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IO 2 The ILDE Toolkit

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Content

Introduction

Today we live in an era of a fast-changing world which means that producing more of the same knowledge and skills will not suffice to address future challenges. In traditional education, teachers could expect that what they taught would last their students a lifetime. Today, schools have to prepare students for jobs that do not exist now but will come because of future technologies. Consequently, education should focus on teaching and learning that involve creative and critical approaches to problem-solving and decision-making. It is also about ways of working, including communication and collaboration, and the tools they require. This shift requires the capacity to recognise and exploit the potential of new technologies. Last but not least, education is about the ability to live in a multi-faceted world as an active and engaged citizen. In such a framework, the citizens influence what they want to learn and how they want to learn it, which shapes the role of educators.

In other words, the inclusion of skills in education has become more crucial to enhance the abilities that students need to develop to succeed in the information age. These skills cover:

- ✔ Learning skills: Critical Thinking, Creative Thinking, Collaborating and Communicating
- ✔ Literacy Skills: Information Literacy, Media Literacy and Technology Literacy
- ✔ Life Skills: Flexibility, Initiative, Social Skills, Productivity and Leadership

These skills are necessary to reflect and think about issues, solve problems creatively, work in teams, communicate in many media, learn ever-changing technologies, and deal with a flood of information.

The project ILDE aims to determine the effectiveness of digital technologies and critical digital literacy in education and vocational training. Significantly, the focus will turn to assess the ICT impact on mother tongue language teaching (L1) and foreign language teaching (L2 - English) in the various grades of secondary education and vocational training.

The Toolkit

The target group of the Toolkit are teachers of mother tongue and English language.

It provides educators with resources to help improve learning outcomes among students. The Toolkit includes an integrated set of resources that help inspire and guide educators. With practical guides for using technology in the classroom, the Toolkit is designed to help improve learning outcomes around essential 21st-century skills—collaboration, creativity, critical thinking, digital literacy and assessment. It provides a methodology containing practical tools and a step-by-step guide to support trainers and teachers. The design and structure of the Toolkit cover the four (4) stages of the EQAVET quality cycle, i.e. planning, implementation, evaluation and review. It helps teachers:

- ✔ Take into consideration a variety of student learning styles, interests, and aptitudes
- ✔ Engage multiple learning styles and develop students' thinking skills
- ✔ Plan more engaging, project-based, inquiry-based learning activities

- ✔ Foster teamwork and collaboration skills using today's digital media and networks encouraging students to share and get feedback on their ideas and work products
- ✔ Inspire student creativity and self-expression
- ✔ Enable student learning to take place anytime and anywhere: home, school, or community

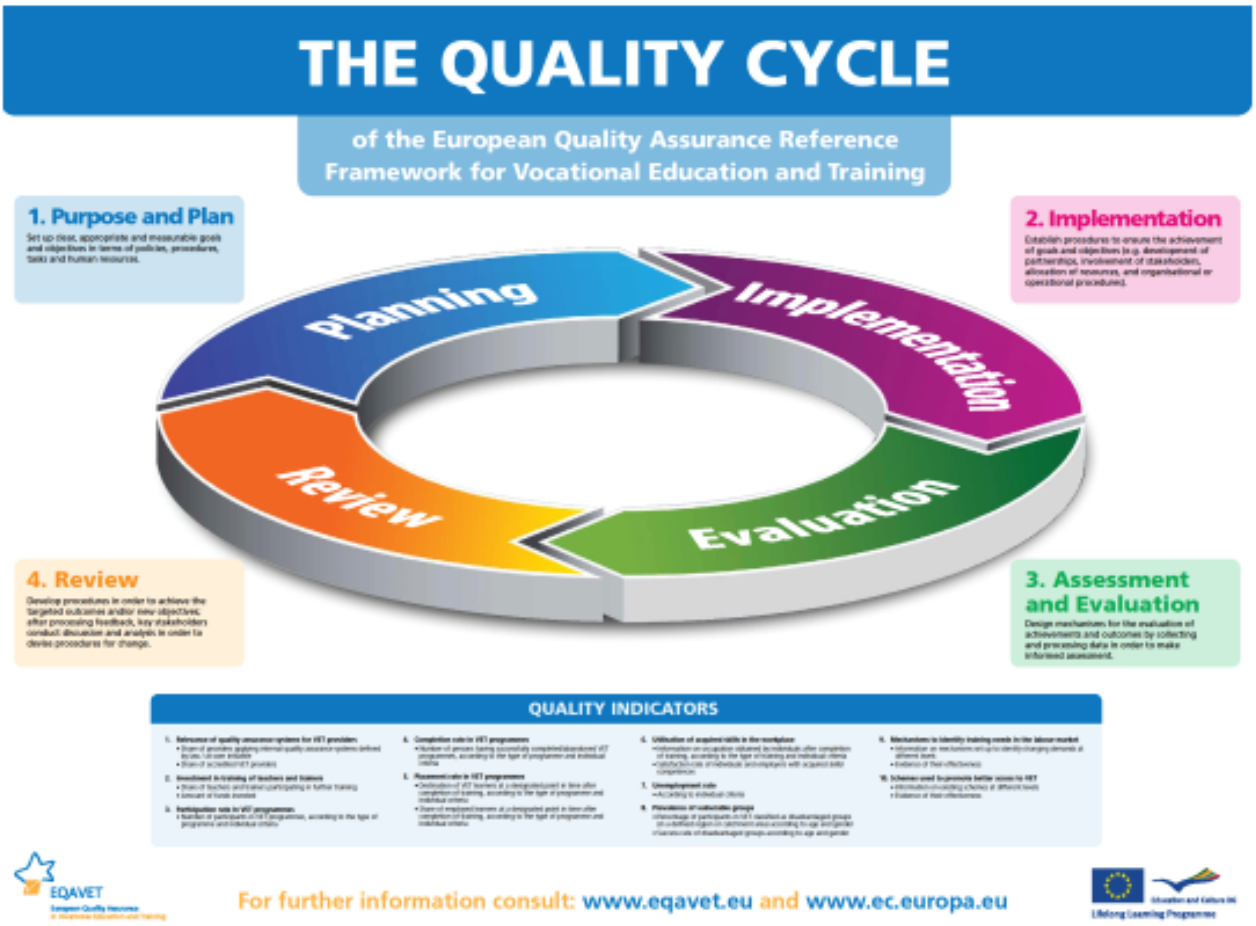
Each of the training toolkits will incorporate several elements, including:

- ✔ 1. detailed trainer's guide including training strategies, exercises and activities
- ✔ 3. recommended reading list
- ✔ 4. case studies of best practices

The Toolkit is designed to stand alone, although it is envisaged that teachers may choose to use complementary segments from other kits to customise their teaching for particular student groups.

The quality approach used in the Toolkit

EQAVET - The EU Quality Assurance in vocational education and training is a tool based on the 2009 Recommendation of the European Parliament and Council. The Recommendation invites Member States to use a series of indicative descriptors and indicators to support and develop their Vocational Education and Training (VET) systems. The tool guides creating a quality assurance system and contains examples of different approaches the Member States use.



The EQAVET quality cycle consists of the following phases:

I. Planning: Stage (1) Set up clear, appropriate and measurable goals and objectives in terms of structure, procedures, tasks and resources
II. Implementation: Stage (2) Establish procedures to ensure the achievement of goals and objectives
III. Evaluation: Stage (3) Design mechanisms for the assessment of achievements and outcomes by collecting and processing data to make informed assessments
IV. Review: Stage (4) Develop procedures to achieve the targeted outcomes and/or new objectives

Using quality cycle in learning unit

The teaching and training cycle is an on-going learning process for the continuous improvement of a training program. Anytime you plan a training and learning program, whether virtually or in a traditional classroom, it goes through a range of processes to develop an essential training skills model. The training cycle begins before the learning unit is conducted and continues after

the program is completed. The emphasis is not simply on a training event itself but also the planning, development and review stages.

PLANNING

Planning starts with what the training aims to accomplish, whereas designing consists of all the planned objectives and ways to achieve them. These objectives may include the setting, whether the learning unit would be conducted in a classroom or in a virtual environment, a minimum core in the course and other important aspects of the subject.

The step consists of research based on training need analysis where the teacher needs to identify the knowledge gap, special learning needs of the students and reflect individual differences. While working on the reasons for assessing and analysing requirements, you may discover that the relevant issue can be addressed by something other than training.
Possible options to achieve learning objectives includes:

- Instructor-led classroom training
- Virtual training
- Self-paced e-learning
- Self-study
- On the job training
- Blended solutions

IMPLEMENTATION

After extensive planning and design, this phase caters to conducting the sessions or training courses (online or self-study). Delivering the lesson requires planning, practice experience, and facilitation skills with different learning styles and students' individual learning needs. Providing knowledge must incorporate multiple resources, address minimum core requirements, and encourage student independence and group work. An effective training program allows the attendees to participate actively in the learning process and practice their new skills and knowledge. Teachers must have clear aims and objectives for each lesson. The classroom must not be unruly. These pedagogical approaches can include:

Collaborative learning – Collaborative learning can occur peer-to-peer or in larger groups. Peer learning, or peer instruction, is a type of collaborative learning that involves students working in pairs or small groups to discuss concepts or find solutions to problems. Like the idea that two or three heads are better than one, educational researchers have found that students teach each other through peer instruction by addressing misunderstandings and clarifying misconceptions.

Cooperative and collaborative learning differ from traditional teaching approaches because students work together rather than compete individually. Collaborative learning can occur any time students work together -- for example when they help each other with homework.

Cooperative learning takes place when students work together in the same area on a structured project in a small group. Mixed-skill groups can be beneficial to students in developing their social abilities.

The skills needed to work together in groups are quite distinct from those used to succeed in writing a paper on one's own or completing most homework or "seatwork" assignments. Cooperative learning is a handy and relevant tool in a world where being a "team player" is often a key part of business success. However, because it is just one set of tools, it can easily be integrated into a class that uses multiple approaches. Individual work may be most efficient for some assignments, while for others, cooperative groups work best. Research suggests that cooperative and collaborative learning bring positive results such as a more profound understanding of content, increased overall grades, improved self-esteem, and higher motivation to remain on task. Cooperative learning helps students become actively and constructively involved in content, take ownership of their own learning, resolve group conflicts, and improve teamwork skills.

The benefits of collaborative learning are:

i. Celebration of diversity. Students learn to work with all types of people. During small-group interactions, they find many opportunities to reflect upon and reply to fellow learners' diverse responses to the questions raised. Small groups also allow students to add their perspectives to an issue based on their cultural differences. This exchange inevitably helps students to understand other cultures and points of view better.
ii. Acknowledgement of individual differences. When questions are raised, different students will have a variety of responses. Each of these can help the group create a product that reflects a wide range of perspectives and is thus more complete and comprehensive.
iii. Interpersonal development. Students learn to relate to their peers and other learners as they work together in group enterprises. This can be especially helpful for students who have difficulty with social skills. They can benefit from structured interactions with others.
iv. They actively involve students in learning. Each member has opportunities to contribute in small groups. Students are apt to take more ownership of their material and think critically about related issues when working as a team.
v. More opportunities for personal feedback. Because there are more exchanges among students in small groups, your students receive more personal feedback about their ideas and responses. This feedback is often not possible in large-group instruction, in which one or two students exchange ideas, and the rest of the class listens.

Problem Based Learning (PBL) - Problem-based learning (PBL) is a student-centred approach in which students learn about a subject by working in groups to solve an open-ended problem. This problem is what drives motivation and learning.

PBL is designed in the following steps:

Step 1: identify outcome and assessment

PBL fits best with process-oriented course outcomes such as collaboration, research, and problem-solving. It can help students acquire content or conceptual knowledge or develop disciplinary habits such as writing or communication. After determining whether your course has learning outcomes that fit with PBL, you will develop formative and summative assessments to measure student learning. Group contracts, self/peer-evaluation forms, learning reflections, writing samples, and rubrics are potential PBL assessments.

Step 2: designing the scenario

Next, you design the PBL scenario with an embedded problem that will emerge through student brainstorming. Think of a real, complex issue related to your course content. It's seldom difficult to identify many problems in our fields; the key is writing a scenario for our students that will elicit the types of thinking, discussion, research, and learning that need to occur to meet the learning outcomes. Strategies should be motivating, engaging, and generate good discussion. Check out the websites below for examples of PBL problems and scenarios.

Step 3: introducing PBL

If PBL is new to your students, you can practice with an "easy problem," such as a scenario about long lines in the dining hall. After grouping students and allowing time to engage in an abbreviated version of PBL, introduce the assignment expectations, rubrics, and timelines. Then let groups read through the scenario(s). You might develop a single plan and let each group tackle it in their way, or you could design multiple plans addressing a unique problem for each group to discuss and research.

Step4: research

PBL research begins with small-group brainstorming sessions where students define the problem and determine what they know about the issue (background knowledge), what they need to learn more about (topics to research), and where they need to look to find data (databases, interviews, etc.). Groups should write the problem as a statement or research question. They will likely need assistance. Think about your research: the process can be unguided or far too specific without good research questions. Students should decide upon group roles and assign responsibility for researching topics necessary to understand their problems fully. Students then develop an initial hypothesis to "test" as they research a solution. Remember: research questions and hypotheses can change after students find information disconfirming their initial beliefs.

Step5: performance and product

After researching, the students create products and presentations that synthesise their research, solutions, and learning. The format of the summative assessment is entirely up to you. We treat this step like a research fair. Students find resources to develop background knowledge that informs their understanding, and then they collaboratively present their findings, including one or more viable solutions, as research posters to the class.

Step6: assessment

During the PBL assessment step, evaluate the groups' products and performances. Use rubrics to determine whether students have communicated the problem, background, research methods, solutions (feasible and research-based), and resources, and to decide whether all group members participated meaningfully. It would help if you considered having your students fill out reflections about their learning (including what they've learned about the content and the research process) every day and after the procedure.

This process-oriented, self-directed, and collaborative pedagogical strategy can prepare our students for successful post-undergraduate careers.

Inquiry-based learning is an approach to learning that emphasises the student's role in the learning process. Rather than the teacher telling students what they need to know, students are encouraged to explore the material, ask questions, and share ideas.

EVALUATION

Evaluation incorporates two aspects: monitoring and review. Monitoring is a short and medium-term activity mainly for management, formative and developmental purposes. Review is a long term and more formal process that has both formative and summative purposes. Formal and informal assessments take place continually, from daily teacher assessments to weekly progress reports to annual standardised tests. Teachers also can access comparative data on the electronic database to identify trends. A unique child study team monitors High-need students. If assessments show students are not learning as expected throughout the learning, mid-course corrections are made (such as re-instruction, changing teaching methods, and more direct teacher mentoring). Assessment data become input for the next step in the cycle. The data will be used as a mechanism for evaluating achievements and outcomes by collecting and processing data to make informed assessments.

REVIEW

In this stage, one identifies how the evaluation results, both monitoring and review, are fed back to generate improvement. This may cause modification to an existing plan or the development of a new program, and thus the cycle commences once more.

Educational Unit Monitoring is a critical component of Educational Quality, allowing the monitoring, evaluation, review of units of study delivered, based on the mode of delivery, using agreed performance metrics. Unit Monitoring provides the opportunity to address any identified deficiencies of a unit mode through the development of action plans, the subsequent improvement of units, and recognise unit modes with high levels of student satisfaction. Unit

Reviews allow the evaluation and peer review of content and learning outcomes of a unit, relevance for the course/s it relates to, pedagogy and assessment, assessment, and benchmarking of the assessment and curriculum to external units. Accreditation requirements and legislative requirements may cause a unit to be reviewed outside of its regular review cycle.

Monitoring student progress and success allows evaluating and reviewing that all students, regardless of their background or mode of study, are given the best chance to succeed with the learning unit. This analysis allows teachers to evaluate student group performance in grade point average, pass rates, retention, and completion and interpret findings to devise improvement strategies.

Quality phases and related indicators

The main objective of this part of the Toolkit is to present a series of indicators on the quality of a learning unit to facilitate the evaluation of education. The indicators can be used to identify issues that should be examined in greater detail. They allow teachers to learn from one another by comparing the results achieved.

Documentation

The most crucial consideration in teaching and courses evaluation, both for improvement purposes and for personnel decisions, is the use of multiple teaching and courses evaluation methods involving numerous data sources. The data obtained from each kind of evaluation, when considered together, provides one with a balanced picture of one's courses and how one teaches them. By thinking carefully about the purposes of the assessment and crafting multiple evaluation methods that suit those purposes, one can devise evaluation systems that are reliable, valid, and fair. Equally important, the process of discussing and crafting evaluation systems focuses attention on good teaching and helps create a culture in which instruction is highly valued.

A) Obtaining feedback from students

The purpose is to gather consensus-based student data that enables lecturers to make informed decisions about their teaching and courses. It is a very effective method of eliciting feedback, which focuses on areas of specific concern to an academic.

There are also several more informal strategies that academics can use in their classes, which are particularly useful to inform their on-going teaching and course development in a particular module or learning unit.

- ✔ Pose questions directly to the class, which can either be responded to orally or in writing
- ✔ Use critical learning statements: Students are asked to write down three points at the end of lesson/section that are 'clear' and three which are 'muddy'.

- ✔ Ask students to draw a concept map showing what they have learned in a particular class or about a topic.
- ✔ Ask students at the end of class to do 'free writing', i.e. give them a topic and ask them to write, without lifting their pens, for three minutes, in response to a topic or question you have posed.

To create a 'culture' of evaluation, students must be encouraged to see their participation in evaluating teaching and courses as part of their role as active learners. To achieve this, it helps to provide your students with feedback on what one has discovered and how the information will influence future behaviour or incite changes in one's teaching style.

Student feedback questionnaire

1. Students answer the questionnaire
2. This questionnaire aims to determine how the students experience the lecturer's teaching and learning in a particular module/learning unit.
3. Student feedback is confidential and anonymous. **No names are needed**.
4. Answer codes are provided with each question.
5. Only **one choice** per question is allowed.

Example of questionnaire based on indicators for student feedback **A = Always B = Usually C = Seldom D = Never**				
Teaching	**A**	**B**	**C**	**D**
It encourages me to tackle the learning experience				
Is enthusiastic about teaching the subject and shows it				
Creates learning experiences where I feel free to participate and express my opinions				
It gives me an overall view of the module by providing a clear outline at the beginning				
Explains the purpose of the subject clearly				

Explains the outcomes of individual lectures				
Plans and prepares lectures thoroughly				
Plans and prepares practical projects thoroughly				
It encourages me to tackle my learning creatively				
It encourages me to think for myself				
Presents stimulating lectures from which I learn				
Chooses topics for assignments/projects which are relevant and clear				
Sets practicals which make sense to me				
Creates enough opportunities for self-study in his/her subject				
Cares whether I learn something new during his/her lectures				
Assesses tests fairly				
Explains the outcomes of individual projects and assignments				
Assesses projects fairly				
Gives feedback on tests, projects, assignments etc. that I learn from				
Is punctual for classes				
Is available for answering my questions				
It uses a level of language that I can understand.				
Teacher and student relationship	**A**	**B**	**C**	**D**
Treats me with respect				
Acknowledges me as an individual				
Is easy to talk to and approachable				

Subject content	**A**	**B**	**C**	**D**
The latest developments in this subject are explained to us				
The way subject content can be applied in the job situation is indicated				
My study guides help me to learn				
Helpful study materials are provided				
The links between topics in subjects are clearly indicated				
The subject content is set out logically				
The volume of work is manageable				
The level of the subject content is stimulating				

Open questions

1. What are the positive aspects of the subject and content?

2. What are the positive aspects of teaching?

3. Suggest ways to improve lectures (what helps you learn effectively in this subject/module)?

4. Suggest ways to improve practicals/projects?

Indicators for Planning

Indicator 1: Learning Styles

INTRODUCTION

A learning style is a personal response to the process of retaining information and using it effectively. We all know that there are different learning styles related to the five senses (Area A), the way information is processed (Area B) and the way a student prefers to work (Area C).

i. Area A includes visual-verbal, visual-non-verbal, auditory and kinaesthetic learners.
ii. Area B includes analytic and global information processing.
iii. Area C includes group mode of work and individual way of work.

Educators need to start their teaching process by observing and assessing their students' attitudes to tailor the lessons for each student. When we discover the weaknesses and strengths in a class, we are ready to reflect on how to implement the strengths, and create a student-centred environment where learning becomes exceptionally effective.

HOW TO MEASURE LEARNING STYLES

As seen in the previous paragraph, there are several learning styles that, if identified before teaching, will help faculty customise their lesson plans to optimise the students' learning experience. As to the learning styles related to the three areas mentioned above, there are several well-known learning style models and instruments, which could be used to detect the preferred learning style of students: the VARK Questionnaire; the Felder– Silverman Index of Learning Style (ILS); the Gregorc Gregorc Style Delineator (GSD), the Kolb Learning Style Inventory (LSI); Dunn–Dunn Productivity Environmental Preference (PEPS).

There are two ways of getting information about students' learning styles: formal and informal. A standard way of getting such information is using several ready-made questionnaires and interview formats that are now available (see above). Alternatively, you can informally observe students while doing a task and take notes about the tactics and techniques they use. This may provide valuable insights into their strategies and, in turn, their preferred learning style.

Regrettably, however, the existing learning style instruments have typically been constructed using only textual information, which is more suitable for verbal learners than others. For instance, there are no visual or active forms of information in the instruments. Thus, there may be differences in how students interact with the instrument's items, threatening the suitability, validity and reliability of measurement.

In the same way, there is a feeling that many students and teachers lack an understanding of learning styles. For example, [Dunn et al.] great dangers might be faced due to learning style misuse. When a student is recognised as a particular "type" of a learner, and their lessons are all prepared with that in mind, they could be missing out on other learning opportunities with a better chance of success. In this context, some points need to be clarified:

• Dimensions of learning styles must not be treated as opposites because learners could be classified into both poles of a dimension at the same time - for example, a good number of students work very well both alone and in a team

• Learning style is not a static behaviour - therefore, learner tendencies might be changed by exposing the learner continually to an educational environment that matches their weaknesses

• Student preferences in the same dimension are different - for example, visual students could have a pure, moderate or mild tendency.

Once these critical variables are made clear, one realises how thorny the issue is. We cannot ignore that interpretation of diagnostic data derived from such tools could be time-consuming and sometimes frustrating for teachers trying to make sense of it.

This does not mean that these investigating tools are useless. Still, it implies that after administering the diagnostic tool/s, we cannot disregard systematic observation and class/individual discussion to have a clear understanding.

In sum, the steps to be taken may be:

1) Optionally, submit the Dunn–Dunn Productivity Environmental Preference (PEPS) survey, which is the that primarily provides an overall view of the learners from a sensory, environmental and mindset point of view (see the link above)
2) Administer a simple ten graded statement survey focusing on the way students prefer to work, individually or in the group (see the section below)
3) Have your students carry out a short self-evaluation questionnaire to see if the results of the previous surveys meet the learners' expectations (see the section below)
4) A follow-up discussion with the students would be suggested.

TOOLS

In designing the questionnaires below, we had to select parameters thought to be most relevant in a VET environment. That's why the focus of the diagnostic instruments proposed in this section is on Area C of learning styles: individual and group working learners.

All can start with a pre-intervention student questionnaire that can work as an ice-breaker but especially to measure the impact learning style activities have had on the students' awareness of the topic. Subsequently, once the questionnaire result on learning styles has been identified, ask each student individually if they acknowledge it. If some students do not agree with the result, the teacher invites them to explain their reasons and try a new test later.

PRE-INTERVENTION STUDENT QUESTIONNAIRE (for pupils)

I. Are you aware that learning styles exist?
II. Are you familiar with your learning style?
III. Are you familiar with the learning strategies of different types of learners?

QUESTIONNAIRE ON LEARNING STYLES (for pupils)

The following statements describe some study habits. Decide to what extent each statement applies in your case: put a cross on the numbers according to when it corresponds to your way of studying.

0 = not at all 1 = little 2 = enough 3 = very

1	I prefer that the teacher gives us jobs that each of us can then perform as he prefers.	0	1	2	3
2	I like working in a group.	0	1	2	3
3	If working in groups is requested, I prefer the teacher to decide how to form groups.	0	1	2	3
4	I learn and remember more when I study alone.	0	1	2	3
5	In group work, I prefer that the teacher leaves us free to distribute the tasks within the group.	0	1	2	3
6	At the end of group work, I have learned more than if I had worked alone.	0	1	2	3
7	When I work in class with a partner or in a group, I feel like wasting my time.	0	1	2	3
8	I learn more in class than I do at home.	0	1	2	3
9	If a task is to be carried out in groups, I prefer that the students decide how to form the groups.	0	1	2	3
10	I learn more at home than in class.	0	1	2	3

RESULTS

Score	Question Nu.	Question Nu.	Score

	1 3 4 7 10	2 5 6 8 9	
Total score Individual style		Total score Group style	
The student's learning style is evident where the Highest score prevails between the two groups of questions		*The student's learning style is evident where the Highest score prevails between the two groups of questions*	

INDIVIDUAL STYLE	GROUP STYLE
You prefer to work alone and conduct one-on-one study rather than with a partner or in a group. You perhaps learn better by studying in a book at home than by working with others at school. Suggested strategies: * keep in mind that the comparison with the teacher and classmates can be beneficial: it does not detract from your style of work, but in addition, it allows you to know other opinions, other ways of thinking and doing * try to make better use of your working time in the classroom, as well as at home, for example, by starting to listen carefully to what others are saying and comparing it to what you know or think	You prefer to work in the classroom rather than at home, in pairs or in groups rather than alone, arguing with others rather than studying books on your own. Suggested strategies: * comparison with others is undoubtedly valuable, but the individual study is equally essential to rework in a personal way what you are learning * Try to make better use of your working time at home, as well as in the classroom, for example, by organising your work tools (books, notebooks, notes, etc.) and making personal summaries of what you have studied

EVALUATION SHEET (for pupils)
[AREA C: working mode (individual or group)]

1. Summarise your personal "learning style" as it emerged from the questionnaire:

2. To what extent do you find yourself in the results of the questionnaire? Does the result seem not to reflect your "learning style"?

3. Have you discovered something exciting about the way you work?

4. Do you plan to try to put into practice some of the “suggested strategies”? If so, which ones and when?

5. a) Did you find this questionnaire interesting?

A lot? Enough? Little? By no means

b) Does it seem helpful to you to possibly improve your way of studying?

A lot? Enough? Little? At all

Indicator 2: motivation

INTRODUCTION

Motivation is not only important in its own right; it is also a significant predictor of learning and achievement. Students who are more motivated to learn to persist longer, produce higher quality effort, understand more deeply, and perform better in classes and on standardised tests. The goals of any management education institute are to produce students who can perform well in the examinations and are employable by the industry. These twin objectives are to be set as targets for processes. These processes include the following:

I. A teacher should vary the teaching-learning process to have case studies, role plays, group discussion, projects, brainstorming, management games, study visits, seminars, lab sessions, guest lectures by experts, etc.
II. The teaching-learning process should bridge the gap between the curriculum and real life.
III. Evaluation methods should provide helpful feedback for the improvement of the student. It should not be just an assessment mechanism for providing grades alone.
IV. Class schedules (physical or digital) should encourage effective classroom learning. The most productive hours are to be used to learn to facilitate the best learning environment.
V. Co-curricular activities that widen the students’ knowledge are planned and made an integral part of the programme.
VI. The course should impart cognitive skills, technical skills, communication skills, presentation skills, analytical skills,problem-solving skills and behavioural skills.

In order to motivate VET learners in the acquisition of L1 and L2 it's crucial to make them understand that their learning outcomes will contribute to a successful professional career. For these reasons, it's necessary to develop tailor-made learning units (see IO1) that are strictly connected to the real world and aim to help learners deal with their future profession. At the same time, each teacher should check from time to time the level of their students' inner motivation.

MOTIVATION BOOSTING

The easiest way for a teacher to raise motivation is to present a topic through a problem-solving activity and a Problem-based learning approach.

EXAMPLE n. 1

Step 1 - Brainstorming activities connected to motivation could include some WH questions (see tools)

Another way to conduct a motivational activity can be the use of mind maps (Tools)

Step 2 - Discussion of the students in groups about the topic – The teachers will be observing each group and taking notes through an observation grid (see tools)

Step 3 - Each group will report possible motivational reasons

EXAMPLE n. 2

TOOLS

Questionnaire through Mentimeter or another digital tool to check motivation

These kinds of approaches could be used for each topic/problem related to each learning unit. The role of the teacher in this phase is not to say or anticipate too much. The teacher should let the students reflect on the matter and raise their natural curiosity and interest.

To measure the general rate of motivation in your students, a teacher can use the quiz below can be considered a valid instrument as well as an exciting ice-breaking activity :

https://docs.google.com/forms/d/1bUPYqeTKnBKkGZHL_dPmsAPVWayp3NJEnnO3ozpE0/edit?usp=sharing

Measurement should be fulfilled in two different moments: before and after the activities set in class. However, the teacher can carry out the post motivating activity at several points during the learning process.

Different tools are available to reach this goal. You can find some examples below:

As a non-digital tool, you can repeat the activities carried out in the earlier stages as feedback on the students' motivation or can rely on a questionnaire as follows

A simple motivational questionnaire based on WH questions

I. Is it useful to write a CV(product)

II. (context question) John wants to apply for Eurodisney: why is it necessary to write a CV?
III. When is it appropriate to send a CV?
IV. How would you write a CV in Italy/ Sweden/ …
V. Where would you send your CV

Indicator 3: Problem solving

INTRODUCTION

Many of today's workplaces require creative problem-solving instead of in-routine activities in a variety of technology-rich settings. For this reason, it's of paramount importance to promote this approach, especially among VET school students. When you are dealing with the topic of your learning unit, presenting the topic through a problem-based learning approach is more involving because it requires the active participation of the students. If, for instance, you want to talk about unit 1, dealing with job searching, it could be more challenging for your students to present the topic as a real problem. Practical problem solving often requires collecting, process, analyse and evaluating information to find a solution/s. Along with other transferable skills like communication, planning and organisation, teamwork, critical thinking, digital literacy, and active inquiry (for example), it is more generally essential in work and life.

There are a few different stages in the problem-solving process, making it a little more complicated than it probably sounds. For example, one first has to define the problem, then collect more information about it and research and investigate causes. After that, one needs to process the material to understand it, and then analyse and evaluate it (whilst generating possible solutions). The final solution/s and action plan then come from there.

ENHANCING PROBLEM-SOLVING

Whether you're dealing with a complex problem or a relatively simple one, you must clearly understand what you want to solve. If you're trying to tackle several issues (even if they're fairly simple problems), the task becomes much more complicated.

If you're working in a team, it's even more critical that you have a shared understanding of the single problem you're addressing. It is also helpful, at this stage, to test the natural inclination to problem-solving in your students through a simple test that could help them improve their curiosity and amusement Tool1.

However, Problem-solving requires a systematic step-by-step approach to a challenge. The teacher should previously focus on the transversal and sub-learning outcomes for this activity, sharing them with the learners.

Examples of possible learning outcomes are:

i. Demonstrates the ability to identify problems.

ii. All arguments are clearly tied to an idea and organised in a tight, logical fashion.

iii. Demonstrates an in-depth, high- level understanding of the topic and issues.

iv. All information presented in the argument was clear, accurate and thorough.

v. All counter-arguments were authentic, relevant and robust.

During the planning phase, you should set your steps:

i. Explore the issue. Invite your students possibly in groups to gather necessary information; tool2

ii. help them learn new concepts, principles, and skills about the proposed topic.

iii. State what is known. Individual students and groups list what they already know about the scenario and which areas they lack information.

iv. Define the issues. Frame the problem in a context of what is already known and identify information the students expect to learn.

Stages in the Problem Solving Process

There are various stages to problem-solving. We have described those that we see as key in the process, starting with recognising the problem and defining and labelling it, solving it, evaluating it, and planning for contingencies. In connection with this, we have introduced specific problem-solving tools and techniques that can be used at each stage. This is because some methods work better at different stages than others. The plans are presented in more detail in the section following this one, titled 'Tools of the Trade'.

Critical stages in the problem-solving process:

i. Problem Recognition – determining what the problem is
ii. Labelling the problem
iii. Conducting a problem-cause analysis
iv. Optional solutions
v. Making a decision based on the best options you have generated
vi. Developing an action plan to solve the problem
vii. Evaluating and monitoring your solution to the problem
viii. Contingency planning and resource examination

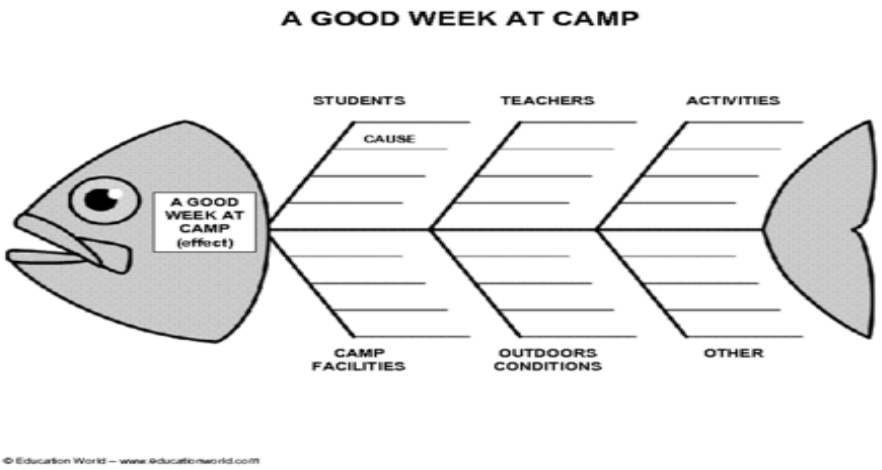
TOOLS FOR PROBLEM-SOLVING (link for extra page)

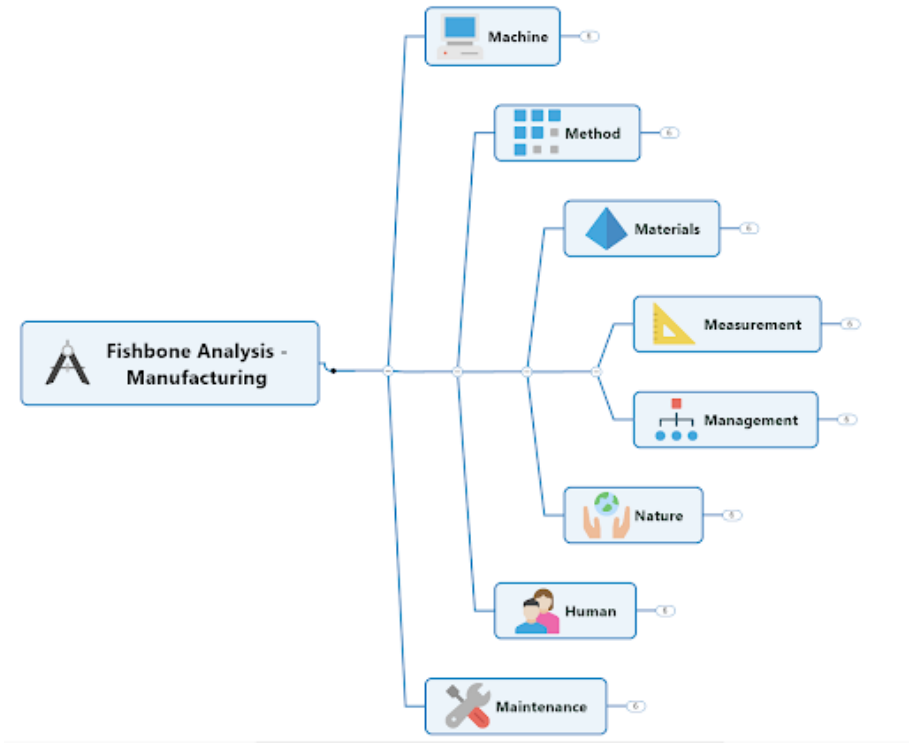
a) Fishbone diagram

Materials needed: marking pens and flip charts or whiteboards.

1. Agree on a problem statement (effect). Write it at the centre-right of the flipchart or whiteboard. Draw a box around it and draw a horizontal arrow running to it.

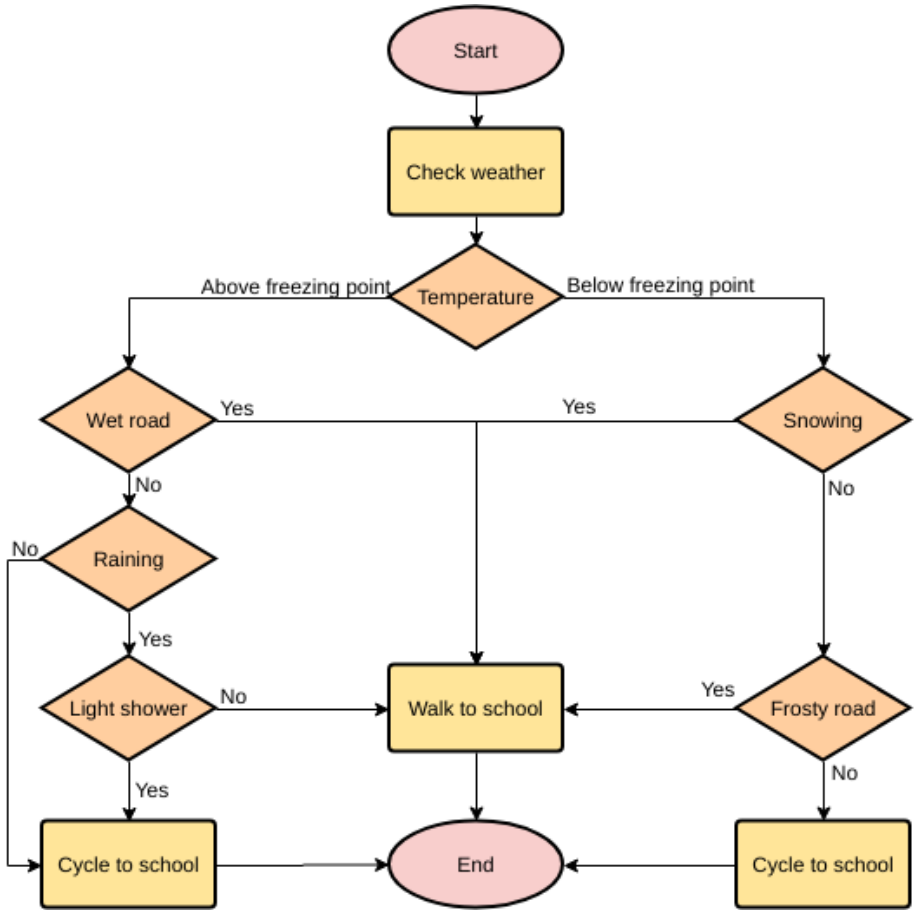
2. Brainstorm the major categories of causes of the problem. If this is problematic, use generic headings:
    - Methods
    - Machines (equipment)
    - People (workforce)
    - Materials
    - Measurement
    - Environment
3. Write the categories of causes as branches from the central arrow.
4. Brainstorm all the possible causes of the problem. Ask, “Why does this happen?” As each idea is given, the facilitator writes it as a branch from the appropriate category. Causes can be written in several places if they relate to several types.
5. Again ask “Why does this happen?” about each cause. Write sub-causes branching off the causes. Continue to ask “Why?” and generate more profound levels of reasons. Layers of branches indicate causal relationships.
6. When the group runs out of ideas, focus attention to places on the chart where thoughts are few.





B) Flowchart

A flowchart is an easy-to-understand diagram with a variety of applications. But you can use it to outline and examine how the steps of a flawed process connect. Made up of a few simple symbols linked with arrows indicating workflow direction, flowcharts clearly illustrate what happens at each stage of a process – and how each event impacts other events and decisions.



Tool Nr. 1 - https://forms.gle/EXbX2QC6TwAjysAR8

Tool Nr. 2 - The following activity could be of help in order to build up the students' approach to PS

Present method	**Challenge**
1 What is achieved?	Why is it necessary?
2 How is it done?	Why that way?
3 When is it done?	Why then?
4 Where is it done?	Why there?
5 Who does it?	Why them?

Indicator 4: Self-Assessment and Peer-Review

INTRODUCTION

Peer-Review can be described as the ability for teachers to make assessment decisions on other teachers' work. Self-assessment is when teachers assess their work. They are both linked to reflective practice. They play an essential role in Peer and self-assessment can also be done by the students to evaluate their progress and work.

Student self-assessment occurs when learners assess their performance. With practice, they learn to:

- objectively reflect on and critically evaluate their progress and skill development
- identify gaps in their understanding and capabilities
- discern how to improve their performance
- learn independently and think critically.

Use self-assessment to develop the learning skills students will need for professional competence and make them aware of and more responsible for their learning processes.

Sometimes teachers use self-assessment and peer assessment together. For example, they might require students to use a rubric to critique the work of their peers and apply the same criteria to their work. Nulty (n.d.) argues that students must first learn to peer assess if they can self-assess effectively.

Skilled self-assessment can be as reliable as other assessment forms. Still, you must provide students with training and practice if you want results to closely align with other assessors' results.

WHEN AND HOW TO USE SELF-ASSESSMENT AND PEER-REVIEW

During the planning phase, it is necessary to use self-assessment and peer review to have an overview of your job before you implement it. It might help you find better ways of implementing the learning unit, whether it deals with grammar, activities or soft skills. Peer and self-assessment can help deepen the teacher's perception of their teaching style; Both should always be considered positive. With peer review, you can acquire other teaching styles. The goal is not to judge someone else's work but to help your mate.

It is also necessary to think about self and peer assessment from the student's point of view to develop an accurate tool with proper criteria for the evaluation itself. In the case of peer assessment, teachers should encourage students to give their peers positive and constructive feedback. Therefore they need to provide students with the right tools.

TOOLS

Tool 1 - The Learner-centred Classroom

Before you begin observations with a peer mentor, complete this initial journal entry. For each item, give examples of the ways you incorporate the following principles into your teaching. Be specific: describe classroom practices, activities, assignments, and instruction that you believe promote academic readiness. Next, include a short reflection of what you see as your strengths and your areas for growth. Would you please use this template for your responses and email it to your peer mentor?

1. Learners have active roles in the classroom. i.e. cooperative learning, pair and group work, role-play, debates, etc.				
2. Teachers communicate daily and quarterly objectives that are the impetus for all activities in the classroom. i.e. writing daily objectives on the board and following a syllabus.				
3. Teachers constantly assess the students' understanding. i.e. during class, frequent quizzes, spelling tests, etc.				
4. Classroom expectations are communicated and enforced. i.e. class starts on time; attendance is taken, regulated use of cell phones, etc.				
5. Teachers use level appropriate and authentic language with learners and in activities. i.e. Activities and interactions produce natural uses of language.				
6. Materials are organised and used efficiently. i.e. the board is scheduled, worksheets are easy to read, etc.				
7. Activities and interactions appeal to a variety of learning styles and unique learning needs. i.e. Multiple instructional methods to appeal to varied learning styles and experiences.				
8. Learners make choices about content and direct the class. i.e. learners set goals; topics are engaging to learners, etc.				

9. Learners acquire strategies that help them learn inside and outside of the classroom. i.e. Practice and make learning strategies explicit: making predictions, asking for clarification, group work, etc				

Tool 2 – Reflection on Practice

Consider each of the critical practices listed below and identify the areas you feel strongest and those you would like to invest more time developing. Where does your current practice fall on the continuum from the *area for most significant growth* to an *area of greatest strength?* This self-assessment will help you develop a professional approach.

Area for Greatest Growth	**Area 1 - Curriculum and Planning**	*Area of Greatest Strength*
Implements standards-aligned units and lessons with clear objectives, challenging tasks, appropriate pacing, sequencing, resources, and supports for English learners and students with disabilities.		
Provides differentiated, culturally responsive learning experiences that enable each student to access the curriculum and progress toward learning goals.		
Engages students in learning experiences that enable them to acquire complex knowledge and subject-specific skills and vocabulary		
Area for Greatest Growth	**Area 2 – Learning Environment**	*Area of Greatest Strength*
Establishes an environment in which students demonstrate respect for and affirm their own (self-awareness) and others (social awareness) differences related to background, identity, language, strengths, and challenges.		
Regularly reflect on one's own cultural lens to remain attuned to one's strengths, gaps, and biases relative to individual and student growth and respond to them in constructive ways.		
Provides differentiated, culturally responsive learning experiences that enable each student to access the curriculum and progress toward learning goals.		
Area for Greatest Growth	**Area 3 – Reflection**	*Area of Greatest*

Strength			
Regularly reflects on the effectiveness of lessons, units, and interactions with students, both individually and with colleagues, and uses insights gained to improve practice and student learning.			
☐	☐	☐	☐
Regularly reflect on one's own cultural lens to remain attuned to one's strengths, gaps, and biases relative to individual and student growth and respond to them in constructive ways.			
☐	☐	☐	☐
Area for Greatest Growth	**Area 4 – Professional Collaboration**		*Area of Greatest Strength*
Consistently and effectively collaborates with colleagues on teaching and learning.			
☐	☐	☐	☐

Indicators for implementation

Indicator 1: Learning Styles

INTRODUCTION

Firstly, what must be kept in mind is that when a learning opportunity provides for 1) multiple means of engagement, 2) multiple means of representation, 3) multiple means of action and expression, different styles of learning are accounted for at the outset, reducing the need to personalise every activity. So, despite the conflicting evidence for the effectiveness of different learning styles, it's good to know different teaching methods. By varying the teaching methods, you'll keep the attention of your students for longer and make the learning experience more enjoyable.

Therefore, what may be suggested to carry out the 5 Learning Units devised in IO1 is to focus mainly on Area C: group learners and individual learners. All the more so because we are operating in a professional education environment, and it is common knowledge that teamwork is one of the most sought-after skills among recruiters. Also, another important criterion is trying to be more practical rather than academic to contribute first and foremost to the improvement of communication in the classroom.

TAKING LEARNING STYLE INTO CONSIDERATION

Step 1 - Well elaborated rules of communication

Communication is key in the classroom: successful teaching is generally considered to require only 50% knowledge to 50% communication skills. As a result, a teacher should be proficient in all four modes of communication – listening, speaking, reading, and writing – and should know how to utilise this proficiency effectively in a school environment. Being able to do this has been proven to impact the success students achieve in their academic lives and the teacher's own career success.

It is of paramount importance to make very clear to students that the terms used in the questionnaires are only descriptive, there are no right or wrong answers or that there are no better or worse scores and that the results of the questionnaires. They are to be used only to better understand the class and to improve on working methods. It is good practice for students to fill in the questionnaires anonymously, calculate their scores individually, and then read the interpretations of the scores provided as part of the package. A class discussion on the results is advisable to follow.

Two are mainly the objectives of the tests: that obviously of verifying the distribution of learning preferences in the classroom and then a more general objective which consists in using the questionnaires as a starting point to promote the awareness of learning styles in the students. In this context, class discussion is to be considered the most helpful stage of the learning preference diagnosis because it fosters quality of communication in the classroom and, most importantly, sets students off to thinking about how they learn best. At a later stage, after implementing learning style activities in the school, it is critical to get some feedback by simply

asking, “How has knowing your learning style helped you academically?”

Step 2 - Monitoring Sessions

Monitoring means reflecting on the improvement, providing the basis to achieve established goals. When teachers monitor, they help the students to think of their learning process. And we all know very well how much our pupils need a regular insight into their learning to record their progress.

To create a student-centred environment, it is necessary to monitor the pupils’ progress very often. In this way, the teachers gain information about who is really improving and learning and who needs some more help and, consequently, use this kind of information to reinforce their strengths and work with their weaknesses.

Of course, the monitoring sessions are aimed at teachers, too, as they adjust their methods and conceptions of learning styles step-by-step. During the application of the Learning Units of the IO1, student monitoring helps both the learners achieve the planned outcomes and the teachers master and use different methods and tools.

Some ways of supporting students to monitor their …. may include:

1- STUDENTS’ REFLECTION: Students tell A) what they know, B) how they learnt it, what helped them during the process, C) what is still unclear. This offers the educators the correct perception of what has been helpful and should be adjusted, while the students know what should be revised.

2- RECOGNISING THE PROCESS: Students should be encouraged to reflect on how their knowledge has evolved. Small group discussions on their learning process will be beneficial for social learners, while a written summary could be used for individual learners.

3- USE A JOURNAL: They may regularly write down sentences such as:

Today I have learnt…

Now I’m able to do...

4- CREATE A CHART

Students may have a chart to fill:

My learning goals	Strategies I used	I achieved this when...

5- QUESTIONNAIRE (for pupils)

Teachers may ask questions such as:

What steps will I take to do this?

I. Which strategy will I try first?
II. Is this the best strategy to use now?
III. What will I do next?
IV. Are there strategies I haven’t used yet?

V. Am I concentrating on the right part?
VI. What can I do to improve my work?

Step 3 - Individual coaching

If you realise that a student is not taking part in the activities, you should wonder why and soon after, you should activate a strategy of individual coaching.

Not all students are the same. Some advance more quickly, others need more time, and the rest fall somewhere in between.

Those students who usually take a bit more time to understand a specific concept often need the teacher's significant amount of attention. If they're not given the attention they need, they might fail in their tests and become frustrated. One-to-one instruction ensures the students interact with the teacher individually so that each can learn and understand concepts at their own pace and in their way. This intervention may take place during activities assigned to the class or in extracurricular hours.

Indicator 2: motivation

INTRODUCTION

One of the most potent feedback elements for our learners is to praise them for their efforts and hard work. “I can tell that you have been practising your reading,” or “The practice is paying off on your times’ tables,” tells learners that they have the power to improve their academic success. That said, we must stop praising ability: “Wow, you are such a smart maths student,” or “You are such an incredible reader.” Praise for powers over effort reinforces the fixed mindset that students have the ability or don’t, and no amount of hard work on the learner’s part can change the outcome. We are all learners and should be encouraged as such.

Throughout a learning cycle, teachers assess student progress by incorporating formative and summative assessments. The purpose of formative assessment is to pinpoint the learning needed for ultimate success on a later summative assessment. Formative assessment informs teachers and students about student and classroom needs for improvement to act accordingly to improve performance on the final evaluation. Some formative assessments are a thumbs up/thumbs down check for understanding, a quiz in small groups, or an exit slip at the end of a lesson. Students must get timely and descriptive feedback from the assessment to move forward in their learning. This cycle of education will improve results on a later summative assessment.

STEPS FOR INCREASING MOTIVATION

Step 1 – questionnaire grid

Use the questionnaire grid in annexe 1 at the start, middle and end of the course to measure student motivation and commitment

Step 2 – create a learning environment

Traditional teaching consists of teachers lecturing and learners taking notes, followed by the learners doing independent work to check for understanding. Transforming this outdated model to include more time where students are talking to students brings about authentic community. Collaborative group work should be the activity between the teacher lecture and the independent work. This is the time when students can digest information and ask questions collectively. Learners participate in what could be considered the “problem solving” phase of their development with new ideas, and together they come to new learnings. This gradual release of responsibility from teacher to student encourages a deeper understanding of the lesson rather than rote memorisation; however, the students are participants in their learning rather than witnesses to the teacher’s knowledge. Student work should be proudly displayed throughout the classroom. This sends a message to students that they are active participants in creating knowledge in the school. The teacher is not the sole holder of knowledge. Additionally, teachers can use language that promotes the community of learners – including the teacher – rather than a room full of individual learners. Using the words “we” and “our” rather than “I” and “you” have a significant impact on classroom culture and how students function as interdependent learners.

Step 3 - establish clear goals

A teacher should set high expectations, and supporting students as they struggle allows learners to rise to meet those expectations. When expectations are transparent, students know where their learning is headed and are motivated to get there because it seems possible: the path is visible. Working towards daily, weekly, and yearly goals gives students a purpose and a meaning for the hard work. The teacher should set daily learning goals (learning targets or "I can" statements) that are visible and referenced daily. Establishing the "goal of the day" at the start of the lesson gives students a purpose for their learning. Students can also formatively assess themselves at the end of each class by checking to ensure they have met the learning goals.

Step 4 - Inspiring your students

We all can remember a specific teacher from our childhood who had a lasting impact. These teachers have inspired, challenged, and motivated students enough to be memorable years later. What makes these teachers inspirational? Inspirational teachers represent success to their students. Teacher success might be receiving a teaching award. Through our triumphs, students can learn what success looks like and go after it. Once our students decide that they want success, they pay close attention to the behaviours, choices, and even sacrifices that led us to success. These behaviours include hard work, willingness to struggle, and the ability to learn from our mistakes. Students internalise their behaviours and strategies as a way to accomplish their own goals. We allow them to do so in our everyday routines, assignments and encounters with them.

Step 5 -using technology to motivate

Videos - students can learn more from the visual material, so it is a great way to start changing the teaching approach with some educational videos. There are many ways in which a teacher can boost motivation for learning through visual and video materials. Make sure that you use technology to motivate students to do some independent research in their free time. Inspiring students to do independent research on whatever topic can be a lot easier with technology because it will also be a lot more interesting to research if they are using technology. This approach in teaching deserves a lot more attention from many teachers, and if you are using it at the moment, make sure that you continue using it for research. Apps that teachers could use for teaching will make it easier to transfer knowledge to your students.

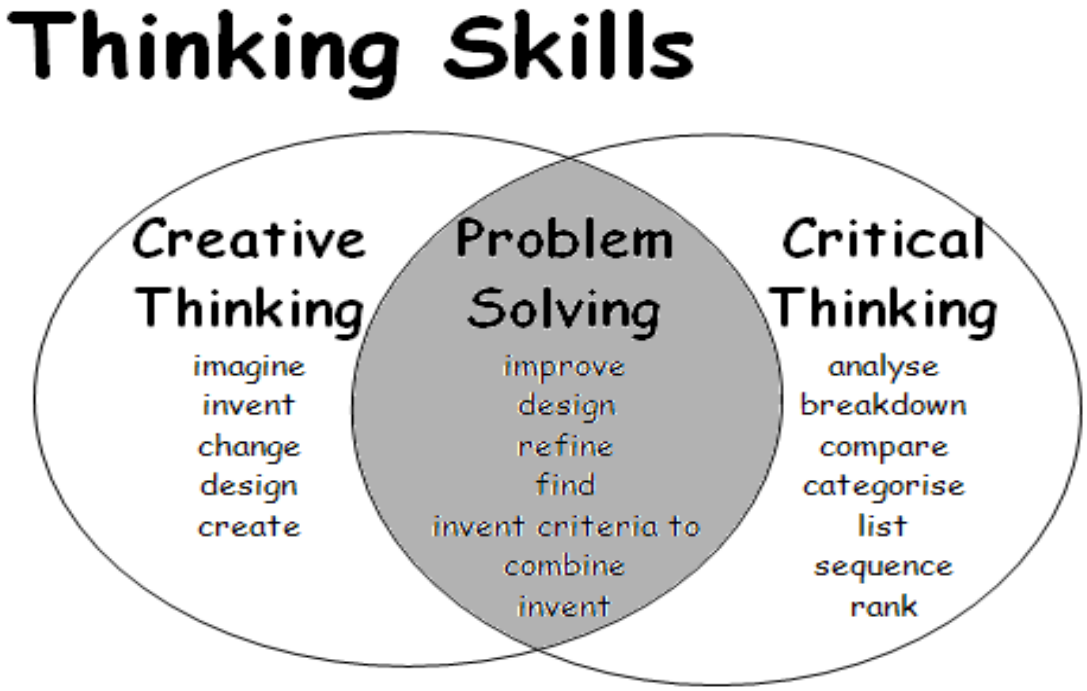
Step 6 – Do NOT forget the questionnaire grid

Indicator Problem solving

Introduction

HOW TO MEASURE PROBLEM-SOLVING SKILLS AND PERFORMANCES - TOOLS

Problem-solving can be considered a transversal skill, among the so-called soft skills, through which the student will have the opportunity to improve other sub-skills that a teacher can observe and notice through the use of a simple observation grid too1



Steps for enhancing Problem Solving capacity

During the implementation phase, the teacher should continuously monitor the activities carried out by the students during a PS activity focusing on the process activated to look for possible solutions.

Consequently, instructions are of paramount importance to carry out this kind of approach. In addition, through observation, the teacher will realise when it is necessary to fix up individual coaching for some students who are not brilliant.

Below are the three indicators developed for the implementation phase and the related tools available to the teacher.

1. Well elaborated rules of communication
2. Monitoring Sessions
3. Individual Coaching

Step 1. Clear Communication or instructions are fundamental to guide or to facilitate a PS activity

The basic instructions could be inferred through the use of a questionnaire. The teacher should cooperate with the learners to set specific rules for implementing the PS activity

Improvement options	**Best option**
What else could be done?	What else should be done?
How else could it be done?	How should it be done?
When else could it be done?	When should it be done?
Where else could it be done?	Where should it be done?
Who else could do it?	Who should do it?

After this activity, the teacher will be able to start a discussion to write shared instructions among the working group.

Step 2. Monitoring

The teacher's role is that of a facilitator and his task in this phase is to monitor the students' activity.

An observation grid will be helpful to achieve this purpose.

Observation grid: **tool1**

While observing the students, the teacher identifies the characteristics related to each student by simply placing a tick beside the pertinent indicator

problem solving	Creative thinking	critical thinking
improve =	imagine +	analyse
Invent =	design +	breakdown
change =	refine +	compare
structure =	find +	categorize

create =	invent criteria to combine event	list sequence

The teacher could fill in the grid for each student during his activity in the group having immediate feedback about the quality performance of each student.
If he realises that a student is not taking part in the activity, he should wonder why and soon after activating some strategies **of individual coaching.**
The possible issues could be

1. The activity is not challenging
2. The members of the group are not inclusive
3. The given instructions are not clear enough, so the student hasn't understood his role.
4. The activity is too difficult for the student.

Some tips to overcome obstacles could be:

1. The teacher will present the students some actual applications of the given PS activity
2. Peer tutoring: The teacher will choose the "leader" of the group, asking him to work with the "inactive" student
3. The teacher rephrases the instructions using the most straightforward concept and words

The teacher should facilitate the task splitting it up into different subtasks or frames

Indicator Self-Assessment and Peer-Review

Introduction

There are different methods to assess the activity of PS carried out by the students. It can be done directly by the students or by the teacher. It is possible to evaluate both the process carried out and the different solutions developed by the students.

You can introduce students to the idea of self-assessment using:

- on-going structured formative learning (for example, by using online quizzes that give students immediate feedback on their performance) or

summative assessment (for example, requiring students to grade their own performance).

Self-assessment benefits the learner by:

i. helping develop critical meta-cognitive skills that contribute to a range of important graduate capabilities. All professionals must evaluate their performance, so this practice should be embedded in higher education learning as early as possible.
ii. They are increasing their self-awareness through reflective practice, making the criteria for self-evaluation explicit, and driving performance improvement practices intrinsic to on-going learning.
iii. They contribute to developing critical reviewing skills, enabling the learner to evaluate their performance more objectively and others' when used in conjunction with peer assessment. With peer assessment, they become more practised in giving constructive feedback and receiving and acting on feedback received.
iv. They are helping students take control of their learning and assessment and giving them the chance to manage their learning and development more independently.
v. They are giving students more excellent agency regarding assessment, thus enriching their learning.
vi. In the long run, it is possibly reducing the teacher's assessment workload—although, on its own, this benefit is not sufficient to introduce student self-assessment.

How to measure self-assessment and peer review?

Peer review can be anonymous so that the students feel more comfortable giving and receiving constructive feedback. It can be a formative assessment (assessment **for** learning) or summative (assessment **of** learning).

Although studies have shown that most students are relatively capable self-assessors, introducing self-assessment can raise dilemmas and challenges. For example:

i. Lower performing and less experienced students tend to overestimate their achievements. As with peer assessment, students' ability to self-assess accurately must be developed over time and with substantial guidance. It is not a time-saving exercise for the teacher, initially.
ii. Students may resist self-assessment, perceiving assessment and grading as the teacher's job, or have no confidence in their ability to assess themselves.
iii. Issues can arise if students' self-assessments are not consistent with peer or staff assessments.

How to design a self-assessment

Students often readily accept the use of self-assessment as part of a formative learning process. It satisfies their need for formal self-reflection on their progress and gives them agency when planning their learning. It may also give them valuable experience for self-assessment that contributes to their grade later in the course.

Design self-assessment carefully, and ensure that you integrate its use into the assessment plan. This way, you optimise the benefits to learning, appropriately engage students in the process by giving them clear directions and explanations, and ensure that contingency plans are in place if issues arise.

Here are some factors to consider when designing for student self-assessment:

a) How experienced are students in self-assessing?
    a. It is unreasonable to expect students to become experts in self-assessment after a single course.
    b. It *is* reasonable to expect that they will be capable self-assessors by the end of their undergraduate program.
b) How will we introduce students to self-assessment?
    a. Consider students' different experience levels when designing tasks, and support the development of their self-assessment capabilities accordingly.
    b. For less experienced students, provide more guidance and facilitation.
    c. Make clear to students the rationale for self-assessment and its intended benefits to their learning so that they do not misconstrue the strategy as evidence of the teacher being lazy.
c) Who should develop the assessment criteria?
    a. At first, you can provide pre-determined assessment criteria for students to use in self-assessing their work. In some areas and at higher levels of study, these may be best determined by the teacher.
    b. Students may find it significantly more exciting and motivating if you involve them in developing the assessment criteria. This also encourages their autonomy and self-management as learners.
    c. Helping develop assessment criteria develops students' assessment literacy and promotes a shared understanding of tasks and assessment standards.
d) How can I support my students as they develop their self-assessment skills?

    a. Students can be capable assessors of their own and their peers' performance. Build their meta-awareness about this capability to articulate and defend the critiques of their work, and clarify what they can do to improve their performance.

  - Providing an expert assessment of students' work allows them to cross-check their self-assessment, combining self-assessment with peer assessment.
  - Use assessed examples of students' work to illustrate different levels of achievement. This will clarify the standards and show how criteria are applied.
- Should students' self-assessment contribute to the summative grade?
  - This is a complex decision. Self-assessment for grading may be more appropriate in high-level undergraduate or postgraduate courses, especially where class sizes are smaller.
  - If you decide that self-assessment will contribute to the grade, precisely state to both students and assessors, at the outset, how much it will contribute.
  - Introduce self-assessment for practice and familiarisation before you use it to contribute to grading. For example, have students attach a self-assessment report to their submitted work.
- What processes will we use to moderate student self-assessment?
  - Assessment of learning is intrinsically inexact and subjective. Use assessment rubrics, whether pre-determined by the teacher or negotiated with students, to specify expected performance standards against stated criteria.
  - Shared use of a rubric by staff and students can prompt valuable conversations about assessment principles and quality standards.

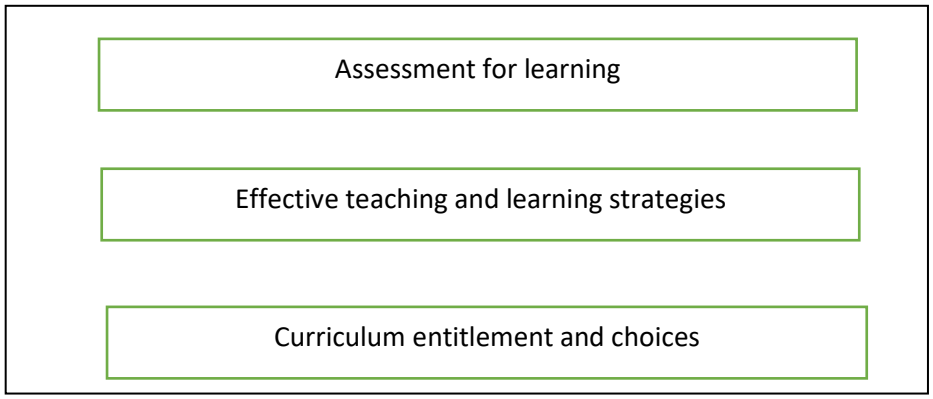
The teacher can incorporate self-assessment into almost any assessment task, either at or after assignment submission time. The teacher can structure the self-assessment by prompting students, asking them, for example:

a) What do you think is a fair grade for the work you have handed in?
b) What did you do best in this assessment task?
c) What did you do least well in this assessment task?
d) What did you find was the most challenging part?
e) What was the most important thing you learned in doing this assessment task?
f) If you had more time to complete the task, would you change anything? What would you change, and why?

Evaluation phase

Introduction

A prerequisite to improving teaching has an effective way to evaluate it. Standard references on the subject agree that the best way to get a valid summative (or formative) evaluation of teaching is to base it on a portfolio containing assessment data from multiple sources. They are ratings from students, peers and administrators, self-ratings, and learning outcomes – that reflect on every aspect of teaching, including course design, classroom instruction, assessment of learning, advising and mentoring. In other words, to effectively evaluate one's education, one must look at one's teaching (or a specific aspect thereof) from as many angles or perspectives as possible to improve the effectiveness of the teaching-learning process. This kind of evaluation enables teachers to provide Personalised learning. It has five key components:



The aim of the evaluation after implementation of the learning unit is to find out factors that promote or challenge the following :

i. promote more creative lessons
ii. share reasonable practice p increase enjoyment of lessons
iii. improve learning in each lesson
iv. build on previous learning
v. build on learners' confidence

The expected outcome is that the teacher gets know-how of what worked good and what needs to be improved with regards to:

i. Learners are learning how to learn
ii. Learners know what they need to know, where they are going and how to get there
iii. Learners can identify when they need help, and they now know how to access support.
iv. Learning opportunities are being personalised. p Achievement is being raised.

The methods for evaluation

The methods that can be used to evaluate teaching and courses, can consist of:

Self - Evaluation
Successful academics continuously evaluate the effectiveness of their teaching style. Self-reflection often occurs before feedback is gleaned from other sources. Although it also means deciding which feedback one needs to take on board to help one develop one's teaching and courses. Self-evaluation involves critical reflection on information gathered in the process of looking at one's teaching through the other eyes to what one's students and peers have said about one's teaching and course. The feedback on one's teaching and courses from peers and students are only precious if one has reflected critically on it in light of one's own experiences and beliefs. Academics could document the feedback from others and their self-reflection and one's responses to all of these in a teaching portfolio.

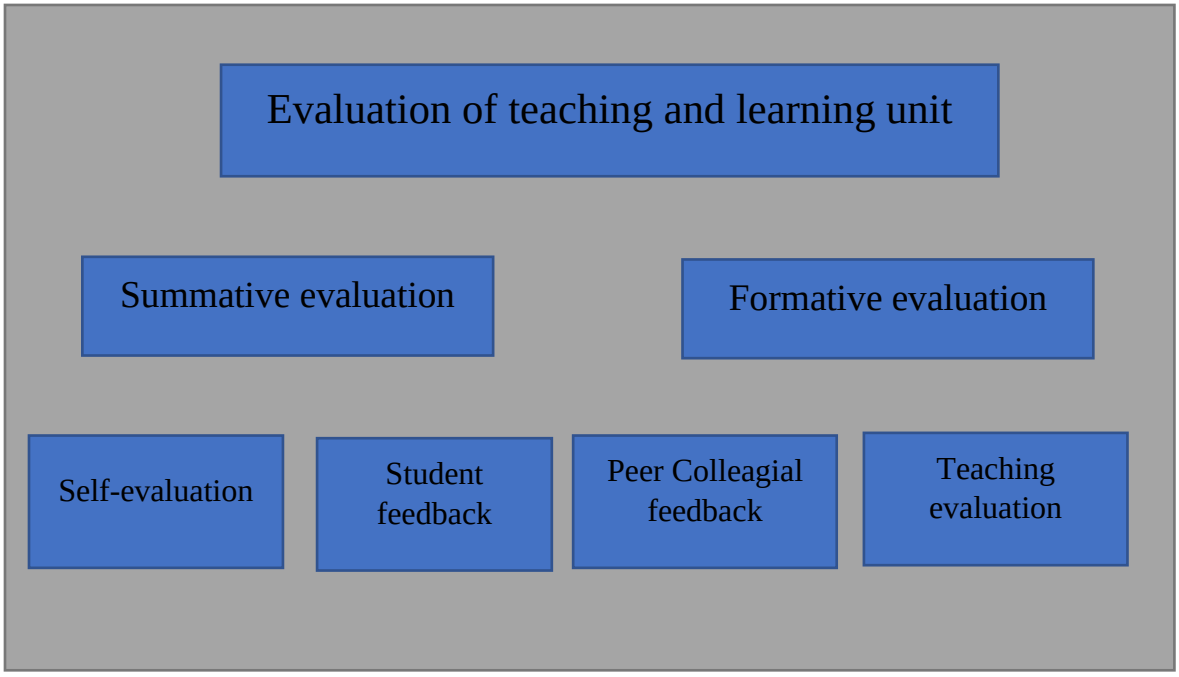
Student feedback
There are many different ways of accessing student perceptions of your courses and teaching. The method you choose depends on the purpose of the evaluation, the nature of the feedback sought; the nature of the discipline; the level of study, and the class's size. There are many other educationally sound approaches for obtaining student feedback.

A student focus group is one of the methods that have been found to be very effective. Focus groups could include the whole class or a sample from the class, and is facilitated by the teaching development team. The purpose is to gather consensus-based student data that enables lecturers to make informed decisions about their teaching and courses. It is a very effective method of provoking feedback, which focuses on areas of specific concern to an academic.

There are also several more informal strategies that academics can use in their classes, which are particularly useful to inform their on-going teaching and course development in a particular module or learning unit. To achieve this, it helps to provide your students with feedback on what one has discovered and how the information will influence future behaviour or develop changes in one's teaching style.

Colleagues teaching observations
Colleague review of teaching can play as significant a role, as does peer evaluation of research. Colleagues with expertise in the discipline being taught and trained in what to observe can provide important evaluative information through classroom visits. They can review course materials and instructional contributions. While observation by colleagues should be approached with caution, peer observation is an excellent method for improving teaching if these results are to be used for summative evaluation. It is especially effective when done reciprocally as part of a teaching circle or mentoring relationship and reflected upon in a teaching portfolio. One can argue that observing teaching improves the teaching of

the observer as much as the teaching of the observee. Mainly if the observer reflects on what they have observed in the classroom. Peer evaluations are usually undertaken by an academic from your department who has insight into the discipline's course material. An alternative method of obtaining feedback on one's teaching is to approach an expert in teaching and learning, like a member of the teaching development team. A colleague from the teaching development team's feedback will focus mainly on teaching practice rather than course content. The evaluation process is enhanced when, before classroom visits, colleagues review the syllabus and course-related materials and discuss course goals and lecture objectives with the academic.



Example of evaluation that include all indicators

statements to be discussed and considered

Rating scale (1 = excellent, 2 = meets minimum standards, 3 = area for development) (NA where not applicable)

The aspect of teaching and learning to be evaluated (self-evaluation, student feedback, peer feedback and teaching)	**1**	**2**	**3**	**Note**
Uses specific teaching strategies to meet the learning outcomes				
Demonstrates confidence with the subject matter				
Evidence of well planned, additional quality material and learning activities (notes, handouts, readings, worksheets, PowerPoint, multimedia, practicals)				
Briefly recaps main ideas from the previous session				

Determines student preparedness for the current session				
Clearly outlines the learning outcomes for the session				
The session progresses in a logical, structured, fit for purpose sequence				
Links the session topic to future topics Concludes the session and consolidates key concepts				
Key points are highlighted and clearly explained				
Definitions of new terminology are well explained				
Clear links between the session/study guide/textbook are made, Outcomes (content that should've been covered) are achieved				
Maximum use is made of the time available				
The timing of the learning activities is in line with the student's attention span				
The pace of the session is appropriate for conceptual understanding to develop				
Deliberately and effectively holds class' attention				
Acknowledges individual students and actively builds relationships				
A positive learning environment is maintained				
Makes use of different visual aids				
Creates opportunities for active student participation, practice and application				
Varies the learning experience of the students through a range of learning activities (doing / writing/seeing/listening/speaking)				
Demonstrates awareness of and appropriate response to individual students				
Uses a variety of questioning techniques effectively				
Provides constructive and immediate feedback to student responses				
Encourages personal responsibility for learning by motivating student consolidation and preparedness (checking submissions, etc.)				
Creates opportunities for students to respond in writing to the subject matter				
Peer (collegial) evaluation	**1**	**2**	**3**	**Note**
Resources and materials are well prepared				
Learning outcomes for the session are explicitly stated				

The session is appropriately paced with breaks as required				
Time for student questions or feedback is allocated				
Summary of main ideas is provided				
Expectations for the next session are established				
Connections to previous and upcoming course materials and assessments (if appropriate) are made				
Time is devoted to active learning (including practice)				
Learning activities target the interests and needs of students				
Learning activities, content and examples are relevant, connected and authentic (e.g. uses real-world examples)				
Key ideas are explored, reinforced, and summarised throughout the session				

Review phase

Introduction

The review process is essential and requires both time and energy to complete. Before beginning, teachers must ask themselves if they are willing to spend the time and energy needed to evaluate their course(s). This process requires a time commitment to review the course and research solutions, learn pedagogical best practices, and take critical feedback from multiple perspectives. If the goal is to improve the learning for students, then taking the time to ensure the creating of a high-quality and rigorous educational experience should be an unqualified yes. That stated, the following sections will look at the process and factors in performing a successful course revision.

Models for review

Reviewing the quality in courses/learning units can cover three (3) perspectives for reflective teaching. The perspectives are 1. Self, 2. Students, 3. Colleagues. These perspectives are helpful to contextualise the feedback process and have been adapted to feedback.

Perspective	**Sources of feedback for the instructor**
Self-reflection	i. Instructors' self-awareness and reflection (e.g. What have you noticed? What do you need to know about your teaching?) ii. Instructors' reflection journals and notes
Students	i. Gathering real-time feedback from students ii. Gathering structured student feedback and input on particular assignments and teaching and learning activities iii. Implementing a classroom assessment technique
Colleagues	i. Asking colleagues for feedback ii. Joining (or starting) a peer-learning group iii. Participating in a teaching square or peer mentoring process
Scientific research	i. Consulting the literature ii. Participating/presenting at conferences iii. Engaging in teaching and learning research iv. Applying research to one's teaching and learning practice

The result of the above should lead to a framework for reflection that can be useful in teaching practice. Three (3) simple statements provide a method for tracking teaching experiences, curiosities, and goals. This framework can be used in most situations and kept as a reference.

What? What did you experience in your class that you are curious about or felt great, or that didn't feel right? Was this something new, or has the teacher experienced it before? What does the teacher want to know more about?

What? So What? Now What?
What? What experiences in your class are you curious about, or felt great, or didn't feel right? Was this something new, or have you experienced it before? What do you want to know more about? Jot down the details and be as specific as possible.
So What? How did this experience impact your teaching, and how do you think it affected your students' learning?

Now What?

a) How will you proceed to examine your experience?

b) Is there something you will try or change in your teaching?

c) What else do you want to learn about?

d) How will you accomplish this?

e) What are your goals for development?

Steps for review

Establishing a clear set of steps in the revision process can reduce effort and time on task. Course revision can be easy with a little planning and preparation and by having the confidence to begin. Using a process will help identify areas for improvement and will ultimately create a better learning environment for students and a better instructional environment from which to teach and facilitate. To accomplish this, efficient course/learning unit revision relies on a two-step process:

Step 1: Set Revision Goals

When does setting goals for course revisions needed? It is necessary to set outward goals, such as revising course materials, improving structure, strengthening assessments, and

looking at inward purposes such as gaining a deeper understanding of the teaching process and identifying personal time management issues. During the process, faculty should be spending time using reflective practice during each of the separate phases of the revision. Reflective practice is the process of casting a genuinely critical eye on the values and theories that inform practice, thereby leading to deeper developmental insight.

Step 2: Review Course Structure, Content, and Assignments

Actual course revision looks at multiple aspects of teaching. In addition to looking for opportunities to improve student learning, faculty can also look for ways to create efficiencies for themselves in their role as instructors. They can also look for "pain points" that can be improved through course revision, such as turnaround times on returned assignments. They can look for ways to reduce the feedback workload by creating more descriptive rubrics that don't require writing as much feedback to the students or developing banks of prebuilt feedback that address the most common issues seen in returning particular assignments promptly. Finally, there is a possibility that other teachers have taught the same or similar courses to the one being reviewed. Seeking the feedback of others during the review process can be beneficial to the overall quality of the course review. The same type of reflective process can be used to solicit information from colleagues to provide an outside perspective. There is also the possibility of adding a collaborative component to the review process that may benefit the redevelopment process. While this article will not specifically address the integration of a collaborative working environment into this process, all of the steps can be applied to multiple course developers such as other faculty, instructional designers, content experts, and even non-academic colleagues

Step 3: Integrate Student Feedback

Step 4: Record Reflections, Findings, and Observations

Step 5: Implement Revisions Using these steps, faculty can evaluate any course with a critical eye and identify changes to improve students' online learning experience and outcomes.

Highlights of good practice

What worked well during the session? / What did the students respond to/ What would I like to try in my classes?
1. What do you think worked well in this lecture?

2. Do you think you accomplished the outcomes you set for this lecture (what can the students do now that they could not do before the lesson?) How do you know this?

3. Now What?
   a) How will you proceed to examine your experience?
   b) Is there something you will try or change in your teaching?
   c) What else do you want to learn about?
   d) How will you accomplish this?
   e) What are your goals for development?

Highlights of aspects to improve

Review discussion

1. What would you do differently if you were to repeat this lecture? Why?

2. What support do you require to develop your teaching practise further?

3. Is there anything you would've done differently based on the students and the content?

4. Based on the observation, do you require any teaching and learning development? If so, what do you need?