RePro Project | Real–Life Business Projects in Multicultural Student Centered Learning

TEACHER´S MANUAL

Education and Culture

Leonardo da Vinci

Community action programme on vocational training
Procedure B, Second phase: 2000–2006, Pilot project

Savonia University of Applied Sciences · HAMK University of Applied Sciences · Berufsakademie Mannheim university of cooperative education | Staatliche Studienakademie · Oxford Brookes University · TEKSTRATEGY™

CONTENTS

Executive Summary

This manual is designed as a teaching guide for effective implementation of the RePro model. In using the RePro model the teacher's role as a facilitator is very important and it is hoped that the resources in this guide will provide a much smoother process in applying the RePro model in Student Centred Learning.

The challenge of supporting students' professional learning and development has been widely acknowledged. European professional business education and its learning processes have to be developed as a part of the international professional and academic community. In this context, emphasis in professional education is put on skills for learning and high-level professional knowledge. This means that acquiring knowledge and its application in a real international context has become increasingly relevant. At the same time, there is an increasing demand to support entrepreneurship and promote regional development. However, knowledge and expertise based on experiences of combining education, learning and real business activities, are still rarely shared and transferred in modern European education.

Real-Life Business Projects in Multicultural Student Centred Learning (RePro) aimed at developing an international model for producing, testing and using business-oriented cases and problems in a multicultural learning environment. This was done by combining educational problems with actual business problems. The project has been a partnership between Savonia University of Applied Sciences (Finland), Oxford Brookes (UK), Häme University of Applied Sciences (Finland), Berufsakademie Mannheim (Germany), Instituto Technico Commerciale 'Enrico Tosi' (Italy), Rezeknes Augstskola (Latvia), the University of Gdansk (Poland) and Tekstrategy (UK).

This manual aims is to be used as a helpful resource and give advice rather than 'teach' colleagues on how to do their jobs. It first introduces the RePro model (adapted on progressive learning; see Hakkarainen, Lonka, Lipponen, 1999; 2004) to teaching and learning through the use of RePro cases. The 1st section of the manual introduces the contextual nature of the RePro model in supporting Student Centred Learning and how to build a RePro case. Student-centeredness is at the very core of the RePro model the negotiation of learning agreements with the students is an innovation that is thoroughly described in Chapter 2 of this manual.

The manual further offers advice on time management of the work process as well as how to help and advice students in their task of obtaining information and data in a business environment. The last two sections offer advice and examples on how to provide meaningful formative and summative feedback to students and also on strategies and techniques to develop a reflective practice on teaching and learning through the use of the RePro model.

Use of the resources in this guide is encouraged and each section in the guide is supported by relevant resource references and/or internet links. Teachers looking for further resources to guide them, can find these after the appendix section under key headings of *assessment, assessment criteria, case studies, feedback, group work, learning agreement and learning contract, reflective practice and Students Centred Learning*. In addition a glossary is provided of key teaching and learning terminology as well as an extended list of assessment techniques.

1. Clarifying the New Terms

1.1. What is Student-Centred Learning (SCL)?

Student-centred learning is based on student's own motivation and needs for learning. In student-centred teaching the *student* is *in the centre* of the learning process (see figure 1). This means that in student-centred learning, teacher's role is to facilitate the planning, and provide guidance and evaluation of the student learning based on the particular learning needs and abilities of students. The underlying idea in this learning method is that learning becomes deeper when the subject is more relevant to the students' interests and aspirations and when they are given the opportunity to actively engage in the creation of their knowledge.

Student engagement involves three interrelated dimensions: *behavioural, affective* and *cognitive* (Fredricks, Blumenfeld, and Paris, 2004). Behavioural engagement is understood in terms of participation and can be observed in actions that lead to specific outcomes, such as task completion. Affective engagement refers to students' reactions towards their teachers and peers (commitment to the group) and emotions (such as enthusiasm, optimism and confidence) that inform their actions whereas cognitive engagement involves student time and effort "investment on thought processes" (such as analysis, synthesis and persistence), which will lead to their cognitive change and growth (Fredricks, Blumenfeld and Paris, 2004, p. 60).

In an attempt to effectively trigger *all three dimensions* of student engagement in the learning process, a methodology called **"The Progressive Learning Model in RePro"** was implemented under the second phase of Leonardo da Vinci community action programme on vocational training.

1.2. What is the Progressive Learning Model in RePro?

Since pedagogic thinking has shifted considerably in terms of the "location" of knowledge construction. While the old teaching paradigm was that classroom teaching is a preparation for a lived experience, the new paradigm suggests that the classroom provides the opportunity to reflect on, and reconstruct the lived experience form the industry world.

RePro stands for **Re**al-life **Pro**blems that the industry world experiences and students reconstruct in the classroom after they have done actual "live" research (through visits, interviews and other forms of investigation) on the cases they are exploring. In this student-centred learning, we view learning as an **open-ended process** requiring active engagement from the learner's part. The **REPRO-model** is based on the following aspects:

Student Engagement: In the learning process, the students' role is to construct knowledge themselves. No one else can learn on behalf of any other person; that is why learning requires a great amount of individual work.

During this process the previous knowledge and experiences will be put to good use.

Learning Environment: In learning situations, the information and knowledge can't be transferred as itself, it should be constructed by the student or the broader learning community (e.g., a group of students, professionals and REPRO-case companies in interaction). Students are supported and given expert guidance (tutors, professionals) during the whole learning process.

Interactive Real Life Context: Learning occurs through interactive dialogue by asking and finding knowledge, together with other learners. The real life learning will be possible, when active and independent students solve problems together, analyse their own thinking and background knowledge, seek for practical and theoretical knowledge and construct their personal knowledge and understanding.

Multidisciplinary Problem Solving: Activating student's motivation and thinking ability by using intellectually challenging and interesting learning tasks (based on real case stories), not subject-centred exercises.

Learning as a Continuous Process: Students are guided towards self-regulation and self-evaluation abilities; e.g., what do I want to learn? What did I learn? How did I succeed in it? What will I do differently next time? Students are encouraged to reflect on their own learning activities and process, because this is one further way to improve the depth of their learning rather than engaging in short-term activities and exams.

The RePro-model involves three parties**: students, teachers/tutors and RePro-companies.** In short, the RePro-model combines educational problems and real business problems by connecting students, teachers and RePro-companies' stories into the same learning cycle. A tool which is central to this approach is the **RePro case**.

1.3. How to Build a RePro-case?

The Repro-case building is the first step in the RePro-model. This is based on teachers' experience co-operation and networks with local businesses/organisations. In order to have a RePro-case for student-cantered learning you should follow certain steps. Here are some recommended practical steps for your advice:

- Network and establish contacts with local companies. Working-life co-operation and knowledge about the real business practices is a competence in professional teaching and learning.
- Choose a RePro –company, which is internationally interested and willing to co-operate with your institution. The access to the company and to a wide source of business information about the company is vital to obtain a holistic view about the Company.
- Prepare interview(s) with the RePro-case Company. This means that you need to create a team of teachers sharing a variety of expertise.

This team of teachers prepare together the questions for the Company interview/visit.

- Set up a meeting with the RePro Company. Before starting the conversations, please make clear the RePro-model for the Company members. Ask permission to record the interviews in line with your institutions practice. This will help you teacher team to write a “real-life” story, a narrative kind of text.
- Make notes out of the visit/interview. At this point every teacher makes first his/hers own notes, which are then put together as a “story”. That will be the first draft of RePro-case.
- Review the first draft with the RePro Company to check accuracy of the story. After that, make the necessary improvements, update the missing data, correct any misunderstandings etc.
- Edit the RePro-case by including pictures, useful links etc.

This process might take from few weeks to several months, depending on the timetable of your team of teachers and the RePro Company. But, it will surely provide you with a real touch to the local companies and a good RePro-case for SCL.

1.4. RePro-case as a Tool for Learning; How to Use RePro-Cases in Teaching?

The RePro case is a short, non-subject specific case of a real company. It is designed in such a way that, within a maximum length of 3,000-3,500 word narrative, it will give a general but accurate description of the company’s position within its environment, highlighting its overall behaviour and particularities giving factual information and avoiding to identify particular problems or challenges it faces as such. Students are invited to identify particular areas of interest and undertake further research on these areas.

Generally, the RePro-model can be adapted to various types of business curricula, in various levels of students’ skills and work load (credit units). The core idea is, that the teacher can use the same RePro-case for engaging students in learning a range of broader business theories and concepts and addressing specific learning tasks (such as understanding the meaning of certain concepts, analysing the business environment, etc.), up to elaborate learning tasks (such as undertaking research to evaluate and improve the company’s environmental policy).

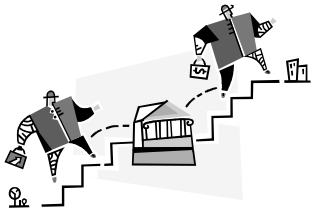
In essence, the RePro-cases can be used at different levels of learning by the same group of students. Under the RePro methodology, the teacher’s role is to facilitate students in selecting issues and formulating more demanding learning tasks on the way of their learning process. The teacher can also use several RePro-cases at the same time, depending on the size of the group, the expected learning outcomes and the level and content of curriculum.

Figure 1 illustrates a **step-by-step process (1-7)** on how a RePro-case can be used in teaching situations.

Figure 1: The Progressive Learning Model adapted in RePro

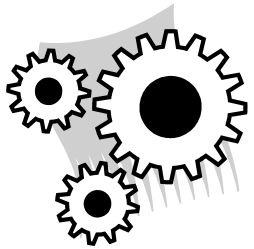
6. Evaluate the learning outcomes

7. Improve and reflect the RePro-case



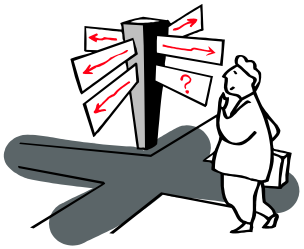
NEXT CYCLE; studying based on the improved RePro-case.

1. Real-life case context creation, a Repro case



2. Combine the experience and student knowledge with the information about the case´s business environment.

3. Formulate the learning task



4. Individual study and knowledge construction

5. Knowledge sharing

Source; Modified Hakkarainen, Lonka, Lipponen, 1999; 2004.

Stage 1 – Preparation Stage

- Pick up RePro-case which serves your course's learning outcomes in the best possible way, by choosing the RePro-case and learning context. You may choose, more than one RePro-cases for your course, depending on the course level, context and number of students enrolled.

- Familiarize yourself with the case(s) and the company it describes.

- Check some useful professional links, material, text books and articles, which you would like your students to study alongside the RePro-case(s).

Stage 2 – Initiation of the RePro Learning Cycle

Real-Life Case Context Creation

- Familiarize students briefly to RePro-model and RePro-case. Ask them to read the RePro-case text. If needed, advice students with curriculum specific information, such as a list of the "mandatory study material" and the rules for students for reporting the learning outcomes/findings, e.g., a course outline *(giving the context of learning).*

Combination of Student Experience and knowledge with the information about the Case's Business Environment (Branch etc)

- Have a discussion with the students (in classroom or in e-learning platform) about the interesting points they found in the case. You may ask students to familiarize themselves better with to this sector of business, or may use previous student experience and knowledge as a starting point. The aim here is to find out what kind of things they would like to learn, research or study further in this particular course using the RePro-case(s) *(engaging students in the learning process, motivating the learners to learn, context building).*

- The discussion more opportunity for the students to participate in active thinking. Students' attention will be drawn to specific learning points. This may happen naturally due to an issue coming up from the case and highlighted in the discussion or you, as the facilitator, may emphasise an issue that is important and in danger of being missed.

Formulation of the Learning Task(s)

- Facilitate students in the formulation of their learning tasks through the use of RePro cases. The learning tasks will typically involve theoretical and practical research on a problem, question or issue, which fits the course's objectives and is related with the particular RePro-case. There may be several learning tasks in one group or all students may work with the same question *(setting the learning objectives).*

- Negotiate a learning agreement with the students. Learning agreement is a personal/group-specific document which describes the learning outcomes to be achieved (learning task), the method by which these will be achieved, the evidence that will be provided for this and the criteria by which they will be evaluated / assessed *(negotiating the learning agreement).*

Individual Study and Knowledge Constructing

- Let students study individually or in small groups (3-4 persons in one group). Give time for students to read literature, collect information and other study materials. You may also encourage a field research among RePro-case company customers (after obtaining the necessary permissions from the company) or managers *(knowledge constructing)*. Your role as a teacher is to facilitate the process, not give answers or solutions to problems.

Knowledge Sharing

- Ask students to share their findings, e.g., research results, models, plans, calculations, ideas with the whole class. Ask all the students to familiarize themselves with each others' findings and ideas *(knowledge sharing).*

- Facilitate the discourse and the sharing process (*collaborative learning)* by:

  - Organizing a panel discussion between students
  - Organizing a seminar
  - Organizing a group presentation
  - Organizing a role play
  - Using an e-learning platform to facilitate on-line discourse.

- Very tangible benefits are produced from this interactive knowledge sharing between students. It reinforces good points, corrects misguided points that may diverge from the key issues under investigation and may expose hidden or creeping issues.

- A series of transferable skills are developed through this process. Students develop their social / interpersonal skills and realise that they are not the only ones who are challenged by particular problems. This develops their self-confidence. They learn to respect the opinions of others, become active listeners and reflective thinkers.

Evaluation of Learning Outcomes

- Using the agreed assessment method, evaluate the learning process and outcomes. Here a number of methods, such as learning diaries, poster presentations, written reports, peer evaluation, etc. may be used *(evaluating the learning outcomes vs. objectives).*

Stage 3 – Closing the RePro Learning Loop

Reflect on and Improve the RePro-Case

- Reflect on your experiences in this process, just as you ask the students to do: what went well and what could be improved? What would you do differently next time? What did you learn yourself? How are you going to use this learning in the future? Feed the outcomes of this reflection to the improvement of the RePro teaching model. Share these thoughts with your colleagues (*self-reflection and learning*).

- Collect the data and information from the students' work and -with their permission- ask permission enrich and update the RePro-case(s) (*enhancement of student-centred learning material*).

1.5. What are the Roles of Tutors, Students and Companies in the RePro-model?

You will have realised that this model represents a major shift from the *traditional concept of learning*, where the central role was the one of the teacher. The differences between the teacher-centeredness of the old paradigm and student-centeredness of the RePro are reflected in the following table:

Table 1 – The RePro Paradigm vs. the Traditional Paradigm

	RePro	**Traditional**
Knowledge is	Constructed by the student	Transferred to the student
Central person	Student	Teacher
Information is	Discovered	Spoon-fed
Learning is	Flexible	Standardised
Teacher is	A guide	A source

Obviously these characteristics are not mutually exclusive, especially in the latter two aspects. It all depends on how the RePro model is used. In lower levels of education both teacher and student may be in the centre stage and knowledge can be both transferred by the teacher in the form of a short lecture as well as discovered through various RePro activities. The learning can still be confined by a very rigid curriculum and the teacher may be used both as a source of knowledge as well as a guide for the discovery of new knowledge. The best thing about RePro is that it is flexible and may be adapted in different learning environments with varied learning requirements.

In the RePro-model the *teacher/tutor* will demonstrate the following:

1. **Personal Skills**
   - good communication skills
   - respect for students' work
   - positive attitude towards students and learning in general

2. **Content Expert Competence**
   - to have an ability to use relevant theoretical knowledge (e.g. literature, research results) to plan and design subject specific, professional learning environment
   - to have a comprehensive knowledge about the area to be studied
   - to be familiar with the future trends in his/her own professional field

3. **Learning Facilitator**

   a. *Developer*
   - sets the student in the centre of learning
   - can plan and design learning material, which activate student's learning process
   - is able to design the learning environment so that student learn to learn self-directive (= setting goals for learning, evaluating the learning etc.)

   b. *Counsellor*
   - is capable of giving feedback from learning
   - activates student's work and learning process

   c. *Evaluator*
   - is able to evaluate learning outcomes
   - is able to adjust his/her teaching and guiding based on the evaluation criteria
   - is able to design learning tasks, exams and exercises connected to the desirable learning outcomes

   d. *Organiser*
   - is able to work together with colleagues and other professionals
   - is capable of communicating with colleagues and other professionals
   - is able to contribute the curriculum development by using own professional knowledge and experience

   e. *Life-long Learner*
   - is capable for reflecting his/her own teaching experiences
   - is able to draw conclusions from reflection
   - is open to innovative solutions

The student's role in the RePro-model is to be an active learner. In student-centred learning the students develop all the time their skills such as
- cognitive skills
- metacognitive skills

- analytical skills
- information retrieval skills
- knowledge construction skills
- writing skills
- presentation skills
- social skills
- evaluative skills
- networking skills etc.

In RePro-model students will set a learning task for themselves based on RePro-case story, achieve the learning task by actively using a wide range of resources (literature, company material, practical knowledge and experience, professional knowledge such as tutor guidance, consultation with practitioners, as well as discussions with other students), share the knowledge with others and evaluate the learning process.

The RePro Company's role is to be itself! Moreover, the company should be willing to be accessed by case researchers (teachers and students)**.** RePro-case stories are narratives about the companies and are used as learning triggers and student engagement tools. The RePro case creates a real context for the students' learning environment and motivates students to select interesting learning tasks to address. It is supposed to be an interesting and easy to read text. Altogether the RePro case is a frame of real business actions and problems, not a perfect study book story with theoretical concepts. Simply, the RePro case company represents the opportunity for the students to be exposed to a real life business story, situations and actions in international context, in which they will familiarise themselves while progressing towards and accomplishing their learning tasks.

1.6. Further Reading

O'Neill, G. and McMahon, T. (2005) Student–Centred Learning: What does it mean for students and lecturers? In O'Neill, G., Moore, S., McMullin, B. (Eds) *Emerging Issues in the Practice of University Learning and Teaching.* Dublin: AISHE. [Available on-line: http://www.aishe.org/readings/2005-1/oneill-mcmahon-Tues_19th_Oct_SCL.pdf, accessed August 2006].

Rhem J. (1996) Urgings and Cautions in Student-Cantered Teaching, National teaching and Learning Forum, Vol.5 (May), No.4, [Available on line: http://www.ntlf.com/html/pi/9605/article1.htm, accessed August 2006]

Sparrow, L., Sparrow, H. and Swan, P. (2000) Student centred learning: Is it possible? Proceedings of the *Flexible Futures in Tertiary Teaching Forum*, Curtin University of Technology, Perth, Australia [Available on-line: http://lsn.curtin.edu.au/tlf/tlf2000/sparrow.html, accessed August 2006].

Hakkarainen, K. (2003). Emergence of progressive inquiry culture in computer-supported collaborative learning. *Learning Environments Research, 6*(2), 199-220.

Bereiter, C. (2002). Education and Mind in the Knowledge Age. Earlbaum.

2. Negotiating the RePro Learning Agreement

2.1. What is a Learning Agreement?

A learning agreement is a formal agreement between a learner and the person who is helping/guiding them to learn. This agreement is to be negotiated between the student and the teacher and it is about what is to be learned, how it is going to be learned and how that learning will be evidenced and assessed.

The role of the teacher

One of the 'key' words in the above definition is the word 'negotiation'. This process of negotiation normally starts with some discussion about the roles and responsibilities of each party. Ultimately the student is responsible for completing the agreed activities and the teacher for offering the necessary guidance and ensuring that the course requirements are met.

Although the responsibility for the completion of the project rests with the student, during their *progress meetings*, the teacher will have to maintain a clear balance between guidance and support (help). The exact level of support rather than guidance will be determined by the level of the student and by the institution's regulations. The progress meetings aim at a dialogue that will enable the student to reflect on their progress, the method they are following and the learning they gain. Ideally, in a progress meeting the teacher will be the one asking questions (much like Socrates did with his students) that will help the student reflect and find their way to the answer.

Another balance that needs to be maintained is the one between the 'student ownership' of the project and the teacher's responsibility to monitor that the agreed learning is indeed under development. In other words, teachers should not interfere at all with the way the student handles the project up to the point where they are convinced that the student is not heading to their agreed target.

Generally the teacher's role at this stage is to:

- provide an overview of the learning agreement process
- offer guidance by providing and stimulating ideas and suggestions about possible learning outcomes
- negotiate the contract by challenging learners' ideas, conforming the institution's academic requirements, suggesting relevant resources and informing the student of non-negotiable criteria
- providing reassurance, encouragement and support
- monitor student progress in planned progress meetings
- re-negotiate the agreement, if needed

The role of the student

Students will be generally not used to taking so much responsibility in the design of their learning and will probably be unfamiliar with skills such as writing learning objectives and planning learning strategies. This is why it will

be of paramount importance for the future to actively attend all the *orientation workshops* that will be organised on learning agreements.

However, after these workshops and before meeting their teacher for the agreement students have to prepare themselves' well and draft a proposed agreement with as clear as possible outcomes, strategies and assessment criteria. The teachers will be there to assist them but an unprepared or undecided student will be a great hindrance to the overall project. They will need to understand that they are in control of their learning and act accordingly.

2.2. Why Use Learning Agreements in RePro?

The RePro model advocates student-centred learning and the learning agreement is a proven method in engaging students to 'own' their own learning. The two main characteristics of a learning agreement are *flexibility* and *focus*. The agreement allows choice and variation in what is learned, to suit the particular student's needs and interests. The learning outcomes do not need to be in one particular area. At the same time, with the agreement (and the process of negotiation, and formal signature) the student's attention is focused on specific outcomes and learning activities.

These two characteristics offer the following benefits, which have always guided the RePro model to teaching and learning:

- Student learning is becoming more relevant to their needs and interests
- Students play a decisive role in designing their learning
- Students are eventually more motivated to learn
- The agreement's focus helps teachers and institution to identify particular support and resources needs.
- The engagement of students with independent learning may have a positive effect on them becoming life-long learners.

However, learning agreements in the way they are so far presented are not the *panacea* (the ultimate remedy) for student learning. There are cases where valid objections and concerns may be raised and somewhat different approaches need to be taken, but always within the RePro spirit.

Some students may not be in the best position to judge what they need to learn.

This could be the case of level 1 undergraduate students in general -or even students from higher levels. The Repro suggestion here is either for the teacher to specify a number of outcomes from the beginning and negotiate the rest or to offer a range of outcomes from which the students will have to choose a number.

Academic standard will fall if students choose their own assessment.

A negotiated learning agreement has no reason at all to be of lower academic standard that a set assignment. The role of the teacher is to ensure the

academic rigour of the project regardless of the assessment form. Some assessment criteria may be set by the teacher and be non-negotiable.

They are not feasible for large courses as there will be no parity between students as well as teachers.

In large courses where many teachers are involved, the leading teacher needs to establish specific requirements with regards to the level of requirements in the course for reasons of consistency. All participating teachers need to be aware of a 'minimum standard' in terms of quality and quantity for the course and start negotiations from that upwards. The role of the course leader is to brief the participating teachers and monitor the progress of their negotiations. Learning agreements need not be individual but in groups where the tasks of each member are clearly defined and where each member has the responsibility to demonstrate their learning of all agreed outcomes in the end of the project. An element that can be non-negotiable here is that apart from, for example, a written group report, each member will be randomly assessed in a learning outcome through an oral examination.

2.3. Steps in Developing a RePro Learning Agreement

Learning agreements are not something new in higher education. Although there are several models in developing learning agreements most of them are based on the model originally proposed by Malcolm Knowles in his book *"Self Directed Learning: A Guide for Learners and Teachers"* published in 1975 by the Association Press in New York. The Repro team used this model as a base and proposes the following steps.

Step1: A set of relevant learning needs has to be established
Whether these will be established by the student or the teacher depends on the level of the course and its specific requirements.

Step2: The learning needs have to become specific learning outcomes
Each need or interest has to be 'translated' into a SMART (Specific, Measurable, Attainable, Realistic and Timed) learning target.

Step 3: Identify specific learning strategies and resources
For each of the agreed learning outcomes, the student has to state how exactly it will be accomplished and provide a list of resources that will be used towards that end. The level of ongoing supervision as well as the number and format of progress meetings will be agreed now.

Step 4: Determine what is to be produced
This may be determined by the formal requirements of the course but there will be a need to consider the appropriateness of the evidence to the original learning outcome (see Appendix 1 – Fifty assessment techniques).

Step 5: Determine the criteria for assessment
This is the step about the expected quality standards of the evidence to be produced. It is often recommended that the work will also be peer-assessed (by other students) as well as self-assessed (by the student who produced it). See Appendix 2 – Sample Assessment Criteria

Step 6: Review the learning agreement
A few days after the initial completion of a draft agreement a second meeting takes place for its formal signing. These few days will allow the student re-think the feasibility of the agreement before committing to it.

Step 7: Carry out the agreement
The student works on the agreement. Progress meetings take place according to what is agreed in step 3.

Step 8: Self-assess and submit the completed work
As agreed in step 5. Peer assessment (if part of the agreement) will also take place at this step.

2.4. The Orientation Workshop

It is usually recommended to address many of the questions that students have about using learning agreements with an orientation workshop where they will have the opportunity to practise the skills involved in developing a proposed learning agreement. These workshops can also provide a platform of communication between students and teachers to discuss their concerns, so that they can plan strategies to help themselves and each other in coping with the unfamiliar process of negotiating learning agreements.

The content of the workshop may vary depending on the student group and perhaps the particular course or subject. However, there are some topics that could be used as the basis of any kind of orientation workshop and these are nothing more than the questions that any student would ask:

- What are the RePro learning agreements?
- How are they used?
- Why use them?
- What do RePro learning agreements look like?
- How do I decide what to learn?
- How is the form filled in?
- How is it negotiated?
- How is it to be assessed?
- How are RePro learning agreements different from other processes of learning and assessment?
- What benefits are derived from the process?
- What are the roles of teachers and students?
- What have been experiences of students in the past?

Each institution may want to give its own personal touch in the way they will design these workshops but the main point we would like to make here is that this are not informational workshops but activity based workshops and should therefore include activities such as group discussions and exercises that will make the students more familiar with the concept and the process of the RePro learning agreement.

Without wanting to be very prescriptive, in the next section we are offering an example of a workshop design which is adapted from the book "*Learning Contracts: A Practical Guide"* written in 1996 by Geoff Anderson, David Boud and Jane Sampson and published in London by Kogan Page.

The authors suggest that such a workshop should last between two and three hours.

RePro Learning Agreement Workshop *(example)*

In line with the concept of RePro learning agreements it is often useful to construct the workshop around questions that participants would like to be answered. Beginning with the question, *"What questions do you have about the RePro learning agreements?*" can provide a focus for the group.

If the group is very large the following questions can be used to provide an outline for the workshop:

- *What is a RePro learning agreement?*
- *Why are the RePro learning agreements used?*
- *How are the RePro learning agreements used in this subject/course?*
- *How is a RePro learning agreement written?*
- *Who is involved?*
- *What is involved?*

What is a RePro learning agreement?

- Participants may have used learning agreements before or may have an idea about what they are which could benefit other members of the group, so asking for their understanding of learning agreements is a useful first step.
- A definition can be given on a slide, relating it to the participants' responses and specifying how it is used in the particular course or subject.

When the term is used to refer to both the proposal and the resulting completed work it is useful to clarify this:

Why are the RePro learning agreements used?

An explanation of why RePro learning agreements are used provides an educational rationale. Other institutions' student responses about the advantages of using RePro learning agreements can be used to illustrate the potential benefits.

How are the RePro learning agreements used in this subject/course?

All information in the orientation session should focus on the particular form of learning agreement used locally.

How is a proposed RePro learning agreement written?

Discussion of the learning agreement form needs to include what is expected in each section and the date agreed for completion. It is helpful to discuss each section of the form in detail, giving examples of different ways of deciding on and expressing what should be included.

It can be helpful to discuss some of the following points:

- Learning outcomes may need to be rewritten several times before they are SMART (Specific, Measurable, Attainable, Realistic and Timed).
- Subject guidelines, teachers' suggested topics, course notes, the suggested readings and discussion with fellow students may help in determining learning outcomes, learning strategies and resources.
- The section for assessment criteria is often difficult to complete but it is important that the criteria are relevant for both teacher and student.
- Contracts are renegotiable.

Exercise- Drafting a RePro Learning Agreement

A couple of completed RePro learning agreement forms would be very useful for students to examine and critique before they attempt to complete their own. You may include some really noticeable mistakes to help them see themselves what they should not do.

An exercise of drafting a learning agreement can be done individually or in small groups. When the proposed agreement is ready it can be exchanged with other individuals or groups as if it were being 'submitted' for negotiation and approval.

Part of the negotiation process may involve altering aspects of the proposal: suggesting other resources, seeking clarification, perhaps narrowing the objective or adding criteria to the assessment column. Students should be asked to give each other feedback before examples of proposals are discussed in the larger group.

Who is involved?
Depending on the context in which learning agreements are being used, there may be teachers, students and possibly representatives from RePro companies involved.

Students may choose to negotiate a RePro learning agreement in pairs or as a small group researching a particular topic.

What is involved?
Using RePro learning agreements affects the roles of both students and teachers. Clarifying these roles helps all those involved.

Students assume the responsibility for their learning and use their initiative by:
- asking for assistance
- seeking resources
- questioning
- formulating the proposed agreement
- fulfilling course standards
- renegotiating the contract, if necessary
- timekeeping
- giving support to fellow students

Teachers provide students with:
- guidelines in course material
- clarification of what is feasible
- examples of what is expected of them
- ideas and challenges
- assistance in focusing
- advice about resources
- support throughout the process
- clear understanding of course standards
- written and constructive feedback.

The workshop might conclude with students considering a learning agreement about learning more about using learning agreements.

2.5. The RePro Negotiation Process

The process of negotiating the learning agreement is one of the most important features of the RePro approach. For a lot of educational cultures this is a significant innovation that will require a lot of effort and a change of mindset from both parties involved.

The student will normally have drafted a proposed agreement and now both student and teacher get involved in a negotiating process. It is advisable that this negotiation happens face-to-face rather than for example by e-mail. The conversation should start by establishing the broader learning needs of the student and then discuss all aspects of the proposed agreement, with some more emphasis on the assessment criteria. The teacher may help the student to explore ideas that did not occur prior to the meeting and suggest relevant strategies and resources that would be most appropriate to accomplish the desired learning. However, teachers should always remember their position in the negotiation process and what they stand for. They have to be very clear about what is negotiable and what is not.

There are a number of models that the negotiation process could be handled, which aim to set the sequence of discussion. George Boak in his book *"A Complete Guide to Learning Contracts"* published in 1998 by Gower proposes a quite simple model of the various stages as below.

1. Welcome and establish rapport.
2. Receive and discuss the student's proposed learning agreement, especially:
   a. main points - clarify any ambiguities
   b. reasons for choosing this area or areas
   c. resource needs - check for dependencies, check on requirements and availability
   d. assessment criteria - clarify and amend, or develop, as needed.
3. Sign and confirm agreement, and/or arrange next steps - such as a revised proposal, an interim meeting, or resources that the teacher will provide, or a meeting to re-assess the learning agreement.

An alternative model might be as follows:

1. Welcome and establish rapport.
2. Discussion of student's broad ideas - which may be based around individual needs, interests and/or opportunities.

3a. Establish the goal, then learning outcomes, learning activities, resources, assessment criteria; or

3b. Establish an outline of learning activities (based on opportunities), then learning outcomes, resources, assessment criteria.

4. Sign and confirm agreement, and/or arrange next steps - such as a revised proposal, an interim meeting, or resources that the tutor will provide, or a meeting to assess the contract.

Both of these models are very broad approximations to what a real RePro Learning agreement negotiation would look like.

2.6. The Learning Agreement Form

The proposed format for the RePro learning agreement is offered in the next page; however, institutions are free to modify it according to their own requirements. However, the elements that are essential in this type of agreement are the following:

- *Learning Outcomes*, which will state what specifically the student will learn or be able to do as a result of studying the RePro case.
- *Learning Activities,* a quite detailed analysis of the actions, strategies and resources that the student will engage with in order to achieve these outcomes.
- *Evidence of Learning*, which will be presented to the teacher as a result of these activities.
- *Assessment of Learning* or the method and the criteria that will be used to assess this evidence.

These are the key elements of learning that have to be negotiated for the learning agreement (advice offered in the following sections). Some additional points to be considered are:

Timing of the project

As with every type of agreement, a *due date* will always be necessary. A teacher may also require from the student a tentative timeline of when each one of the learning activities will be completed. A tentative time line will include all the activities the student will undertake from the moment the agreement is signed till the completion of the project and the submission of the evidence(s) of learning. The purpose of such a timeline is to be used as guide for both student and teacher with regards to progress meetings.

Teacher's comments/ Learner's notes

Often the teacher will want to write a few comments or even suggestions on the agreement. Similarly the student may wish to write a few notes or points that were raised during the negotiation. This can be done in a separate section that can be provided with a different formatting of the agreement (or quite simply on a separate page).

Changes in the agreement

In the case that the original agreement needs to be renegotiated, modifications can be made and signed during the subsequent progress meetings. In keeping with the spirit of the RePro approach, all changes will have to be agreed by both parties.

LEARNING AGREEMENT

Name: _____ **Student Number:** _____

Field of Study: _____

Contact details: _____

_____

Semester in which RePro Study is to be undertaken (please circle one)**: 1 2**

Date by which the RePro Study Project is to be submitted: ...../..... /20..

1. Learning Outcomes

Please describe the learning outcomes of your study. At the end of this period of RePro study I shall be able to:

a)

b)

c)

d)

2. Learning Activities

Please describe what you intend to do to achieve each of the learning outcomes above.

(Learning Agreement cont'd)

3. **Resources**
Please describe the resources or particular access to people or information which will be required to achieve your proposed learning outcomes.

4. **Evidence of Achievement**
What evidence will be available to demonstrate that you have achieved the learning outcomes of your study? E.g., written documents, demonstrations, presentations etc

5. **Assessment Criteria**
What assessment criteria will be appropriate in judging your achievements?

Learning Outcome	Assessment Criteria
a)	
b)	
c)	
d)	

6. **Assessment**
How will the learning outcomes of your study be assessed? E.g., assessment of written documents, observation of presentations or demonstrations etc

Learning Outcome	Assessment Method
a)	
b)	
c)	
d)	

NB
a) All students will attend an assessment interview.
b) In the case of group work all students will receive the same grade unless a case for a different distribution is made to me in writing at the time of submission of evidence of achievements.

Signature of Student _____ Date _____

Signature of Course Teacher _____ Date _____

2.7. Further Reading

Anderson, G. & Boud, D. (1996). Introducing learning contracts: a flexible way to learn. Innovations in Education and Training International, 33, 4, 221-227 [Available online: http://www.education.uts.edu.au/ostaff/staff/publications/db_7_ab_ieti_96.pdf#search=%22%22Negotiation%20process%22%20learning%20contract%22%22, Accessed August 2006]

3. Timing the Work Process

In order to facilitate the teacher, we present her a work planning example for the study of a case within a semester. The example is based on the assumption, that a case can be used partly or wholly during any course depending on the course requirements. This means that this planning approach can be applied in all courses regardless of their length of duration. The time distribution is presented in percentage of total time available for the case.

No	**Stage**	**Time (%)**
1.	Case introduction	10%
2.	Negotiation of RePro learning agreement	10%
3.	Teacher support	40%
4.	Evidence of achievement and non graded feedback	20%
5.	Submission of work & self assessment (assessment by teacher)	10%
6.	Peer assessment and feedback meeting	10%
	Total	***100%***

Obviously teachers need to consider also the time for the orientation workshop (which is not included here as students may already be familiar with the RePro process). In the course preparation period the teacher must consider al the elements of the forthcoming agreements and, depending on the course requirements, determine the “negotiation range”, i.e., what is negotiable and to what extent and what is not negotiable at all. Elements that need to be considered are:

Elements of learning agreement	**Remarks**
Learning outcomes	- may vary for students of different level and type and length of the course - may be predefined by teacher - should be consistent with course objectives
Learning activities	- should include plan of what students should do with element of reflection

	- may be predefined by teacher - how students would work (individually or in teams)
Resources	- where to find information - if information may be available entirely or partly depending on students progress
Evidence	- form of evidence of achievement
Assessment	- methods - criteria - process

The Course Life-cycle

Stage 1 – Case introduction (approx. 10%)

This stage includes students reading the case for the first time. Depending of the length of the case and type of the course, it would be advised to give students access to the case through a course website (if available) or in print form in advance (when the students enrol in the course). Students should be also provided with the course manual – the primary source for how to work and use the case effectively. During this stage students should be encouraged to ask relevant questions regarding the manual, the case and the RePro approach to clarify any ambiguities. Depending on the time available, teacher may plan short introduction of the RePro model or even organize an orientation workshop as presented in Section 2.

Stage 2 – Agreement of learning contract (approx. 10%)

After studying the manual and the RePro case study, students and teacher negotiate learning agreement. For further details on negotiating the learning agreement please refer to Section 2.

Stage 3 - Teacher support (approx. 40%)

After having signed the learning contract, the work with the case can start in accordance to negotiated learning outcomes and activities. With regards to the student work with the case, the teacher remains in background ready to give support. The type of teacher support depends on the agreed learning outcomes and activities; however it can include supportive lectures, group and individual tutorials and most importantly progress reviews. Teachers should be prepared to regularly monitor students during this stage and make sure that they are moving towards the right direction. Teachers might have to intervene first by making the students reflect about their progress, appropriateness of their strategies and posing helpful questions to guide students forward to the agreed direction. If the agreed course of action is proven ineffective then the teacher may have to re-negotiate parts or even the entire learning agreement with the student.

Stage 4 - Evidence of achievement and non-graded (formative) feedback (approx. 20%)
The types of evidence for accomplishing the learning outcomes have been determined in the earlier stages of the process. As advised, students should be encouraged to provide with the agreement a timeline of when each piece of evidence will be ready. Every time the student has something produced they should have the opportunity of a formative feedback to resolve any misunderstandings about the expected results and amend any inefficiencies with regards to the evidence. Formative feedback is essential as it is provided early enough in the RePro study process to allow the students to respond by improving their evidence of learning before the deadline of the project (For more details on formative and summative feedback see Section 6).

Stage 5 - Evidence submission – Summative assessment (approx. 10%)
Evidence submission, in accordance with learning agreement, should take place on the agreed date. If self-assessment, which is strongly encouraged, is included in the learning agreement, then the form should also submitted on this date. Depending on the form of agreed evidence and the agreed assessment criteria the teacher should plan adequate time to assess the evidence in a summative evaluation.

Stage 6 - Peer assessment and feedback meeting (approx. 10%)
If peer-assessment is part of the learning agreement then the teacher should allow time for felloe students to assess the evidence of learning in the current work. Then, once the entire assessment loop is closed, the teacher should allocate time to discuss the feedback with the student. This is one more learning opportunity for the student.

4. Collecting Information for Businesses

4.1. The Concept of Information

The analysis of case studies requires from student gaining additional information, because the delivered material is just the beginning for further work and activities. **"Information"** one of the basic conceptions in the present world, however there is no universally recognized definition of it. Data, which have been processed, interpreted and understood by recipients, are information. Also essential, introduced in useful form facts will be informative. Knowledge, increase of knowledge and understanding facts, which are useful for recipients of information are information. Information is notification about facts, events, phenomena, characteristics of objects.

4.2. Credibility of Information

The rightness of undertaken decisions, efficiency of analyses and scientific research depends strongly on information quality. Credible information is essential to undertake a decision. Credibility of information means “level of adequate reflection of objectively existing issue, processes or economic events”. Credibility incorporates the most essential features of information

from practical point of view. The information is actually valuable, if it contributes to improvement of rightness of undertaken decisions. The credibility of information depends also on the reliability of its source.

Feature of information quality
Fair/Reliable - means lack of information deformation, usage of suitable measurement methods, proper information transfer, recording the characteristics of real issue.

Current/Present - means consistence with real state of process in a certain moment, lack of delays in information delivery. It means also that information is adequate to range, time and character of the user's activity. It is very important, because delay in assembling, processing and the potentially essential information can transform the communication in useless piece of paper. In the situations of quick changing conditions, non-current information becomes the serious problem.

Prompt/In time - concerns access to information in proper time, so that it could be delivered to users if needed.

Useful - the information influences the decision process and/or the enrichment of knowledge, making possible the settlement of variants as well as the choice of the best solutions. This is one of basic elements of information quality whether it is useful for concrete investigation or it is sensible for given case.

Comparable - it is connected with possibility of comparative analyses in time, space or with planned data. It means ability to compare result of actions connected with settled objectives with competitors' results or result reached in previous years. It is also connected with necessity of equal qualification of analyzed data and the unification of methodology of data assembling and calculations.

Complete - contains all data about described issue, event or process. It is a set of necessary information needed to solve definite task. The set of information is accumulated in such range, that it is sufficient to undertake activities even when it is known that additional relevant information exist however its gaining is expensive and time-consuming. In reality the information is almost never complete however it is required that it is complete at least in range of key elements.

Detailed - it concerns the level of details, aggregation and condensation of information, which can vary depending on level of analysis. Too little details makes investigation general, too much details are not desirable as well, because it makes the researcher to spend too much time over small details.

Selective - means choosing information adequate to concrete problem or applied methods.

Exact/Precise/Accurate - means precision of reality representation. There is no absolute information and more preciseness raises costs this however does not always enlarge value of information. The preciseness depends on many different factors: type of problems, method of data assembling, control system of data processing.

Available/Accessible - means the easiness of obtaining the information sources. The grade of accessibility to sources decides whether the gained information will make the solution of decision problem possible. If the information from one source is not sufficient, it is necessary to reach to different source. If different sources are available then the credibility and/or the cost of gaining over information might decide.

4.3. Basic Criteria of Information Classification

Economic information can be classified according to following criteria: aim, type, character, period of creation, time concerns, sources and others. The most essential classification in reference to RePro is based on source.

External information	Information accumulated outside the enterprises and send to enterprise an information form to define tasks to realization, e.g. definite instructions, ratios. These are various publications, data bases or informative services, from which it is possible to gain general information about economy and branch.
Internal information	Information which originate from individual cells of enterprise and are used inside this enterprise or send outside.
Original information	Information originating from assembling for concrete project, through organization of the special investigations.
Secondary information	Information which already exist and have been accumulated, analyzed and safe. Secondary information are those which come from with earlier investigations, were used for different aims than studied project.

Students will usually use external sources of information, especially when the analysis requires wide context. Gaining information from the case study organizations might be relatively difficult. The task is usually easier in the case of large organizations, which often publicize parts of their internal information. It is a lot harder in the case of smaller organizations which usually tend not to disclose their financial results. It is also important to make sure that process of information collection is not causing any inconvenience for the participating businesses. Therefore, every measure should be taken to limit student visits to the minimum necessary. A well organized visit with all the details on information that is needed and questions to be asked carefully planned in advance will be of great help. This will be greatly appreciated by the company contacts and will continue to support the RePro tasks.

4.4. Important Issues Regarding Using Primary and Secondary Data

Primary data and first hand information are useful in special situations requiring quick problem solving. Therefore we are often forced to collect primary data. This requires from both students and teachers familiarity with skills to collect such data: observation and interviews or surveys. Analyzing these data collection techniques are beyond the scope of this manual. Readers interested in finding more may look at research methods books (some are proposed in the end of this section).

4.5. Where to Look for Secondary Information

Students have to gain over necessary information to find solution for a problem during analyzing of concrete case studies. Secondary information will be probably mostly used according to their advantages. Some of these sources are introduced below:

1. Basic information and data used in case study analysis may be found at governmental statistic agencies in every country. These institutions publish studies with statistics in print form and online in their websites (e.g., http://www.stat.gov.pl/english/index.htm; http://www.stat.fi/index_en.html; http://www.csb.lv/avidus.cfm). There might be delays in case of hard copies connected with period of accumulating data, handling, as well as publishing period. The international centers function in similar way, such as Euro stat - the institution responsible for accumulating and disseminating statistical information relating to all countries of European Union (http://epp.eurostat.ec.europa.eu).

2. The different financial institutions, which accumulate various data about financial markets, economy of individual countries or regions, can be good source of information. The most popular international institutions of this kind are: World Bank (http://www.worldbank.org/), European Bank Reconstruction and Development (http://www.ebrd.org/) or the International Monetary Fund (http://www.imf.org/). The financial institutions act also in every country. They are central banks, which are responsible for monetary policy of individual states. They are Bundesbank (http://www.bundesbank.de) in case of Germany and Banca di Italia (http://www.bancaditalia.it) in case of Italy.

3. The similar category of information sources are stock exchange, which publish stock quotations, public noted companies' annual reports, prospectus for stock issue and general economic studies in paper and electronic form. Stock exchange in London (http://www.londonstockexchange.com) ranks among the largest stock exchanges. World Federation of the Exchanges (http://www.world-exchanges.org) and Federation of the European Securities Exchanges (http://www.fese.be) are in the same the group of information sources.

4. Public administration is relatively reliable source of information. Proper ministries are popular source of data. The information available from finance (e.g. Finnish department of finances: http://www.vm.fi), economy, agriculture or natural environment department (e.g. Latvian department of natural environment: http://www.varam.gov.lv) might be useful for the purpose of analysis of individual cases studies. There are more different institutions besides departments of public administration. The office of competition and consumers protection in Poland (http://www.uokik.gov.pl) is an example. It deals with problems of competition. Local administration might be also useful in information gathering.

5. International organizations, which publish the data in reference to world, individual regions and countries in different form, are often used as information sources. The most important of these institution are:
   - Organization for Economic Co-operation and Development - www.oecd.org
   - Club of Rome - www.clubofrome.org
   - United Nations – www.un.org
   - Greenpeace - http://www.greenpeace.org/international

6. Students can seek some information in different commercial organizations. They are commercial banks, stockbroker offices; research institutes (e.g. Gallup Institute http://poll.gallup.com). The necessity of payment for majority of this information is a strong disadvantage.

7. Trade/branch and economic organizations are next group of information sources. They often publish current concrete trade information and also general economic data on their internet web sides. The example of such organization in case of shipping industry is CESA (Community of European Shipyards Associations www.cesa-shipbuilding.org).

8. Excellent sources of information are books and periodicals. It is possible to use them through networks of libraries of libraries (the National Library in Poland possesses the greatest resource http://www.bn.org.pl) or internet publishers' web sides. The last one refers to periodicals which have today their electronic version apart from traditional paper form (e.g. www.economist.com). Students and teachers can search over 300 periodicals, journals, and newswires simultaneously for industry information at http://www.findarticles.com/ and http://www.magportal.com/.

9. Information is accumulated also by different media - e.g. CNN possesses its own rich databases (www.cnn.com; www. bbc.co.uk).

10. Financial information for publicly listed companies may be obtained from “Yahoo! Finance” (http://biz.yahoo.com/), which pulls together such resources as Reuters, PR Newswire, Business wire, and Market Guide. Similarly another good source of such information is the website “Daily Stocks” (http://www.dailystocks.com/) which offers links to extensive company information including stock quotes, profiles, charts, news, SEC filings, and articles. “Yahoo Quotes” (http://finance.yahoo.com/) allows

searching for multiple stock quotes simultaneously and displays the results in chart providing a quick comparison of stock prices for a number of companies/competitors.

11. If you are looking for information about and industry sector, at http://biz.yahoo.com/industry one can check industry press releases and current news whereas at http://www.corporateinformation.com/ one can find links to industry resources in over 30 sectors.

12. Finally, for non-profit organizations there is a wealth of sources such as http://www.guidestar.org/ which provides a searchable directory of nonprofit organizations and the Internet Nonprofit Center (http://www.idealist.org/) offers a library of information about nonprofit organizations, a searchable directory of organizations, discussion forums, and links to other websites of interest. Also the more generic About.com provides links to a large number of nonprofit-related websites: http://nonprofit.about.com/index.htm .

4.6. Further Reading

Saunders, M., Lewis, P. and Thornhill, A. (2003) *Research Methods for Business Students.* 3rd edition. Harlow: Prentice Hall.

5. Working with Groups

5.1. Individual Learning and Learning in Groups

Depending on the number of students involved in the course it is strongly recommendable to have the RePro-cases worked out by formal groups of students instead of individual solutions. Normally, student group work makes it possible to bring in a broader range of knowledge, of theoretical backgrounds, perspectives, creativity, etc. and thus increases the chance for an appropriate solution of the case. Further on, group work is a suitable technique for the training of special soft skills, e.g. teamwork, cooperation, task division, etc.

However, because all group members are dependent on each other, the risk for the individual student can increase when he or she is involved in group work: “sink or swim together”.

5.2. Objectives for Group Work

Following these remarks there are two general directions for possible objectives of group work. One refers to all aspects of the case’s business problems, i.e. the students should be able to handle the case on the basis of their theoretical knowledge and practical experience.

The other focus of objectives comprises various aspects of people involved, i.e., the students should learn to develop or apply their soft skills and methodological skills: how to cooperate with others, how to communicate with others, how to present results, etc.

It is always advisable to introduce group work when a group can evoke synergy effects, which are not only an addition of individual performances but represent a special surplus.

But a successful group work in that sense depends on various conditions for positive interactions among the group members:

Result: the group members should see a benefit in their cooperation. Only in that case group work will be attractive for the participating students.

Common understanding: it is important that the group members get along with each other, i.e. they should be capable of communicating with and showing empathy for each other.

Concerted action and strategy: group members should be able to defer their special characteristics and interests for the time span of group work in order to facilitate and improve cooperative behaviour.

Common objectives: group members should have a common vision of their task. This is a crucial point for a succeeding interaction. Even if some disturbances in strategy, in understanding etc. will arise, a common objective will help to overcome these problems.

It is obvious that in every day life there are many factors (such as diverse preferences and interests, personality characteristics, likes and dislikes, etc.) that affect the success of group work. These impacts will be stronger when a group comprises more people and/or more heterogeneous people.

Therefore one of the predominant tutor's tasks (see also the statement on the teacher's role in this manual) consists in supporting the group forming and in coaching the group process. Especially, the teacher should make the students aware of these preconditions and explain the following practical issues to the students.

5.3. The Forming of a Group – Practical Aspects

Size

The maximum seize of a group should be four to five. To avoid idleness, teachers need to be aware that the less experienced the students are or the less time is available for a task, the smaller the groups should be.

Homogeneity/Heterogeneity

The more heterogeneous a group is, the more creative it can be, but the higher grade of heterogeneity is also linked with more problems in cooperation and coordination. So it is also advisable to consider the following points:

- professional background knowledge of students
- cultural background of students, e.g. national and / or international students
- gender, etc.

Decision on group forming
There are different ways to decide how groups will be formed:
- self-selected by the students, which is advantageous if you have small classes, where students already know each other;
- pre-selected by the teacher, according to background of students, students levels (e.g. students of different semesters or grades vs. passed/not passed students), work habits, former grades, gender, etc.;
- students can express preferences, the final allocation can be made by the teacher;

5.4. Group Member Roles

In an effective group a number of crucial functions must be performed by group members. 1f these functions are not performed then the group will drift aimlessly without getting much done. The group needs to decide who is going to perform these roles, which do not have to be fixed for the whole duration of the RePro project. The roles that can be considered at various stages are the following:

Co-ordinator
A group needs a co-ordinator, or at least someone who will chair meetings. This person has the responsibility for clarifying the aims of a meeting, its agenda, for introducing each topic and for summarising discussions and decisions.

Secretary or note-taker
A group needs someone to take notes in meetings, to keep a record of what has been decided, who is doing what, when the next meetings are and so on. This person should produce an outline set of notes after the meeting and copy it to each member of the team.

Progress chaser
A group needs someone to chase progress - to see if everyone is doing what they are supposed to and that all the jobs that need doing by a particular time are on schedule. This person has work to do between meetings and should report on progress at the start of each meeting.

Time-keeper
In meetings groups will have a limited amount of time but a lot to do. Unless they are careful they may use up all their time on the first few things and not get the rest done. They will need to watch the time carefully and divide it up between their tasks. The timekeeper's responsibility is simply to make sure everyone is aware of how long they have got and when this time has run out.

5.5. Group Process

Ground rules
After groups have been formed, discuss with your students necessary qualifications for group work, like active and tolerant listening, mastering content, constructive criticism or managing disagreements. Highlight the importance to reach a consensus.

Possible steps of a SCL-process:

- Step 1: students are presented with the case and are asked to read them and come up with some (e.g. five) questions.

- Step 2: Brain storming on the case followed by discussion on the questions. At the end the group decides on five (e.g.) „master questions“. Students are asked to use several sources (books, articles, internet, etc.) while working on the problems.

- Step 3: Presentation of results by the students and a solution of the questions by the teacher.

- Step 4: Students have to write a report on the case about the solution and the learning process.

Managing the group

After groups have been formed do not let a group break up, even if their work looks unproductive or if they want to break up. Since the REPRO aim is to stimulate real life business projects, the latter is not an option for students, once they are part of a group.

Students who are clearly uncooperative or unproductive can be dismissed by the other group members by majority vote. The dismissed student must find acceptance in another group, within the own group for re-entry or take a failing grade.

Give each group the chance to discuss uncooperative behaviour of group members. Students who are perceived as being unproductive then have the opportunity to improve.

Provide the students with a clear frame for meetings with the teacher: How many, when and where, individual, group or meetings with the whole class?

Fix deadlines for the requested work, e.g. presentations, term papers, projects, evaluation, etc.

Practical guidelines

Let the students know what their responsibilities as a member of a study group are:

- getting to know each other within the team (exchange of profiles, contact addresses, etc.)
- abiding rules/guidelines of group work (e.g. deadlines, distribution of tasks, roles and functions within the group, etc.)
- interpretation of the topic, definition of essential questions of the topic, developing a list of goals for the group
- looking for sources

- preparation before group meetings (e.g. doing all the required readings, etc)
- completion of all tasks which were asked
- presence in all meetings
- active participation and support to group members
- Determine periodically whether your team is working successfully (e.g. is too much work required or is the time in group meetings well spent?)

Point out to the students that all logistical arrangements (meetings, location, length, etc) should be set for the semester at the beginning of the work task. Then encourage students to divide up the labour and to formulate a concept which group member is doing what and when. Review the concepts and discuss with the students if you feel necessary. Ask the students to meet once or twice during the work task and discuss the following questions: What contribution of each group member was helpful for the group so far? What could each member do to improve the group work?

It is expected that the results of the group work will present a holistic analysis of the topic. Specifically, this means that the collection and presentation of independent, loosely related or uncoordinated single parts, arguments or examples would not meet the requirements of the group work.

5.6. Evaluation of Group Work

There are many approaches to evaluate group work if we combine the following dimensions:

1. What to evaluate?
- work process
- results: term papers / essays or presentations

2. Who will evaluate?
- teacher
- peers
- others (e.g. representatives of RePro-companies on which the used case stories are based on)

3. When to evaluate?
- during the process
- at the end of the group work

4. How to evaluate?
- freestyle
- on the basis of checklists
- with reference to a learning agreement

Especially for the assessment of the group internal processes, peer evaluation is considered the most appropriate method. Presentations could be assessed by peers as well as by the tutor. Evaluations of results (essays, case solutions, etc.) are more the teacher’s task. But nevertheless the final responsibility for the evaluation will be up to the teacher.

Ongoing feedback and end-of-project peer evaluation

Group members should be encouraged to provide honest feedback to each other during the project and especially when problems arise. Giving and receiving feedback isn't often socially acceptable and when it is done badly it can produce strong emotional reactions which can cause more trouble than the problem the feedback was intended to solve.

A good method to achieve this task in a constructive manner is by trying to give feedback in the safety and privacy of pairs (one student to another – in private). During this session, students should be encouraged to take turns to give first some positive feedback to each other, such as what they like about the other person in the team. Then, they can take turns to give some feedback intended to change the other person. This should not be a long-winded process.

After the task is completed each student should submit an anonymous assessment of the participation of the other group members. Thereby, each student must evaluate the other group members and also himself. If several group members indicate that a student was uncooperative and/or unproductive, the teacher should mark this student with a lower grade. A technique from the University of Brighton that can be quite helpful is described in the box that follows:

The following example utilises a **Peer Assessment mechanism** designed to determine an individual summative mark from a group submitted assignment. The mechanism utilises a proforma that is given to the students. Students are given the proforma when the assignment is set. This enables the students to understand their individual expectations very early in the group development process. The students also understand that their actions and contributions to the group work will be ultimately judged and negotiated with their peers and this will have a direct bearing on their grade.

The proforma states:

This sheet is designed to divide a group mark between the members of a group, based on their contribution to the task. Ideally all group members have each equally contributed to the final product; however, in many cases this does not occur. Thus the purpose of the group assessment sheet is to reflect the amount of effort committed by each group member.

Please award each person a mark for each category. The total mark for that category must total 100, i.e. the marks on each line across must add up to 100. For example, if you all agree that everyone in a group of 5 attended meetings regularly, each person should be given '20' for that category.

The categories presented can vary depending on the nature of the assignment. These may notionally be: regular attendance at meetings, contribution to undertaking primary research, contribution to data analysis, contribution to writing up of report, and contribution of ideas, supporting and encouraging the group.

Each student verifies these marks by signing the form and this is then submitted with the assignment. Tutors then are able to take the group mark and factor in the individual contribution:

Each student's final mark is calculated by dividing their total mark (*) by N, and multiplying the answer by the group mark

N is found by dividing 600 by the number of students in the group. Therefore when there are four students in the group, N=600/4=150.

Example: a group of 4 is awarded a joint mark of 60%. Jane gets a peer assessed score on the grid above of 180. Her final mark is 180/150 x 60 = 72%.

Source: *http://www.hlst.heacademy.ac.uk/resources/cases/case73.html*

As part of the learning agreement for the RePro cases, students should be asked to write a reflective log or diary on how their learning with regards to the agreed learning outcomes and activities has progressed from Day 1 till the last day of the project. The log should have the learning outcomes as agreed in the learning agreement listed in the beginning. Every week the students should focus on these outcomes and fill in their reflections related to these. They must be encouraged to think about evidence that change in the learning experience has occurred. It does not matter in which order they address the outcomes however, by the end of the RePro project they are expected to have reflected on all of the learning outcomes.

Students should also reflect on and review the operation of the group as a group. In doing this, they should be both descriptive (by providing specific incidents to illustrate their points) and analytical (by making sense of what went on and explaining why things happened the way they did). Teachers should encourage students to concentrate on how rather than on what. This part of the evaluation should not be about the content of the RePro project but on how they went about it and on group processes and methods. Students should review their own role in the group and try to recognise the influence they personally had, the role they played and their contribution to the effectiveness of the group. It is *very important* here for the teacher to encourage the student to look forward as well as back and attempt to see the implications of their experience for future group work and the ways they could behave more effectively in groups. The following table lists some questions that could be used to structure this peer/self evaluation process.

Group Evaluation Questions

- How did you select members for your group?
- How did you become a group and establish working practices?
- What group roles did you adopt?
- How did you organise your meetings?

- How did you organise your tasks?
- What working methods did you try out?
- What steps did you take to improve your effectiveness as a group?
- What difficulties did you encounter?
- How did you tackle the difficulties you encountered?
- How did you produce your report and/or presentation?
- What were your strengths and weaknesses as a group?
- What were your personal strengths and weaknesses as a group member?
- If you were to work in the same group again, how would you personally go about things differently?
- If you were to form a new group to tackle another project, how should your group go about it?
- What have you learnt about working in groups?

Adapted from: Gibbs, G. (1994) Learning in Teams. Oxford: OCSLD

5.7. Further Reading

Jaques, D. (2000). *Learning in Groups: A Handbook for Improving Group Work*, 3rd edition, London: Kogan Page.

Gross Davis, B. (1993) Collaborative Learning: Group Work and Study Teams, from the hard copy book by Barbara Gross Davis *Tools for Teaching* San Francisco Jossey-Bass Publishers, available online: http://teaching.berkeley.edu/bgd/collaborative.html

6. Providing Meaningful Feedback

6.1. The Purpose of Assessment

Assessment in all levels of education serves primarily three purposes:

- Diagnosis of learning (what the student knows; what the student needs to learn)
- Support of learning (what the student is learning; how this can be improved), and
- Certification of learning (what the student has learnt).

We have therefore three general approaches in assessment: diagnostic, formative and summative. In RePro we can use all three approaches although normally formative and summative will be mostly used.

Diagnostic assessment could be used in order to classify students in different groups of ability, should the teacher want to positively discriminate students and set different tasks (more challenging for the more advanced students – more streamlined for the less advanced ones).

Formative assessment takes usually the form of an “interim” deadline by which the students have to show parts of their work to the teacher and the teacher comments on the progress they have made. The teacher may offer advice for the improvement of student’s understanding and learning, spot mistakes in the student’s approach and bring them to their attention and indirectly guide them to the right answers. However it is important here that this formative assessment should better not be driven (imposed) by the teacher but left to the discretion of the student.

Summative assessment is normally linked with a mark or a grade and is the one that “gives the licence” for the student to proceed to the next stage or to graduation.

6.2. The Purpose of Feedback

The provision of feedback to the student serves again three purposes:

- Motivate the students
- Inform them how well they have done, and
- Tell them how to improve

Feedback can take several forms and dimensions it can be oral or written, it can be very detailed or very generic. Normally in a RePro setting we would expect teachers to provide oral formative feedback and written summative feedback. The basis of the feedback should be the progress the students have made towards achieving each one of the outcomes that have been agreed in the learning agreement.

Using formative feedback to encourage, motivate and correct learning will improve the outcomes of the RePro model and will help students to better define their learning strategies towards the agreed goals. Teachers, however, have to remember that it is not just poorly performing students that need

feedback – students that are doing well will want to know how to do even better.

In a ***formative feedback session*** teachers could start by asking the student what, in their own opinion, they feel they did particularly well thus far. The teacher then could list the areas they thought the student addressed well (some motivational 'praise' would be strongly suggested here). The session could continue by asking the student what areas in their work could be improved. In the same manner, the teacher could then list the areas they thought could be improved. There is usually a tendency in all teachers to suggest some 'action points' alongside the normal feedback they provide. This would identify for students what they should do next time to improve their performance. As the RePro model to learning is a student-centred one, we believe that **a more effective strategy** might be to involve students in identifying their own action points based on the feedback they have just received. This would integrate the process into the teaching and learning situation and involve the students more actively in the generation and planned use of feedback.

Recent research has shown that although students perceive marks or grades to be the primary vehicle for measuring their progress, they perceive written summative feedback as the one that helps them understand where they were wrong and drive them back to reflect on what they could do or learn better next time. However, we have all experienced cases where we provided carefully constructed individual comments throughout the students' work and yet students simply turn to the back page to locate the grade without reading the comments we have made.

As student engagement with the feedback is one of the basic philosophies of the RePro model, it is of paramount importance to create the proper culture in the class with regards to feedback. This can only be achieved through the proper and effective use of formative feedback as discussed above.

The summative feedback can normally follow the same pattern as the one suggested for the formative session. Only here, when it is done in writing, there is no opportunity for dialogue and the teacher needs to clearly identify strengths and weaknesses and propose ways for improvement for the student to learn. Although it is acknowledged that many institutions have introduced anonymous marking with the best interest of the students in mind, in the RePro model it is felt that it is difficult to write impersonal (to an anonymous student) and yet appropriate feedback. So, whenever possible, personalized comments, praise, etc. are encouraged.

The following example is from a case where Corinne (final year student – name changed) did a strategic analysis on the airline Cathay Pacific and presented it in a report. You will notice that the feedback provided refers to specific learning outcomes as listed in the learning agreement, negotiated with the course tutor. Following these points, the tutor also provides feedback on the presentation of the report based on the standards set by the institution. You will notice that there is a section for the overall tutor impression, which offers a more personal dimension to this feedback.

Agreed Learning Outcomes	Tutor Comments
Firm Dynamics: Evidence of organisational change in the firm; accuracy of description; reliability of sources.	This is an excellent section with the only weakness being that the company background you offer for Cathay Pacific, although very good and informative, is not really written in an executive summary as required for the report with key points of your analysis in the various sections. However, what follows provides excellent evidence of organisational change in the firm with a very good account of facts for the past three years of the company's history. You have used a wide range of relevant and reliable sources, which indicates a very good depth of independent research from your part. This was an excellent piece Corinne, well done!!
Critical evaluation of previous strategic leadership practices. Justification linked with previous section and evidence of outcomes.	In this section you classify the various strategies followed by Cathay Pacific over the past few years mainly as 'adaptive and 'manipulative' and you use brief but sound arguments to support this with reasonable evidence of their outcomes. You should also show why you evaluate these strategies as right or wrong by offering *your* critical insight and *your* views about that, given the external and internal business environment of the company in the region. The table you offer should be further expanded with discussion whereas p.5 could be significantly shorter.
Proposed strategic direction. Justification in terms of emerging environmental patterns and trends using an appropriate framework for analysis.	You propose a very good strategic direction by suggesting that the company should introduce a low cost carrier but you should justify your proposal better by taking into consideration the emerging environmental patterns and trends in the airline industry in Asia Pacific. You should also consider the particular strengths as well as weaknesses of Cathay Pacific in this analysis and argumentation. Appendix 2 was excellent. You then use a table with D' Avenis' framework to 'fit' your proposed strategy, demonstrating a good grasp of the 'new' 7Ss and of how you could use them in strategy development.
Realistic approach to create the "enabling conditions" for the firm to self-organize as a complex adaptive system. Levels of creativity and applicability of ideas in the specific firm with concrete examples.	Your approach to the creation of conditions that will enable Cathay Pacific display innovative and constructive emerging behaviours as a complex co-evolving system reflects a good understanding of the "six memes" as well as an equally good ability to implement them in real life. Your attempt to apply these ideas in Cathay Pacific with company-specific examples was very good, even if in parts you needed to be more specific, as for example when you were talking about "swarm thinking"
Presentation of work: Report style, appropriate referencing conventions, sources, language, and grammar.	The assignment was written using very well the report writing conventions. The executive summary was the only weakness; otherwise you provided a table of contents, numbered sections, page numbers, list of references and appendices. Your use of academic/professional English was very good with no major grammatical or spelling errors in your text. You followed the Harvard referencing conventions as set by the Business School.
General Comments: You did really very well here and showed that you have the potential to take up high management roles in real life as well. I was very pleased to read this assignment, not only because it reflects a good understanding of the module but also because it was written at a high professional standard. Corinne, I wish you all the best for your career in the future. I look forward to the moment you become a CEO!	

Obviously, this is only an example of feedback showing the approach that one institution takes on feedback. Teachers will have to develop their own feedback practices based on their own institutional standards. The basic feedback guidelines for the RePro cases are:

- Feedback should be motivational even for low achieving students
- Detailed feedback for each individual agreed learning outcome
- Start with the strengths of the submitted work
- Offer specific advice on how the submitted work can be improved

7. Reflective Practice

7.1. The Need for Reflection

Student centred learning can be fostered only by teachers who know how to learn themselves. They must know their own strengths and weaknesses, know what they want to do and why they want to do it. In order to acquire this self-knowledge they need to develop a reflective practice in their teaching. The following table offers some reasons on why we, as educators, reflect:

• Natural element of learning • Gain insight & understanding • Foresee consequences • Solve problem(s) • Justify action • Achieve control • Improve decisions • Increase options • Clarification • Detect errors • Forced to do it • Seek “truth” • Explore mindsets • Identify “right” problem • Challenge norms • Gain new perspectives • Self-insight • Self-development	• Personal mastery • Overcome resistance • Apportion blame • Explore responsibility • Increase self-confidence • Get new ideas • Part of thinking • Conflict resolution • Negotiation • Cultural expectations • Be more successful • Enhance performance • Gain multiple viewpoints • Intuitive element • Gain an edge • Uncover discrepant reasoning • Shift blame (distancing) • Make tacit explicit

7.2. Strategies to Develop a Reflective Practice

Unfortunately, reflection does not come naturally or even easily to most teachers. Teaching is often seen to be primarily about the immediate present and instant pragmatic action, while reflecting is perceived as a more academic pursuit. However, in a dynamic and continuously changing learning environment such as the RePro model, teachers need to realise that student-centeredness does not mean that their role is not any lesser than in traditional

teaching and they need to constantly think bout how to offer the best possible learning experience to their students. What the RePro model does is facilitate a dialogue between the student, teacher, and peers (and in some cases the RePro companies), which helps the student make sense of their learning.

In order to introduce a more formal structure to reflective practice, institutions that adopt the RePro model may encourage the use of one or more of the following strategies:

Course and Unit Reviews

Course and unit reviews at the level of Schools/Faculties can focus on the use of the RePro model and teachers using this approach may report on how they applied it, what was the students feedback, what they intend to change next time and why.

Mentoring

Mentoring is another strategy where a trusted colleague with experience in the RePro model advises and continually discusses issues, problems and challenges faced by a less experienced mentee who uses the RePro model in his or her classes.

Mind mapping

Mind mapping is a process by which the connected ideas surrounding the implementation of RePro in teaching a particular unit are drawn in a map fashion so as to enable the teacher to reflect on them and to clarify and/or reshape them and move onwards.

Peer Observation

In the same way describe in Chapter 6 about formative feedback, the teacher may choose a particular tutorial and ask a trusted colleague to observe their teaching and implementation of the RePro model. The observer must write down three strengths and three weaknesses of the teaching. After the session with the students, the teacher should take time to reflect and write down for themselves what they think are the three strengths and three weakness of their teaching. They should then go through the list with their observing colleague and use it as a focus for discussion about how they might improve. They may also wish to video the session as a prompt for the discussion.

Reflective Diary

This involves making explicit reflections on the ways that RePro is implemented in the teaching practice of a particular course unit through writing and thereby making them available to inform future action. The diary can be used both as an occasional tool for reflection and on a regular basis. When used on a regular basis it can serve as one of the methods to document information that will be used for the review and further development of the RePro model.

Reflective Workshops/ Seminars

This may done at institutional level and involve the RePro champions of the institution meeting with all teachers that have adopted and implemented this

approach in a structured or unstructured seminar in which successes and challenges may be openly discussed, concerns and issues presented in public and action towards their resolution agreed.

Student/teacher evaluation

A very useful practice is to introduce a formal student evaluation of the course or unit that was taught with the RePro model. The results of this evaluation should be reflected and commented upon by the course/unit teacher in the next faculty meeting (exam board, academic year review, etc.).

Teaching/learning networks and interest groups

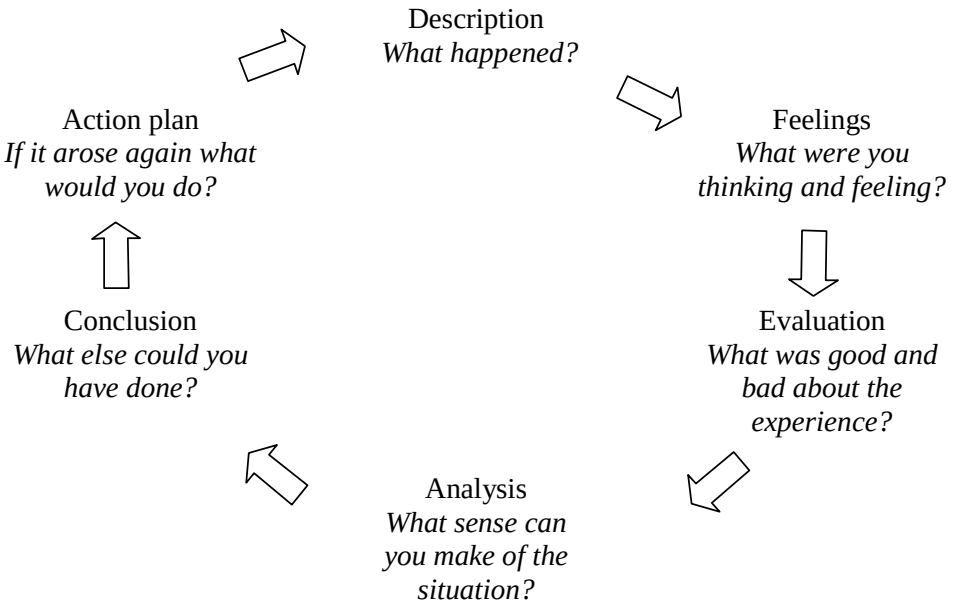
Teaching/learning networks can be set up to link several institutions as a way of connecting reflective teaching projects. The RePro project website can provide a transnational communication platform for all the teachers to share experiences, practices and concerns.

7.3. How to Reflect on the RePro-model

For the teacher to reflect on his or her teaching experience of the RePro model a useful tool can be the Gibbs (1988) reflective cycle. This provides a fairly straightforward for reflection and encourages a clear description of the situation, analysis of feelings, evaluation of the experience, analysis to make sense of the experience, conclusion where other options are considered and reflection upon experience to examine what they would do the next time they will use the RePro model.

A well-developed description provides basic information about the RePro teaching and learning experience by answering the “canonical questions”: who, what, when, where, and how. The teacher should examine the whole process from the learning agreement negotiation to the summative assessment as well as the student evaluation of the course for trends and patterns and for evidence of teacher or student strengths and weaknesses are the key element of analysis. This type of analysis requires in-depth, honest self-appraisal and focused introspection.

The Reflective Cycle



Finally, the teacher should identify specifically how their future actions will be informed and improved by what has been learned from the implementation o the RePro model in their teaching. Repeating this cycle provides the reflective teacher with an invaluable tool for continuous learning and improvement.

The reflection on the teaching experience could be written be in a narrative form and should answer questions such as:

- What was the setting in which the course was taught and to who were the students?
- When was the course taught?
- How did the RePro model influence my decisions in designing and preparing the course?
- What were the intended learning outcomes of the course?
- What were the essential strengths and weaknesses of the course?
- How did the RePro model influence these strengths and weaknesses?
- What specifically should be changed to improve the delivery of the course?
- What specifically should be changed to improve the achievement of the intended learning outcomes?
- What were the unintended and unanticipated learning outcomes of the lesson?
- What specifically have I learned as a result of developing, planning and teaching this course from a RePro perspective?
- What is the most important thing I have learnt about student learning?
- What is the most important thing I have learnt about my teaching?

- What is the most important thing I have learnt about my students?
- Has this experience been helpful to me becoming a more effective teacher?
- Specifically, how should my learning and growth as result of this experience be used to improve my performance in other aspects of my teaching?

7.4. Further Reading

Atherton, J. S. (2005). Learning and Teaching: Reflection and Reflective Practice. Available On-line: http://www.learningandteaching.info/learning/reflecti.htm

Appendices

Appendix 1: Fifty Assessment Techniques

Source: Knight, P.T. (2002) *Being a teacher in higher education*. Buckingham: SRHE and Open University Press

1. Artefacts/ products, especially in fashion, design, engineering, etc.	11. Defence of lab records.
2. Assessment as gatekeeping: students gain entry to classes only on production of bullet point summaries etc	12. Design and build (similar to 2 above).
3. Assessment banks. Students have access to a question & answer bank. They learn how to answer all of them but assessed on a sample	13.Dissertations and theses
4. Assessment of work-based learning (in a variety of ways, many times, by a variety of people, for different purposes).	14. Electronic monitoring of web searches, program use & communications.
5. Book, website or program reviews	15. Essay writing - one 5000 word, piece (make harder/easier by varying amount of tutorial guidance, range of reading expected, novelty of the topic/problem, time available, conceptual complexity, etc.).
6. Classroom assessment techniques. They are brief tasks that tell the teacher something about the class's grasp of the material.	16. Essays writing - 2 x 2500 word pieces.
7. Completing structured summaries of readings, debates etc.	17. Exhibitions of work, posters, products.
8. Computer-based self-assessment	18. Field work and lab work assessment (traditional and well established).
9. Concept maps. Excellent way of seeing how students understand complex content and relationships.	19. Formative assessment of logs/journals/portfolios (when the purposes are formative, students identify areas for discussion. If summative, sampling within the logs etc. is recommended, especially if students know in advance the areas that are likely to get closest attention).
10. Contribution to threaded electronic discussions.	20. Games and simulations

(Continued)

21. 'General' assessments, drawing together learning in several modules.	31. Personal response assessments. Usually done in classes where each student has an electronic response pad. Teachers ask questions and they press a key to show their answer. Can be used for classroom assessment or test purposes.
22. Making annotated bibliographies for next year's students.	32. Posters.
23. Making models (literally, in some subjects, conceptual models in others)	33. Production of structured logs of project dissertation progress and reflection on it.
24. Multiple choice questions (they do not have to be only tests of information, although it is a lot quicker to write MCOs like that. See also 3, above)	34. Projects.
25. New tests in which learners use old software/programmes/notes.	35. 'Real' problem working, which involves defining 'fuzzy' situations, bringing some order to ill-defined issues, analysing the problem and suggesting solutions.
26. Objective Structured Clinical Examination (OSCE).	36. Replication of published inquiries.
27. Open-book, end of course exams.	37. Role-playing.
28. Orals and vivas.	38. Self-assessment. Skill at self-evaluation is valued by many employers, which is a reason for having self-assessments. Easiest when used formatively.
29. Peer assessment. Some try to use it summatively but it's a lot easier if done for formative purposes.	39. Seminar presentations (in or out of role; with or without use of video, OHT, PowerPoint, etc.).
30. Performances. Vital in the assessment of competence. Note massive problems assessing complex performances fairly and reliably. Simulations sometimes possible.	40. Short answer questions. (MCOs plus some explanation of the thinking; limit to 100 words per response?)

(Continued)

41. [Short] appraisals of target papers.	46. Terminal, unseen examinations and other individual time-constrained assignments
42. Small-scale research or enquiry.	47. Two part assessments. Elements of a task are formatively assessed but the final product is summatively assessed.
43. Statements of relevance, which are short pieces of writing, 1000 words, perhaps, making claims about the relevance of a workshop, article, field observation etc. to another task or activity.	48. Web page creation.
44. Submission of claims to achievement with reference to portfolio (if this is to be summative, I suggest grading on the claim alone provided that sufficient evidence supports the claims).	49. Writing exams / tests/ assessments to tutor specification.
45. Takeaway papers/questions/tests.	50. Writing memoranda or journalistic summaries.

Appendix 2 – Sample Assessment Criteria

Grade	Marking Criteria
A	Evidence of effective self managed and autonomous learning, using a wide range of sources of theory, information and data which has been critically evaluated to give new insights in conclusions and recommendations, is presented through written documents, presentations, demonstrations or other previously agreed methods. Evidence indicates dept and/or breadth of knowledge, and/or skills and capabilities developed to a high level of competence.
B	Evidence of effective self managed learning, using a range of sources of theory, information and data which has been critically evaluated to support appropriate conclusions and recommendations, is presented through written documents, presentations, demonstrations or other previously agreed methods. Evidence indicates depth and/or breadth of knowledge and competence in skills or capabilities demonstrated.
C	Evidence of self managed learning, using appropriate sources of theory, information and data which has been evaluated to support appropriate conclusions and recommendations, is presented through documents, presentations, demonstrations or other methods previously agreed. Evidence indicates appropriate knowledge in the subject area and the development of skills or capabilities.
D	Evidence of self managed learning, using limited sources of theory, information and data which has been evaluated to support limited conclusions and recommendations, is presented through documents, presentations or demonstrations. Evidence indicates limited knowledge of the subject area and limited skills or capability development.

Glossary of Key Terms

N.B. *Please note that the following website provides a full glossary of useful academic terms used in higher education teaching and learning* http://www.heacademy.ac.uk/2287.htm#S

Assessment criteria –	details of what standards teachers will be looking for when they mark your assessments according to different categories such as A, B, C, D or in percentage terms e.g. 50% or 100%
Formative assessment -	assessment aimed at determining a person's strengths and weaknesses with the objective of improving them. Generally expressed in words rather than grades, and generally not used in the final assessment.
Learning agreement -	A learning agreement is a formal agreement between a learner and the person who is helping/guiding them to learn. This agreement is to be negotiated between the student and the teacher and it is about what is to be learned, how it is going to be learned and how that learning will be evidenced and assessed.
Learning contract -	agreement by which the learner agrees on a number of objectives that s/he must have achieved by the end of the learning period.
Peer assessment -	Assessment undertaken by a fellow (peer) student or fellow professional in the discipline
Repro model -	the RePro-model combines educational problems and real business problems by connecting students, teachers and RePro-companies' stories into the same learning cycle. A tool which is central to this approach is the **RePro case**.
Student Centred Learning -	Ways of thinking about learning and teaching that emphasise student responsibility for such activities as planning learning, interacting with teachers and other students, researching, and assessing learning.

Summative assessment -	Assessment generally taking place at the end of a course and leading to the attribution of a grade or a mark to the learner, which will allow the learner to move to the next part of the course, or which completes the course.

Edited from Payne E and Whittaker L, (2006), Developing essential Study Skills, 2nd edition, Prentice Hall & http://www.heacademy.ac.uk/2287.htm#S

Sources

N.B. *For free registration of international higher education e-journal* http://www.hlst.heacademy.ac.uk/johlste/about.html -

Assessment
http://www.hlst.ltsn.ac.uk/resources/cases/assess.html - useful range of case studies on a variety of assessment methods

Assessment Criteria
http://www.hlst.heacademy.ac.uk/guide/assessment/a05c.pdf - assessment criteria example

Case studies
http://www.materials.ac.uk/guides/casestudies.asp - Guide to using case studies
http://www.hlst.heacademy.ac.uk/resources/cases/case73.html

Feedback
http://www.heacademy.ac.uk/resources.asp?process=full_record&section=generic&id=353 – formative feedback

Group work
Gibbs, G (1994), Learning in Teams, Oxford: OCSLD
Jaques, D. (2000). *Learning in Groups: A Handbook for Improving Group Work*, 3rd edition, London: Kogan Page.
Gross Davis, B. (1993) Collaborative Learning: Group Work and Study Teams, from the hard copy book by Barbara Gross Davis *Tools for Teaching* San Francisco Jossey-Bass Publishers, available online: http://teaching.berkeley.edu/bgd/collaborative.html

http://www.hlst.ltsn.ac.uk/resources/cases/group.html - reference to different case studies with group work, e.g. group work collaboration online

Learning Agreement & Learning contract
Anderson, G. & Boud, D. (1996). Introducing learning contracts: a flexible way to learn. Innovations in Education and Training International, 33, 4, 221-227 [Available online: http://www.education.uts.edu.au/ostaff/staff/publications/db_7_ab_ieti_96.pdf#search=%22%22Negotiation%20process%22%20learning%20contract%22%22

Reflective practice
http://escalate.ac.uk/3571 - reflective practice guide
Atherton, J. S. (2005). Learning and Teaching: Reflection and Reflective Practice. Available On-line: http://www.learningandteaching.info/learning/reflecti.htm

Researching information – Local, European and global business websites - refer to section 4.5 in the manual for guidance

Saunders, M., Lewis, P. and Thornhill, A. (2003) *Research Methods for Business Students,* 3rd edition Harlow: Prentice Hall.
http://www.stat.gov.pl/english/index.htm http://www.stat.fi/index_en.html;
http://www.csb.lv/avidus.cfm
http://epp.eurostat.ec.europa.eu
http://www.worldbank.org/
http://www.ebrd.org/
http://www.imf.org/
http://www.bundesbank.de
http://www.bancaditalia.it
http://www.londonstockexchange.com
http://www.world-exchanges.org
http://www.fese.be
http://www.vm.fi
http://www.varam.gov.lv
http://www.uokik.gov.pl
http://biz.yahoo.com/
http://www.dailystocks.com/
http://finance.yahoo.com/
http://biz.yahoo.com/industry http://www.corporateinformation.com/
http://www.guidestar.org/
http://www.idealist.org/
http://nonprofit.about.com/index.htm .
http://www.greenpeace.org/international
http://poll.gallup.com
http://www.bn.org.pl
http://www.findarticles.com/
http://www.magportal.com/.
www.oecd.org
www.clubofrome.org
www.un.org
www.cesa-shipbuilding.org
www.economist.com
www.cnn.com;
www.bbc.co.uk

Student Centred Learning

Bereiter, C. (2002). Education and Mind in the Knowledge Age. Earlbaum.

Hakkarainen, K. (2003). Emergence of progressive inquiry culture in computer-supported collaborative learning. *Learning Environments Research, 6*(2), 199-220.

Hakkarainen, K., Lonka K., Lipponen, L. (1999). Tutkiva oppiminen : älykkään toiminnan rajat ja niiden ylittäminen. Porvoo : WSOY.

Hakkarainen, K., Lonka, K., & Lipponen, L. (2004). Tutkiva oppiminen: Järki, tunteet ja kulttuuri oppimisen sytyttäjinä. 6. uudistettu painos. Porvoo: WSOY.

O'Neill, G. and McMahon, T. (2005) Student–Centred Learning: What does it mean for students and lecturers? In O'Neill, G., Moore, S., McMullin, B. (Eds) *Emerging Issues in the Practice of University Learning and Teaching.* Dublin: AISHE. [Available on-line: http://www.aishe.org/readings/2005-1/oneill-mcmahon-Tues_19th_Oct_SCL.pdf, accessed August 2006].

Rhem J. (1996) Urgings and Cautions in Student-Cantered Teaching, National teaching and Learning Forum, Vol.5 (May), No.4, [Available on line: http://www.ntlf.com/html/pi/9605/article1.htm, accessed August 2006]

Sparrow, L., Sparrow, H. and Swan, P. (2000) Student centred learning: Is it possible? Proceedings of the *Flexible Futures in Tertiary Teaching Forum*, Curtin University of Technology, Perth, Australia [Available on-line: http://lsn.curtin.edu.au/tlf/tlf2000/sparrow.html, accessed August 2006].

Education and Culture

Leonardo da Vinci

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.