.

Appendix 9.5

Assessing an Essay or Piece of Writing

Facilitator explains that writing assessment and assessment for learning need to be highly integrated. Facilitator describes how, in order to raise students' writing standards, the teacher must concentrate on and teach the qualities of good writing. In order to improve his/her writing, the student must know what needs improving and how to make these improvements.

Facilitator recaps on the rubric for scoring an oral language presentation [Appendix 4.6]

Score	***Organisation***
4 points (Exceptional)	Well organised essay. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised essay. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised essay. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no organisational features present. Random collection of loosely-related ideas.

Score	***Content***
4 points (Exceptional)	The student demonstrates in-depth understanding of the relevant and important ideas.
3 points (Strong)	The student includes some of the important ideas related to the topic. The student is knowledgeable about the topic.
2 points (Acceptable)	The student may include an important idea, part of an idea, or a few facts but does not develop the ideas or deal with the relationships among the ideas.
1 point (Beginner)	The student shows limited understanding of the topic.

Appendix 9.5

Score	*Presentation skills*
4 points (Exceptional)	Poised, clear articulation; proper volume; steady rate; good posture and eye contact; enthusiasm; confidence
3 points (Strong)	Reasonably clear articulation; rate fairly steady; some eye contact. Broadly enthusiastic.
2 points (Acceptable)	Some mumbling; little eye contact; uneven rate; little or no expression
1 point (Beginner)	Difficult to understand; no eye contact; rate too slow/fast; speaker seemed unmotivated.

	Organisation	**Content**	**Presentation**	**Total***
Student X				

Total = sum of scores on organisation, content, presentation

Directions: Working in pairs, participants consider which elements of the scoring rubric could be retained, and which elements need to be added.

Elements that need to be added to the oral presentation scoring rubric to transform it into a writing rubric:

1. _____
2. _____
3. _____
4. _____
5. _____

Appendix 9.6

General Principles for Scoring Responses to Subject-matter Essays

Guidelines for Scoring Essay-type Questions:

1. Prepare some type of scoring guide - e.g., an outline, a rubric, an 'ideal answer', or 'specimen' response from previous administrations.
2. Grade all responses to one essay question before moving on to the next one.
3. Periodically rescore previously scored papers.
4. Score penmanship, general neatness, spelling, use of prescribed format, and mechanics (e.g., spelling) separately from subject matter content.
5. Score papers without knowing the name of the pupil writing the response.
6. Provide pupils with feedback on the strengths and weaknesses of their responses.
7. When the grading decision is crucial, have two or more raters involved in the scoring

Advantages and Disadvantages of Holistic and Analytic Scoring Rubrics

Holistic Scoring Rubrics:

Advantages

- You can score the student's papers a little faster than with analytic rubrics
- It helps you to view the papers as a working whole

Disadvantages

- You give a single overall mark and do not point tout details to your student that might help them to improve
- Your own bias (e.g., towards neatness or spelling correctly) and errors (paying closer attention to correctness of a specific element in one student's paper than to another) can easily be masked by the overall mark.

Analytic Scoring Rubrics

Advantages:

- By scoring each element separately, you can give students feedback on strengths and weaknesses
- By scoring each part separately, you can look over all the papers to see which elements gave students most trouble and therefore need attention during teaching.
- By weighting some elements more heavily than others, you can give more value to one element (e.g., content) than to another (e.g., presentation).

Disadvantages

- Teachers may be frustrated by the amount of time it takes to develop an analytic scoring rubric.

Source: Adpated from Nitko, (2004)

A Rubric for Assessing Writing

Score	Organisation
4 points (Exceptional)	Well organised essay. Ideas are in logical sequence, one point following on another. All or almost all transitions between parts are smooth. Flows well.
3 points (Strong)	Reasonably-well organised essay. Most ideas are ordered logically. There are several smooth transitions between parts.
2 points (Acceptable)	Weakly organised essay. Ideas don't follow from one another. Transitions are poor. Difficult to follow the logic of the presentation.
1 point (Beginner)	Few or no organisational features present. Random collection of loosely-related ideas.

Score	Content
4 points (Exceptional)	The student demonstrates in-depth understanding of the relevant and important ideas.
3 points (Strong)	The student includes some of the important ideas related to the topic. The student is knowledgeable about the topic.
2 points (Acceptable)	The student may include an important idea, part of an idea, or a few facts but does not develop the ideas or deal with the relationships among the ideas.
1 point (Beginner)	The student shows limited understanding of the topic.

Score	Conventions
4 points (Exceptional)	Poised, clear articulation; proper volume; steady rate; good posture and eye contact; enthusiasm; confidence
3 points (Strong)	Reasonably clear articulation; rate fairly steady; some eye contact. Broadly enthusiastic.
2 points (Acceptable)	Some mumbling; little eye contact; uneven rate; little or no expression
1 point (Beginner)	Difficult to understand; no eye contact; rate too slow/fast; speaker seemed unmotivated.

Appendix 9.8

Assessing a Writing Sample

Directions: Read the writing sample provided by the course organiser. Then, work on your own to score it, using the scoring rubric in Appendix 9.7. After you have finished, compare your ratings with a partner, and discuss why there might be differences.

	Organisation	**Content**	**Presentation**	**Total***
My scores				

Total = sum of scores on organisation, content, presentation

Reasons for differences in scores:

1. _____

2. _____

Constructing a Task-specific Holistic Scoring Rubric

Facilitator identifies aspects of writing that were not assessed as part of the analytic scoring rubric presented in Appendix 9.7. Examples include:

- Audience / sense of audience
- Presentation skills
- Writer's voice
- Fluency / flow of writing

Directions:

Consider this writing task:

> Imagine that your student council has decided to prepare a time capsule for your high school class this year, to be opened at your 20th class reunion. All students in your class have been invited to make suggestions about what they think should be included.
> Write an essay to your student council suggesting three objects or documents that should be included and explaining why you think they are particularly significant.

Working with colleagues in your group, prepare a simple, 4-point holistic scoring rubric that could be used by teachers or by students themselves to evaluate their performance on this writing task.

Points rating and label	Characteristics
Level 4 - Superior essay	
Level 3 - Good essay	
Level 2 - Fair essay	
Level 1 - Emerging essay	

Appendix 9.10

Applying the Holistic Scoring Rubric

Directions: Read through the text below, and then apply the scoring rubric your group has created to the text.

Obviously, there are many items that could be included in this time capsule we plan to construct. So many things have happened this year in the world, and also just in our school, that choosing just three objects or documents is a daunting task. When we do open the time capsule, we will want it to contain more than just trivia from our high school days. My suggestion is to include objects that help represent our shared past, our dreams for the future, as well as preserving memories from the high points of our senior year.

The first item that I suggest should be included is a kindergarten yearbook for our class. Imagine us at our twentieth reunion, thirty-eight years young, gathered about a faded, dusty, crisp yearbook with yellowed pages, examining pictures of ourselves in 1987. Looking at these pictures now is amusing, but I think in twenty years, we will see these pictures in a different light. Many of us have known each other ever since we first shared crayons and fingerpaint in Mrs. Smith's kindergarten class. It will be touching to look back together to the very first year that we started our education. The past is something we should keep with us.

I also think it would be a good idea to include a document where each of us records predictions of the future both for us as individuals and for where we think the country will be in twenty years. I believe it would be fascinating to review these stories, to find out who achieved what they set out to achieve as well as to discover whose dreams changed in twenty years. Our predictions about the future direction of the country will remind us that teenagers do think about helping to build a better nation and community. For example, I would like to predict that following the very close Gore/Bush presidential election voter apathy among young people will decline. These predictions symbolize our concerns about the future.

The third and final item that I propose should help us celebrate the high points of senior year. I would like to see included some of the trophies we have gathered in both athletic and academic fields. First, these trophies will be great conversation starters, reminding us of funny or heart-warming anecdotes. Symbolizing struggles past and obstacles overcome, these trophies will also remind us that meeting the present challenges we face is possible.

For some of us, high school is the most important time of our lives; for others, it is merely a stepping stone on the way to a life full of rich accomplishments. I feel that the items I have selected for placement in the time capsule will cater nicely to the differing beliefs of these two schools of thought. When we have drifted far apart, they will bring us closer together as we reunite to celebrate past memories, present challenges, and future dreams.

Score: Level _____

Now, discuss with other members of your group why you assigned this score.

Appendix 10.1

Types of Portfolios

Background knowledge

1. Contents of portfolios

Facilitator explains a portfolio is a limited collection of a students' work used mainly in order to:

- present the students' best work or
- to demonstrate the student's educational growth over time.

Facilitator explains that other uses for portfolios may be:

- to showcase the student's favourite work
- to document a process such as a long-term project or
- to demonstrate the group achievement of a number of students

Facilitator explains that this session will focus on the first two uses of portfolios listed above. It is important that the teacher and student make sure the portfolio is not a scrapbook for all the student's work. Items in a portfolio are carefully selected. A portfolio may take the form of a folder, a box of items, or whatever form is necessary to include the items/learning being assessed.

(a) Best Work Portfolio [Favourite Work Portfolio]

General Purpose 1: A student's best works are selected to provide convincing evidence that the student has achieved specific learning targets

Specific Purposes:

- To provide evidence of subject-matter mastery and learning
- To provide evidence of high-level accomplishment in an area such as art or writing
- To provide evidence of minimal competence in a subject for purposes of graduation
- To provide evidence of a school or school district's accomplishments

Contents: A student's best works are selected to provide convincing evidence that the student has achieved the specific learning targets

General Purpose 2: Communications

Specific Purposes:

- To showcase a student's work for his/her parent(s)/guardian(s)
- To pass on information about a student to the next teacher
- To showcase a school's talents

Appendix 10.1

Contents: Examples of accomplishments that may be typical or may impress others.

(b) Growth and Learning Portfolio

Facilitator describes the possible specific purposes of a growth and learning portfolio as:

- Teacher and/or student reviewing progress and change in achievement
- Student needs to look over his/her work to see the entire picture of what has been accomplished.

Facilitator describes the essential elements to a growth and learning portfolio. It is important to include all of the following:

1. **Cover Letter** "About the author" and "What my portfolio shows about my progress as a learner" (written at the end, but put at the beginning). The cover letter summarizes the evidence of a student's learning and progress.

2. **Table of Contents** with numbered pages.

3. **Entries** - *both core* (items students have to include) and *optional* (items of student's choice). The core elements will be required for each student and will provide a common base from which to make decisions on assessment. The optional items will allow the folder to represent the uniqueness of each student.

   Students can choose to include "best" pieces of work, but also a piece of work which gave trouble or one that was less successful, and give reasons why.

4. **Dates** on all entries, to facilitate proof of growth over time.

5. **Drafts** of aural/oral and written products and revised versions; i.e., first drafts and corrected/revised versions.

6. **Reflections** can appear at different stages in the learning process (for formative and/or summative purposes.) and can be written in the mother tongue at the lower levels or by students who find it difficult to express themselves in English.

   a. For each item - a brief rationale for choosing the item should be included.
   This can relate to students' performance, to their feelings regarding their progress and/or themselves as learners.
   Students can choose to reflect upon some or all of the following:
   - What did I learn from it?
   - What did I do well?
   - Why (based on the agreed teacher-student assessment criteria) did I choose this item?
   - What do I want to improve in the item?
   - How do I feel about my performance?
   - What were the problem areas?

   b. For the whole portfolio (the cover letter - see above)

Stages in Developing a Portfolio System, and Characteristics of a Good Portfolio

Facilitator outlines steps in developing a portfolio system:

Six steps for developing a portfolio system (Nitko, 2004)

1. Identify portfolio's purpose and focus
2. Identify the general achievement targets to be assessed.
3. Identify appropriate organization
4. Decide on portfolio's use in practice.
5. Evaluation of portfolio and entries.
6. Evaluation of scoring rubrics.

Facilitator describes the characteristics of a good portfolio (adapted from McMillan, 1997):

- Clearly defined purpose and learning targets
- Systematic and organised collection of student products
- Pre-established guidelines for what will be included
- Student selection of some of what is included
- Student self-reflection and self-evaluation
- Progress documented with specific products and/or evaluations
- Clear and appropriate criteria for evaluating student products
- Portfolio conferences between students and teachers
- Involve parents in the portfolio process

Three tips for portfolio assessment (Nitko, 2004)

1. *Include authentic work* - e.g., in science portfolio, a student should work on evaluating evidence, using scientific explanations to account for data, or collecting data to support or refute explanations - the things real scientists do.

2. *Record conceptual development* - portfolios should include student's own explanations, understandings and conceptual frameworks. The portfolio should be frequently updated as the student progresses through a project or problem solution, to show changes in the student's conceptual framework and thinking as the project develops.

3. *Engage in reflective activity* - the student uses the portfolio as the basis for discussions with the teacher about his understanding of concepts, principles and theories that underlie the work. The teacher guides the discussion to support the student.

Appendix 10.3

Linking Learning Targets to Portfolio Contents

Teacher presents examples of linking learning targets to portfolio content, noting that portfolios can be used in a range of subjects.

Learning Target	What is put in portfolio	Frequency of entry and assessment
Student evaluate one's own progress over time.	Student reviews his/her own portfolio; Student answers questions to the teacher about his/her development.	Two or more times a year.
Student participates in science experiments and record findings and conclusions	Student documents participation in experiments and writes up conclusions	Four or five times a term
Student communicates effectively through writing	Teacher and student select writing samples to include in portfolio.	Two or three times a term.
Student documents key milestones in a project.	Student selects key aspects of the project to include (e.g., outline, main findings, reflections)	Three or four times during the course of the project.
Summarise main outcomes of a project	Student documents key outcomes of the project	Once, at end of project

Adapted from Valencia, Hiebert & Afflerback (1994).

Contents of a Development Portfolio

Facilitator describes possible contents of a portfolio in mathematics. Ultimately, these are linked to learning targets.

Learning Target	What is put in portfolio
Student demonstrates understanding of mathematical concepts.	A description by the teacher of a student activity that displayed understanding of a mathematical concept
Student solves complex problems involving profit and loss.	Draft, revised, and final versions of student work on a complex problems involving profit and loss.
Student identifies and solves problems in algebra	Algebra problems created by the student
Student reflects on problem solving strategies, and identifies strengths and weaknesses	A written explanation of the contents of the portfolio

Directions: Work with a partner to consider what might be included in a portfolio for students on work experience at local businesses. List some broad learning targets for the work experience, and consider what contents might go in a portfolio.

Learning Target	What is put in portfolio
Identify the management team in the company, and find out what their roles in the company are.	Interviews with key management personnel.
Identify how the company advertises its products, and comment on the advertisements.	

Appendix 10.4

Facilitator presents additional examples of portfolio contents, demonstrating the range of artifacts that can be included, but also stressing that the contents of the portfolios must be compatible with the learning targets of a unit or project.

Biology Portfolio	History Portfolio
• Reports on careers related to the field of biology • One lab reporto One problem-solving logo Pamphlet on diabetes (group project) • Video of group presentation on the circulatory system • Essay on chemical warfareo Research paper on AIDS • Tape-recorded interview with university professor • Self-evaluation of portfolio using rubric • Goal-setting web	• Annotated Bibliographies of five books written about World War One • Reading list of ten articles related to World War One • Tape of interview with local historian • Map of the Battle of the Somme • Video of oral presentation on the Battle of Waterloo • Research paper on the formation of the European Union • Peer evaluation of portfolio using rubric • Venn Diagram comparing the Battle of the Somme and Pearl Harbour

Supporting and Encouraging Students to Engage with their Portfolios

Facilitator explains that it is important that students play a very active role in selecting the work that goes into a portfolio. Teachers must prepare their students to become involved in the self-reflection process. Facilitator explains that student self-assessment and portfolio conferences will be held. Facilitator describes the stages through which a teacher should take the students.

Support and encouragement are required by both teacher and students at this stage. Devote class-time to student-teacher conferences, to practicing reflection and self-assessment and to portfolio preparation, since these may be new skills for most students.

Reflection and self-assessment do not come naturally to people who have had little practice in it, and require **learner training**. For example, encourage them to ask themselves: What did I learn from that activity? Which is my best piece? How can I improve this? This can be done by class suggesting (what are some possible reasons for including an item in your portfolio?) or in pairs - "portfolio partners" - who help each other select samples of their work (written comments on their work from a peer can also be included in the portfolio). Teachers should start with more structured forms of reflection and slowly proceed to more open reflective comments.

Give **guiding feedback.** The finished portfolio may be due only at the end of the term, but it is a good idea to set regular dates at which time several portfolio-ready items (i.e. with drafts and reflections) will be handed in, so that students know whether they are on the right track. Alternatively, you can have a portfolio project on a single unit of material so that both teacher and students will acquire experience in this kind of assessment over a shorter period of time.

Ownership: To ensure that the portfolio represents the student's own work, some items can be done completely in class. You might also decide to have a test (preferably with corrected version) included as a core item together with reflection on what the student learned from doing the test and revising it. Furthermore, you may ask the students to explain in their reflections who helped them to improve their work (a peer, a parent, a spell-checker) and what they learned from revising their work

Evidence and Dates	Skill/Target	Comments	Teacher's Mark	Student's Mark	%
Cover sheet/Introduction	Planning				5%
Description and overview of the company (Written Text)	Writing informational text				10%
Interview with manager about organisation of the company (Tape) + reflection on interview (Written Text)	Using aural/oral language skills				20%
Student's review of work experiences (writing)	Analysis / Reflection				20%
Daily log fully written up with 3 entries per week	Reflection				25%
Student's own choice (e.g., artefact made)					20%
Total Mark					100%

Evaluating a Portfolio - Creating a Holistic Scoring Rubric

Directions: Your students are about to embark on a work experience project. Work with a partner to develop a holistic scoring rubric that can be used to score their portfolios at the end of the project (after 10 weeks).

4 points (Exceptional)	
3 points (Strong)	
2 points (Acceptable)	
1 point (Beginner)	Portfolio shows little or no evidence that learning targets have been reached. Students engages in little self-reflection. Several required components are missing from the portfolio.

Facilitator reminds participants that, even if they use holistic scoring rubrics, they may still annotate the portfolio, thus providing feedback to students.

Appendix 10.8

Student Self-evaluation and Self-reflection (Artifact)

Facilitator will introduce framework for description of an artifact. After students have completed such a form, they can include it in their portfolio.

Student Artifact Reflection Form

Name_____ Date_____ Artifact_____

Discipline Area_____

Artifact Description

_____
_____
_____
_____

(Continue answers on another page)

In what ways does it represent your best work?

_____
_____
_____
_____
_____

From the skills checklist, identify the skills you demonstrated effectively in producing this artifact?

_____
_____
_____
_____

Of the skills you demonstrated in producing this artifact, which ones can you improve? What could you do to revise or strengthen the work?

_____
_____
_____
_____

Advisor Endorsement Date_____

Comments:_____
_____
_____
_____

Student Self-evaluation and Self-reflection

Facilitator will point out that the attached form below can be used as another strategy for student self-evaluation and self-reflection. It is to be filled out after students have completed an a project or unit of study. It this instance, it is based on work-experience.

Name: _____ Date: _____

Self-evaluation:

What are the main things you have learned from this work experience?

How have you changed as a person over the course of the work experience? What are your strengths and weaknesses in the roles you have undertaken?

If the work experience were to be extended by another 6 weeks, what would you do differently, and why?

Self-reflection

When you look at your portfolio, how do you feel about yourself as a learner? Explain why you feel this way.

Appendix 10.9

Facilitator reminds participants that teachers can also encourage student self-reflection through asking questions. These questions could be asked in the context of an interview.

- What is the process you went through to complete this assignment? Include where you got your ideas, how you explored the subject, what problems you encountered, and what revision strategies you used.
- What makes your most effective piece better than your least effective piece?
- Did other members of your group review your portfolio? What comments did they make?
- How does this activity relate to what you have learned before?
- What are the strengths of your work? What sill concerns you?

Identifying Strengths and Weaknesses of Portfolio Assessment

Facilitator asks groups to make a list of what they see as the advantages and disadvantages of portfolio assessment.

Directions: Think about portfolio assessment (relative to other types of assessment). Working as a group, list some strengths and weaknesses.

Portfolio Assessment	
Strengths	Weaknesses
Promotes collaborative assessment	Scoring by teacher and student may be 'unreliable'
Allows students to evaluate own work	

Appendix 10.10

Possible Advantages:

- They allow the teacher to see the student as an individual, each with his or her own unique set of characteristics, needs, and strengths.
- They transform the role of the teacher away from generating comparative rankings of achievement (grades, percentile rankings, test scores) and toward improving student achievement through evaluative feedback and self-reflection.
- They help teachers standardize and evaluate the skills and knowledge we expect students to acquire without limiting creativity in the classroom.
- They help students be more accountable for the work they do in class and the skills and knowledge we are asking them to acquire.
- They aid in the diversification of approaches to teaching and learning, thus increasing the connections with a wider range of learners and learning styles.
- They involve students in the assessment process, thus giving them a more meaningful role in improving achievement.
- They invite students to reflect upon their growth and performance as learners.
- They involve parents and the community in taking measure of their children's academic achievement in the context of the school curriculum rather than as measured by more ambiguous standardized tests and grades.

Possible Disadvantages:

- They may be seen by some as less reliable or fair than more quantitative or standardized evaluations such as test scores.
- Parents can often be skeptical about measurements other than grades and test scores.
- Most colleges and universities still use test scores and grades as primary admissions criteria.
- They can be time consuming for teachers and staff, especially if portfolios are done in addition to traditional testing and grading.
- Teachers must develop their own individualized criteria, which can be initially difficult or unfamiliar.
- Data from portfolio assessments can be difficult to analyze or aggregate, particularly over long periods of time.
- They are often difficult to integrate meaningfully into school cultures where very high stakes are placed on comparative student ranking and standardized tests.

Appendix 11.1

Project Work - Some Topics

Facilitator discusses the role of project work, and how it can be used to assess student progress towards important learning outcomes.

Facilitator presents examples of projects that are suitable for students in secondary/vocational schools:

Example 1: Famine

Grade 9-12, Social Studies, 12-week group project

Famine is a human tragedy that shreds the lives of millions of people around the world each day. Students take on different roles to identify ways to address current relief needs and to propose recommendations for reducing famine in the world.

Learning targets:

- Students identify which countries currently suffer from famine
- Students identify causes of famine
- Students examine ways in which famines can be eliminated.
- Students contrast the roles of individuals and of governments in eliminating famine.
- Students consider the effects of famine in one country on food resources in another.
- Students evaluate current international efforts to address famine.

Project plan

Stage of Project	Product	Due date
Planning and Organizing	Project plan and timeline	Week 1
Researching and Developing	Interview with project group	Week 6
Producing a Final Product	Poster or brochure to increase awareness about famine Project report on 'elimination of famine'	Week 8 Week 10
Presenting the Final Product	Presentation of report to class by project group	Week 12

Appendix 11.1

Example 2: Waste Management

Grade 10, Science, 10-week group project

Students engage in the process of making new material from waste, as they turn biodegradable garbage into rich compost that can be used as a fertilizer.

Learning targets:

- Students learn to value the environment, by engaging in a project on recycling waste.
- Students learn about the composting process, and make compost
- Students distinguish how to get organic material to decompose (an aerobic process) rather than rot (an anaerobic process).
- Students identify the types of chemical reactions that occur during composting
- Students communicate their findings to the school community and to the community outside the school.
- Students explain how composting is an example of conservation of mass.

Products and due dates:

Stage of Project	Product	Due date
Planning and Organizing	Group project plan, including hypotheses	Week 1
Researching and Developing	Individual learning logs on implementation of experiment and observation of outcomes, including photographic evidence.	Weeks 3-8
	Group oral interview to with teacher to assess progress	Week 6
Producing a Final Product	Written group report on outcomes of the project, including implications for economy and society.	Week 8 Week 10
Presenting the Final Product	Group presentation on final report.	Week 12

Project Work - Project Plan

Directions: Working in groups, identify a suitable project for students that you teach. Include key learning targets, as well as expected products and a time line.

In which subject area(s) is the project grounded? _____

What is the title of your project? _____

_____

Provide a brief description outlining the focus of the project. _____

_____

_____

List some key ***learning targets***:

1. _____

2. _____

3. _____

4. _____

Now list some key ***products*** that will emerge from the project:

Stage	*Product*	*Due date*
Planning and Organizing		
Researching and Developing		
Producing a Final Product		
Presenting the Final Product		

Appendix 11.3

Assessing Project Work

Facilitator will suggest ways in which projects can be evaluated, noting that the existing strategies can be applied to evaluating many project components. Facilitator notes that:

- it is not necessary to use every assessment strategy with every project; the particular assessment strategies used should be related to the purpose of the project;
- some assessment strategies that provide formative assessment information should be used
- different assessment strategies should be used throughout the project; it is not sufficient to wait until the end of the project before providing feedback.

Facilitator explains that the following are examples of assessment strategies, covered in the current course, that might be used to assess a project.

- *Portfolio assessment* - students may be required to present a portfolio as part of the project, and this can be evaluated using the approaches outlined in Module 10 (e.g., application of a holistic scoring rubric in Appendix 10.6 and 10.7; or self-reflection and self-evaluation templates in Table Appendix 10.8 and 10.9).
- *Oral Presentation* - students may be required to make a presentation at the end of the module. This can be evaluated using a scoring rubric such as that presented in Module 4 (Appendix 4.6, Appendix 4.7) or using a new scoring rubric, designed to incorporate the specific learning targets of the project.
- *Essay* - students may write informational or persuasive text as part of the project. This can be evaluated using a suitable writing rubric, such as that presented in Appendix 9.5. The teacher will need to decide if the rubric should be changed to accommodate the specific learning targets established for the project.
- *Learning Log* - students may be directed to maintain a learning log during the project. The teacher's comments in the learning log will constitute formative assessment information. At the end of the project, students might be given credit for completing the learning log in a timely manner, or a rubric might be developed that reflects the quality of the content of the learning log.
- *Interview* - the teacher can meet with individuals or with a group at some point during the project (preferably well before the end) to provide feedback on the progress of the project, and to suggest directions that it might take (see Appendix 5.5).
- *Checklist* - it may be appropriate to provide students with a checklist, or to have them develop their own checklist, detailing different stages of the project. This will enable students to keep track of their progress in implementing the project.

Participants (groups) are invited to suggest other assessment strategies that might be used in evaluating a project.

Project Assessment and Evaluation Plan: Waste Management

Facilitator indicates the importance of communicating to students at the beginning of the project how they will be assessed, and what each assessment component is worth.

Facilitator indicates that teachers may wish to provide separate grades for different aspects of the project and/or combine grades across aspects to provide one overall grade. It is probably preferable for the teacher to provide feedback (in the form of grades and comments) for separate aspects of the project, rather than for the project as a whole. This helps to maintain the focus of students on the separate parts. On the other hand, if you are required to allocate an overall grade, it will be necessary to inform students how this is to be done.

For example, the following assessment plan could be used with the waste management project described in Appendix 11.1

Project Assessment and Evaluation Plan: Waste Management

Stage of Project	Product	Evaluation Procedure	Percentage of overall grade
Planning and Organizing	Project plan	Written plan based on template provided by teacher. Full credit for submission. Oral and written comments on project design to be given.	10%
Researching and Developing	Individual learning logs.	Full credit for successful completion of learning log three times per week and inclusion of photographic evidence. Teacher to write written comments on students' learning logs once per week.	25%
Researching and Developing	Oral interview	Oral interview with project group after 6 weeks to assess progress and look ahead to the reporting stage. Credit for participation.	10%
Producing a Final Product	Group report	Written report on the outcomes of the project by the group. Report to be scored using writing rubric. Students to consider economic and social benefits of composting as well as the direct outcomes of the project.	25%
Presenting the Final Product	Group Presentation	Presentation to be scored using scoring rubric for oral language presentations (see Appendix 4.6, 4.7). Other groups in class could also score presentations.	15% (teacher grade) 15% (student grade)

Appendix 11.5

Project Assessment and Evaluation Plan

Directions: Working as a group, develop an Assessment and Evaluation Plan for the project you designed in Appendix 11.2, or develop the plan around the famine project in Appendix 11.1. In your plan, mention any formative assessment information that you will provide to students.

Stage of Project	Product	Evaluation Procedure (including formative feedback)	Percentage of overall grade
Planning and Organizing			
Researching and Developing			
Producing a Final Product			
Presenting the Final Product			

Appendix 12.1

Planning Template for Workshop

1. Learning Targets: (List key learning targets for your course). These should be general. For example:

(i) To provide participants with strategies for integrating assessment and instruction to support student learning
(ii) To enable participants to implement strategies that will adequately assess student progress
(iii) To enable participants to identify appropriate goals and learning outcomes, and to link these to assessments.
(iv) To enable participants to engage students in self-assessment.

2. Assessment Strategies: (List key instructional strategies to be presented at the workshop)

(i) identifying instructional goals and learning targets.
(ii) assessing and developing students' background knowledge (semantic maps, concept maps, semantic feature analysis etc.)
(iii) developing and implementing a rubric for scoring an oral presentation delivered by students.
(iv) identifying the major stages in implementing a project, and linking appropriate instructional strategies to each stage: (e.g., oral interviews, written report, oral presentation).
(v) applying an analytic scoring rubric to assess students' informational writing.

3. Mode of Presentation

(i) facilitator led discussions
(ii) small group activities and paired work
(iii) questions and answers at end of each session
(iv) participants to complete interactive learning log at end of each day.

4. Schedule of Activities

Day 1: 9.00 am. to 10. 30 a.m. . . . . .

5. Course Evaluation

Informal evaluation at end of days one and two (via learning logs)
Formal evaluation at end of course.

Appendix 12.2

Course Evaluation Form - Example

Facilitator will explain that the following is an evaluation form for the current course. The evaluation forms relating to specific 3-day courses will need to take into account the learning targets associated with those courses. An important starting point are the goals of the project.

Facilitator recalls broad objectives of current course:

At the end of this training event the trainees will be able to:

1. list and demonstrate different strategies of performance assessment
2. assess the effectiveness of a workshop (from participant feedback)
3. develop a plan for a 3-day workshop to disseminate the assessment techniques to other teacher trainers

Broad areas in which the evaluation form taps into include:

- Extent to teachers understanding of key concepts and strategies presented during the course
- Intention of teachers to implement specific strategies during their work.
- Views of teachers on the preparation and effectiveness of the facilitator.

Facilitator will also make the distinction between quantitative feedback (which can be obtained through administering multiple-choice questions), and qualitative feedback (which can be got by asking respondents to provide written responses to questions).

Facilitator will point out that it is appropriate to ask a small number of open-ended questions, but that the data becomes unmanageable if too many such questions are asked.

Overall themes of questions:

- Question 1 - understanding of course content and strategies
- Question 2 - intention to change own assessment practices as a result of attending the course; effects of course on practices.
- Question 3 - evaluation of the course instruction and pedagogical aspects of the course (e.g., balance between lecture and activities)
- Question 4 - adequacy of coverage of specific strategies.
- Questions 5 - teachers' confidence in their ability to implement selected strategies
- Questions 6-8 - open ended questions designed to provide qualitative information.

Note: these questions are not intended to be used to evaluate the current course. They are examples of the types of questions that participants might use to assess the courses they present.

Appendix 12.2

1 **Please indicate your agreement with the following statements about key course content:**
(Tick one box in each row)

	After attending this course, I have an improved understanding of . . .	*Strongly Agree*	*Agree*	*Disagree*	*Strongly Disagree*
a)	key principles of assessment.	❑1	❑2	❑3	❑4
b)	differences between formative and summative assessment	❑1	❑2	❑3	❑4
c)	differences between instructional goals and learning targets	❑1	❑2	❑3	❑4
d)	why learning targets are important for planning assessments	❑1	❑2	❑3	❑4
e)	how learning targets can be used to plan assessments	❑1	❑2	❑3	❑4
f)	the 6 elements of Bloom's taxonomy	❑1	❑2	❑3	❑4
g)	how Bloom's taxonomy can be used to plan and evaluate assessment activities	❑1	❑2	❑3	❑4
h)	strategies that students can use to categorise their questions (QARs)	❑1	❑2	❑3	❑4
i)	why background knowledge is important for learning	❑1	❑2	❑3	❑4
j)	strategies for assessing students' background knowledge (semantic mapping, semantic feature analysis)	❑1	❑2	❑3	❑4
k)	how to develop an analytic scoring rubric to assess an oral presentation	❑1	❑2	❑3	❑4
l)	differences between holistic and analytic scoring rubrics	❑1	❑2	❑3	❑4
m)	how to implement an analytic scoring rubric to asses an oral presentation	❑1	❑2	❑3	❑4
n)	strategies to involve students in assessing their own learning.	❑1	❑2	❑3	❑4
o)	strategies for assessing student portfolios	❑1	❑2	❑3	❑4
p)	strategies for planning the assessment and evaluation of student projects	❑1	❑2	❑3	❑4
q)	strategies for assessing and evaluating student projects	❑1	❑2	❑3	❑4
r)	differences between reliability and validity of test scores	❑1	❑2	❑3	❑4
s)	strategies for improving the reliability of scores assigned by teachers using a rubric.	❑1	❑2	❑3	❑4
t)	differences between cognitive and metacognitive knowledge	❑1	❑2	❑3	❑4

Appendix 12.2

2 **To what extent do you expect your assessment practices to change, as a result of attending this course**
(Tick one box in each row)

	As a result of attending this course, I will. . .	*Strongly Agree*	*Agree*	*Disagree*	*Strongly Disagree*
a)	implement the strategies for measuring students' background knowledge (e.g., semantic mapping, QAR)	❑1	❑2	❑3	❑4
b)	carry out interviews with individuals and groups of students to assess their progress and provide them with feedback	❑1	❑2	❑3	❑4
c)	meet on a regular basis with other teachers in my school to plan assessment activities	❑1	❑2	❑3	❑4
d)	meet on a regular basis with other teachers in my school to achieve consistency in grading students' work (e.g., essays, portfolios)	❑1	❑2	❑3	❑4
f)	provide more oral and written feedback to my students to help them focus their learning	❑1	❑2	❑3	❑4
g)	involve my students more in assessing their own learning	❑1	❑2	❑3	❑4
h)	encourage my students to reflect more on their own learning processes (metacognitive knowledge)	❑1	❑2	❑3	❑4
i)	encourage my teaching colleagues to implement more formative assessment in their classrooms	❑1	❑2	❑3	❑4

3 **To what extent do you agree with the following statements about the course?**
(Tick one box in each row)

		Strongly Agree	*Agree*	*Disagree*	*Strongly Disagree*
a)	The facilitators were well prepared	❑1	❑2	❑3	❑4
b)	The facilitators demonstrated strategies that are relevant to the needs of my students	❑1	❑2	❑3	❑4
c)	The facilitators motivated me to do well on the course.	❑1	❑2	❑3	❑4
d)	The facilitators responded to my questions.	❑1	❑2	❑3	❑4
e)	The group work was interesting and held my attention.	❑1	❑2	❑3	❑4
f)	Too many topics were covered in the time available.	❑1	❑2	❑3	❑4
g)	Important topics were not covered in sufficient detail.	❑1	❑2	❑3	❑4
h)	The balance between presentation and group activities was about right.	❑1	❑2	❑3	❑4

(the following can be used as an alternative to Question 3).

4 **Please rate the amount of coverage given to each area below during the course.**
(Tick one box on each row)

	Areas	*Too little coverage*	*Adequate/sufficient coverage*	*Too much coverage*
a)	principles of assessment	❑1	❑2	❑3
b)	instructional goals and learning targets	❑1	❑2	❑3
c)	categorisation of questions (Bloom)	❑1	❑2	❑3
d)	assessing interviews with students	❑1	❑2	❑3
e)	assessing students' writing (essays)	❑1	❑2	❑3
f)	approaches to student self-assessment	❑1	❑2	❑3
g)	Interpretation of teacher-made tests	❑1	❑2	❑3
h)	portfolio assessment	❑1	❑2	❑3
i)	assessment of projects	❑1	❑2	❑3
j)	differences between formative and summative assessment	❑1	❑2	❑3

Appendix 12.2

5 As a result of attending the course, how confident are you in your ability to do the following? *(Tick one box on each row)*

	Areas	*Very confident*	*Somewhat confident*	*Not confident*
a)	Engage students in assessing their own work	❑1	❑2	❑3
b)	Demonstrate the KWL strategy to students in my class-rooms.	❑1	❑2	❑3
c)	Develop a scoring rubric to assess students' portfolios.	❑1	❑2	❑3
d)	Interview a groups of students to provide them with form-ative assessment information about a project they are doing.	❑1	❑2	❑3
e)	Help students to think about their own learning processes.	❑1	❑2	❑3
f)	Involve students in using a learning log.	❑1	❑2	❑3

6. How could the course have been modified to better meet your current needs in the area of school-based assessment?

7. What additional content (if any) should be added to the course to improve its focus?

8. What suggestions do you have to make the course more interesting?

9. Please add any additional comments you may have here.