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STUDENT-CENTRED LEARNING

TOOLKIT FOR STUDENTS, STAFF AND HIGHER EDUCATION INSTITUTIONS

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Lifelong Learning Programme

STUDENT-CENTRED LEARNING

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You cannot teach a man anything. You can only help him discover it within himself.
Galileo Galilei

It is important that students bring a certain ragamuffin, barefoot irreverence to their studies; they are not here to worship what is known, but to question it.
Jacob Bronowski

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Student-Centred Learning—Toolkit for students, staff and higher education institutions

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Content

Angele Attard, Emma Di Iorio, Koen Geven, Robert Santa

Editing and Proofreading

Angele Attard

Supported by the T4SCL Project Steering Group

Ligia Deca, European Students' Union
Monique Fouilhoux, Education International
Milica Popovic, Education International
Robert Santa, European Students' Union
Natalia Tarachiu, European Students' Union
Bert Vandenkendelaere, European Students' Union
Olav Øye, European Students' Union

With the guidance of the International Advisory Board

Prof. Lee Harvey, Copenhagen Business School, Denmark
Dr. Sybille Reichert, Ph.D, Higher Education Consultant
Prof. Jussi Välimaa, Institute for Educational Research, University of Jyväskylä, Finland
Prof. Kirsten Hofgaard Lycke, Faculty of Education, University of Oslo, Norway

Design & Typesetting

Linus Rowedda

Cover Illustration

Are Edvardsen

Image credits

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ABBREVIATIONS

EACEA	Education, Audiovisual and Culture Executive Agency
ECTS	European Credit Transfer System
EI	Education International
ESU	European Students' Union
LLL	Lifelong Learning
LLP	Lifelong Learning Programme (European Commission)
PBL	Problem-Based Learning
RPL	Recognition of Prior Learning
SCL	Student-Centred Learning
T4SCL	Time for a New Paradigm in Education: Student-Centred Learning (Joint EI-ESU Project)

1 PRINCIPLES AND DEFINITION

1.1 INTRODUCTION

This Toolkit forms part of the project entitled *Time for a New Paradigm in Education: Student-Centred Learning* (T4SCL), jointly led by the European Students' Union (ESU) and Education International (EI).This is an EU-funded project under the Lifelong Learning Programme (LLP) administered by the Education, Audiovisual and Culture Executive Agency (EACEA).

T4SCL, as a pioneer initiative, aims to assist policy makers in designing sound student-centred learning (SCL) strategies and approaches and to increase the capacity of student and staff representative organisations to be active partners in spreading a culture of SCL in higher education institutions across Europe. The project aims to provide comprehensive insight into the necessary tools, challenges and success stories of SCL as a fundamental basis for lifelong learning (LLL). It also aims to provide concrete policy input—during and beyond the project lifetime—to ongoing discussions as to the future of the EU Education & Training Programme and the next phase of the Bologna Process.

SLC is practical and achievable, as well as being highly beneficial for learners.

Following on from the initial desk research and survey undertaken with both EI and ESU member organisations (higher education staff unions and national student unions respectively), published in May 2010, this toolkit is one of the last initiatives, marking the end phase of the project. It represents a key outcome of the project. This toolkit follows extensive research and a series of events at both European and national levels, combined with trainings on the subject-matter.

This toolkit is designed for *effective, practical implementation of SCL by teaching staff, students and institutional leaders*. It aims to show how *practical and achievable* SCL is, as well as being highly beneficial for learners.

1.2 THE CONCEPT OF SCL

SCL was credited to Hayward as early as 1905 and to Dewey's work in 1956. Carl Rogers was then associated with expanding this approach into a theory of education in the 1980s and this learning approach has also been associated with the work of Piaget (developmental learning) and Malcolm Knowles (self-directed learning). Some of the SCL literature can be summarised into the following elements (cf. Lea et al, 2003):

- The reliance on *active rather than passive learning*;
- An emphasis on *deep learning and understanding*;
- *Increased responsibility and accountability* on the part of the student;
- An *increased sense of autonomy* in the learner;
- An *interdependence between teacher and learner*;
- *Mutual respect within the learner-teacher* relationship; and
- A *reflexive approach to the teaching and learning process* on the part of both the teacher and the learner.

SCL is broadly based on constructivism as a theory of learning, which is built on the idea that learners must construct and reconstruct knowledge in order to learn effectively, with learning being most effective when, as part of an activity, the learner experiences constructing a meaningful product. SCL is also akin to *transformative learning* which contemplates a process of qualitative change in the learner as an ongoing process of transformation which focuses on enhancing and empowering the learner, developing their critical ability.

1.3 PRINCIPLES UNDERLYING SCL

On the basis of an examination of the theory behind SCL and following an intensive discussion with teachers and students on what they consider SCL to be, which took place at the launching conference of the T4SCL Project—*Time for a New Paradigm in Education: Student-Centred Learning*—in Bucharest, Romania in May 2010, below is a list of general principles underlying SCL. These principles do not aim to form a comprehensive picture of what SCL is about. Rather they put forward a clearer understanding and debate about the topic.

- ***Principle I: SCL requires an Ongoing Reflexive Process.*** Part of the underlying philosophy of SCL is that no one context can have one SCL style that can remain applicable through time. The philosophy of SCL is such that teachers, students and institutions need to continuously reflect of their teaching, learning and infrastructural systems in such a way that would continuously improve the learning experience of students and ensure that the intended learning outcomes of a given course or programme component are achieved in a way that stimulates learners' critical thinking and transferable skills.

- ***Principle II: SCL does not have a >One-Size-Fits-All< Solution.*** A key concept underlying SCL is the realisation that all higher education institutions are different, all teachers are different and all students are different. These all operate in very diverse contexts and deal with various subject-disciplines. Therefore SCL is a learning approach that requires learning support structures which are appropriate to each given context and teaching and learning styles appropriate to those undertaking them.

- ***Principle III: Students have Different Learning Styles.*** SCL recognises that students have different pedagogical needs. Some learn better through trial and error, others learn through practical experience. For some learners much is learned by reading literature, others need to debate and discuss theory in order to understand it.

- ***Principle IV: Students have Different Needs and Interests.*** All students have needs that extend beyond the classroom. Some are interested in cultural activities, others in sports or in representative organisations. Students can have children or can be faced with psychological conditions, illness or disability.

- ***Principle V: Choice is Central to Effective Learning in SCL.*** Students like to learn different things and hence any offer should involve a reasonable amount of choice. Learning can be organised in liberal formats, such as at colleges of liberal arts or choice can be offered in a more traditional, disciplinary style.

- ***Principle VI: Students have Different Experiences and Background Knowledge.*** Learning needs to be adapted to the life and professional experience of the individual concerned. For instance, if students already have considerable experience in using ITC, there is no point in trying to teach them the same thing again; if they already have considerable research skills, perhaps it would be better to help them in theory. Personal experience can

also be used to motivate students, for instance, by allowing students to share a personal story to illustrate a point.

- ***Principle VII: Students should have Control Over their Learning.*** Students should be given the opportunity to be involved in the design of courses, curricula and their evaluation. Students should be seen as active partners who have a stake in the way that higher education functions. The best way to ensure that learning focuses more on students is by engaging students themselves in how their learning should be shaped.

- ***Principle VIII: SCL is about >Enabling< not >Telling<.*** In simply imparting facts and knowledge to students (telling) the initiative, preparation and content comes mainly from the teacher. The SCL approach aims to give the student greater responsibility enabling the student to think, process, analyse, synthesise, criticise, apply, solve problems, etc.

- ***Principle IX: Learning needs Cooperation between Students and Staff.*** It is important that students and staff cooperate to develop a shared understanding both of the problems experienced in learning, as well as their problems as stakeholders within their given institution, jointly proposing solutions that might work for both groups. In the classroom, such cooperation will have a positive effect as the two groups increasingly come to consider each other as partners. Such a partnership is central to the philosophy of SCL which sees learning as taking place in a constructive interaction between the two groups.

1.4 A WORKABLE DEFINITION OF SCL

SCL remains a debated concept with no one clear definition available, since multiple interpretations co-exist which exclude each other. Nonetheless, this section will try to circumvent this issue by arriving at a workable definition of SCL.

It is interesting first to consider what participants at the launching conference of the T4SCL Project considered as being integral components of SCL. These include:

- Flexibility and freedom in terms of the time and structure of learning;

- More and better quality teachers who strive to share their knowledge;

- A clear understanding of students by teachers;

- A flat hierarchy within higher education institutions;
- Teacher responsibility for student empowerment;
- A continuous ongoing improvement process;
- A positive attitude by teachers and students with the aim of improving the learning experience;
- A relationship of mutual assertiveness between students and teachers; and
- A focus on learning outcomes which enable genuine learning and deep understanding.

On the basis of all of the above and of the practical suggestions put forward below, this toolkit is proposing the following definition of SCL:

> »*Student-Centred Learning represents both a mindset and a culture within a given higher education institution and is a learning approach which is broadly related to, and supported by, constructivist theories of learning. It is characterised by innovative methods of teaching which aim to promote learning in communication with teachers and other learners and which take students seriously as active participants in their own learning, fostering transferable skills such as problem-solving, critical thinking and reflective thinking.*«

With this definition serving as a useful starting point, this toolkit will now move on to suggest practical ways in which SCL can be implemented in a meaningful manner, keeping in mind the benefits that this learning approach produces and the key characteristics which are necessary in order for an institution to assess whether the SCL approach is being applied by it.

2 THE BENEFITS

2.1 INTRODUCTION

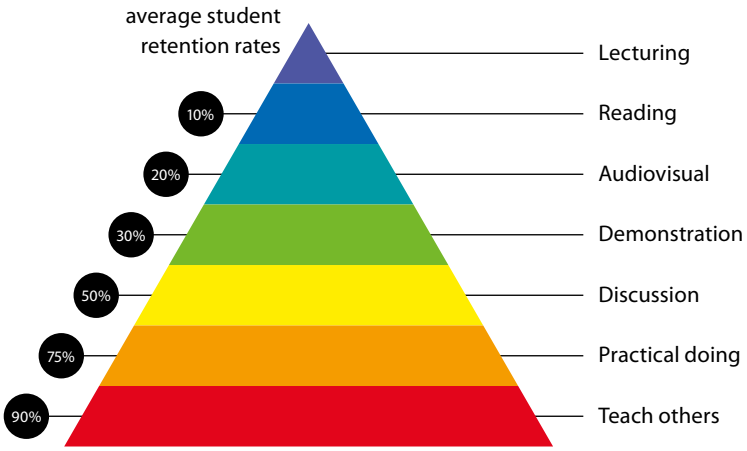
SCL, if implemented properly, offers benefits to all, including the institution, students and staff involved, higher education staff unions, students' unions and society as a whole. Given the current context of higher education across Europe—the financial situation, massification of higher education and a high workload for teaching staff—there are many benefits to be reaped by implementing the SCL approach.

2.2 BENEFITS FOR STUDENTS

The benefits of SCL for the students involved are many and varied. Coming into an academic community possibly for the first time can shape the way students think for the rest of their lives. SCL provides skills for life, creates independent learners and responds to the changing and differing needs of individual students. Below is a list of what such benefits can include:

- ***Making Students an Integral Part of the Academic Community:*** Students are said to be part of the academic community, but in practice this can be difficult to achieve due to varied practices of rigid teaching structures. Via SCL, students can become part of that community much earlier, given that the teacher acts as a facilitator, rather than an instructor. In encouraging students to think for themselves, analytical skills and critical thinking are gained earlier on. In this context, research-led teaching becomes all the more possible. Teachers are able to discuss their research and hear the views of students on the matter. Increased cooperation and a feeling of having one's views valued can further increase the interaction and engagement of students. This can lead to participation in the development of research and also to help develop a given course, due to the sense of ownership that students feel. Lastly, it may also encourage more students to enter the academic community as members. We must not forget that students are the teachers of the future!

fig. 1 Learning Pyramid
Source: National Training Laboratories, Bethel, Maine



- ***An Increased Motivation to Learn:*** SCL can encourage deeper learning, as shown in the Learning Pyramid below. Knowledge retention differs depending on the way in which material is learned, but all types of active learning show a higher retention rate than traditional forms of learning. The student is also often more motivated to learn through SCL, because the tasks set require original thought and increase interest in the subject-matter. As the Learning Pyramid below suggests, students retain more of the information they learn where there is an aspect of active learning and active participation.

- ***Independence and Responsibility in Learning:*** Within SCL, students must engage with the course material and are in control of their learning. This makes the student more independent and adaptable to life after higher education. The independence of students enables them to learn more effectively and to gain other skills such as teamwork, effective written and verbal communication, prioritisation of tasks and critical analysis. In turn, students can develop transferable skills and would be able to work more effectively in their careers and lives in general.

- ***Due Consideration for Student Needs:*** Massification of higher education has had the effect of diversifying the student body. Inevitably students have differing needs that are wider than ever before. SCL can enable students to study in a flexible manner, through the use of part-time study, distance learning and e-learning. The SCL approach demonstrates that learning is not limited to a given time or place in the way that traditional learning has been. Different learning needs of students can also be met because students can engage with materials in different ways. For example, some students engage more with audiovisual materials whereas others prefer reading. Furthermore, by experiencing a range of teaching methods students are further challenged academically.

2.3 BENEFITS FOR TEACHERS

Whilst the benefits of SCL for students seem obvious, some may question whether this is also the case for teaching staff. Indeed, teachers can benefit from SCL as much as the students in their classes. Below is a list of what such benefits can include:

- ***A More Interesting Role for the Teacher:*** SCL, as stated above, puts the onus on the student to learn. The teacher is there to facilitate and enable this. Whilst this might be seen by some as negative, it is a good opportunity to academically challenge students, in order to enhance their learning.

- ***Solutions to Tackling Massification and Diversity:*** In a reality of massification in higher education and a more diversified student body, it is likely that SCL will have to be used in many cases because of the increased demands of quality from students, the increased costs of higher education associated with this and the diversity of the student body, meaning student needs are varied.

- ***Positive Impact on Working Conditions:*** Given that SCL provides the opportunity for learning to take place in different ways, the work of a teacher can be more interesting and the negative aspects of the working conditions normally associated with teaching can be alleviated by SCL.

- ***Continuous Self-Improvement:*** SCL can enable teachers to review and develop their courses and teaching methods so as to improve both the content of their courses and their method of delivery as teachers. The confidence gained from implementing the SCL approach is also measurable in that teachers obtain relevant and constructive feedback from more highly-engaged students.

- ***Increased Learner Motivation and Engagement:*** Increased engagement by students and a higher level of student participation makes the job of teaching more interesting. The ability to bring new research into tutorials or classes becomes a reality in SCL. This sounding board of ideas can contribute to the research of the teacher and introduces students to research and the academic community at an early stage in their learning process.

- ***Professional Development for Academia:*** SCL can offer a much higher level of professional development with regards to the development of knowledge, skills and competences relevant both for personal development and career advancement. It also enhances teachers' flexibility in designing ways of running a course or a programme component and in applying new ways of teaching or research.

2.4 THE WIDER BENEFITS OF SCL

Collectively both teaching staff and students have an interest in, and benefit from, SCL. This produces cross-over and benefits for their representative organisations. Below is a list of what such benefits can include:

- ***Quality Enhancement:*** Any increase in the quality of both working conditions and the student academic experience is to be welcomed by both teachers' and students' unions.

- ***The Status of the Teaching Profession:*** Given the trend in institutions to focus on research, the status of the teaching profession can only be improved with the adoption of the SCL approach. SCL takes into account innovation and allows teachers to develop their courses in the way they wish, whilst allowing students the flexibility to develop in their own ways.

- ***Increased Representation in Governance Structures:*** Given that SCL in and of itself requires a higher level of cooperation between all institutional levels, it pre-supposes that the hierarchy within higher education institutions is

rather flat. SCL therefore favours a more collaborative approach within institutions, allowing for more representation of both students and staff within the relevant governance structures.

SCL also produces benefits both to institutions in which the learning approach is being applied as well as to society, which is a key beneficiary of graduates who are innovative, critical and reflective thinkers and who are able to drive development forward in their given society. Below is a list of what such benefits can include:

- ***Better Retention Rates in Higher Education:*** Where institutions employ the SCL approach, there tends to be a lower number of students who choose not to complete their studies. This may be due to the flexibility within such courses and may also be due to the fact that, via SCL, students engage with their studies more than within traditional methods of instruction. Indeed, students feel more valued when learning within an SCL environment because their learning needs are paramount. In a climate of massification, formalisation and anonymisation of higher education, this can only be welcomed.

- ***Attracting Students:*** Where students' learning needs are carefully considered, teaching will be seen as being of higher quality. Meeting student expectations and managing them is of paramount importance. Furthermore, many aspects of SCL can be implemented without costly measures and can make institutions which apply this approach much more attractive to potential students, also attracting more mobility into the region in which the institution is found, thus benefitting also the development of society.

- ***An Ongoing Improvement Process:*** The ability of institutions to evaluate their courses and the student academic experience as a whole mean that they produce better graduates. The main benefit to society as a whole is that such graduates are more analytical and better citizens as a result of them having to think for themselves throughout their higher education studies.

- ***Fostering a Lifelong Learning Culture:*** Students who have experienced SCL are likely to learn more lessons by themselves and are likely to be more practical and logical, with an ability to tackle all sorts of problems as an when they arise, turning this into a learning experience. SCL can give graduates skills for lifelong learning, making them more effective in their place of work and enabling them to contribute extensively to the society in which they live.

3 AN SCL CHECKLIST

This chapter of the toolkit provides an indicative checklist of what may be required in terms of successful implementation of the SCL approach:

If one finds that in their home institution none or few of the elements mentioned below are present, then the subsequent chapters will be useful in helping to identify the manner in which SCL can be applied. In particular, Chapter 4 looks at how to make change happen in order to move towards applying the SCL approach.

If, on the other hand, one finds that many of the elements mentioned below are present in their home institution, it is an indication that the institution is on the right track, but it would be useful to consult the subsequent chapters in any case, being that SCL in and of itself teaches us to keep seeking to improve on current applicable methods.

1. Consultation with Students [Tick as Appropriate]		Yes	No
1.1	Are there transparent procedures in place for students to be able give feedback on the quality of the educational process?	❍	❍
1.2	Are students consulted on curriculum content?	❍	❍
1.3	Are students consulted on the teaching and evaluation methods used?	❍	❍
1.4	Are students involved in periodic programme quality reviews?	❍	❍
1.5	Are students involved as full and equal members in committees where issues relating to the student experience are discussed at all levels (e.g. department, faculty, university, etc.)?	❍	❍
1.6	Are straightforward procedures in place for students to appeal decisions regarding their academic attainment or progression?	❍	❍

2. ECTS (European Credit Transfer System) and Learning Outcomes [Tick as Appropriate]		Yes	No
2.1	Are students consulted when learning outcomes are designed?	❍	❍
2.2	Are student needs and the diversity of the relevant student group considered when designing learning outcomes?	❍	❍
2.3	Are students informed on the intended learning outcomes before they start a course or programme component?	❍	❍
2.4	Are ECTS credits used co-related with defined learning outcomes?	❍	❍
2.5	Are credits transferable between courses and institutions?	❍	❍
2.6	Are credits measured based on student workload, independent of contact hours?	❍	❍
2.7	Are students awarded credits for activities that help them attain intended learning outcomes if conducted outside the institution?	❍	❍
2.8	Does your institution refer its qualifications to a Qualifications Framework?	❍	❍

3. Quality Assurance [Tick as Appropriate]		Yes	No
3.1	Are both staff and students consulted during the institutional quality assurance process?	❍	❍
3.2	Are both representatives of teachers and students involved as full and equal members in the panels undertaking institutional quality assurance reviews?	❍	❍
3.3	Do institutional quality assurance reviews and guidelines take into account the overall elements of teaching and learning?	❍	❍
3.4	Do programme quality reviews take into account the use of learning outcomes?	❍	❍
3.5	Do programme quality reviews take into account the assessment methods used?	❍	❍
3.6	Do external quality assurance evaluations refer to the teaching and learning process?	❍	❍

4. Mobility, Recognition and Prior Learning [Tick as Appropriate]		Yes	No
4.1	Are study periods conducted by students in other institutions within various mobility schemes recognised by your institution?	❍	❍
4.2	Do incoming mobile students at your institution benefit from support in order to be able to cope with their new cultural and linguistic environment?	❍	❍
4.3	Are examples of good practice in teaching and learning that mobile staff come into contact with discussed and disseminated at the institutional level?	❍	❍
4.4	Is prior learning (in non-formal learning environments) recognised by your institution for the purpose of access into educational programmes?	❍	❍
4.5	Is the process of recognition easy?	❍	❍
4.6	Can recognition of prior learning be done without significant costs or bureaucracy?	❍	❍

5. The Social Dimension [Tick as Appropriate]		Yes	No
5.1	Are special support measures in place in order to help students from disadvantaged backgrounds?	❍	❍
5.2	Are learning paths flexible enough so as to permit combining work/family-life and studies?	❍	❍

6. Teaching and Learning Methods [Tick as Appropriate]		Yes	No
6.1	Does your institution use peer assessment and peer learning?	❍	❍
6.2	Does your institution have programmes for which it uses activity-based learning?	❍	❍
6.3	Is group-work used in the learning process within your institution?	❍	❍
6.4	Are extra-curricular activities of students accepted and recognised as an essential part of the learning experience?	❍	❍
6.5	Is the development of transversal skills by students one of the objectives of the learning process in your institution?	❍	❍

7. Student Assessment Methods [Tick as Appropriate]		Yes	No
7.1	Are the goals of the learning process agreed upon between teachers and students?	❍	❍
7.2	Are peer- and self-assessment used as a method in the student assessment process?	❍	❍
7.3	Are projects used in the assessment of students?	❍	❍
7.4	Are simulations of tasks and ›real life‹ situations used in the assessment of students?	❍	❍

8. Learning Environment [Tick as Appropriate]		Yes	No
8.1	Do students have access to appropriate research and study facilities both on and off campus?	❍	❍
8.2	Is information technology used within the learning process?	❍	❍
8.3	Do librarians collaborate with teachers in order to enhance students' learning experience?	❍	❍
8.4	Does you institution contribute to promoting a national/regional culture of SCL?	❍	❍

9. Professional Academic Development [Tick as Appropriate]		Yes	No
9.1	Does your institution have any guidelines on teaching and learning?	❍	❍
9.2	Does your institution have a regular professional development programme for teaching staff?	❍	❍
9.3	If yes, does this programme include a constructive discussion on the application of teaching methods?	❍	❍
9.4	Does this programme use an SCL approach in providing training on the use of innovative teaching methods and student-centred curriculum development?	❍	❍

4 CHANGING THE MINDSET

4.1 INTRODUCTION

Where none or few of the items listed in the above checklist are present within a given higher education institution, a change process would need to be initiated in order to move a higher education institution or system towards applying the SCL approach. In order for change to take place in a given higher education setting, a strategy is needed with the aim of cooperating with and convincing others. Collegiality is a central value in higher education. A strategy based on coercion and power will not only fail but also raise active opposition. Strategies should always be based on values such as academic freedom and professionalism if they are to achieve tangible results. The challenge is therefore to forge a coalition with those who want to change and to persuade others who are sceptical. Below, some guidance is given on elaborating reform plans. The chapter will run through six steps in a creative policy cycle, starting with planning and ending with an evaluation of the change process, with the aim of implementing reforms leading to the successful application of the SCL approach.

4.2 THE POLICY CYCLE

Much debate exists in higher education policy on whether change happens more effectively in a top-down or a bottom-up manner. There are strong arguments on both sides of the debate. Supporters of the top-down approach argue that democratically-elected leaders in higher education should control resources to implement a consistent policy at all levels of the higher education system. Top-down methods such as laws, regulations, ministerial decrees, institutional missions and reform agendas can guarantee consistency across a given higher education setting. Proponents of the bottom-up approach argue that no change is carried through if it is not supported by those who will do the actual teaching, with this being more effective if initiatives start with individuals themselves and are spread by means of a process of inspiration and sharing of best practices.

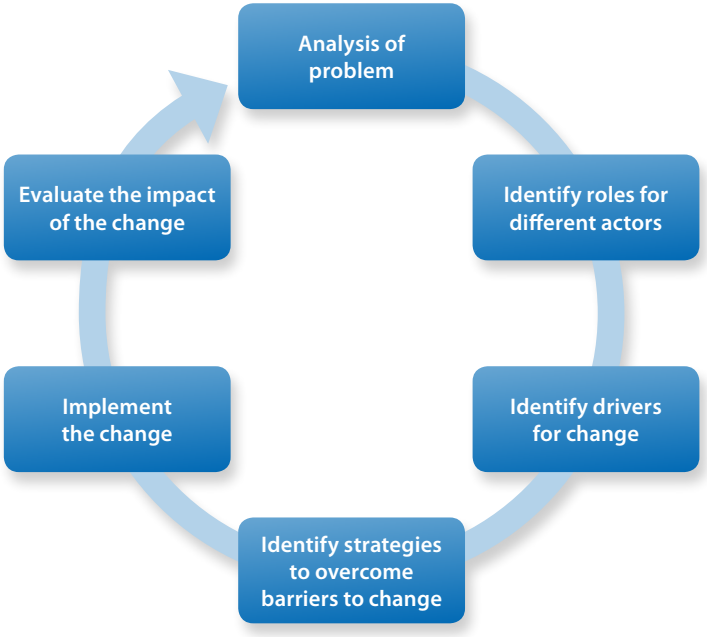
In trying to make change happen to lead towards the adoption of the SCL approach, it is advisable to be pragmatic and acknowledge a more iterative way of policy-making. In a pragmatic vision, both the top and the bottom levels have different roles to play and neither should be over-emphasised. Higher education leaders are needed because

they have access to resources and to personnel and a good overview of the system. On the other hand, lower levels have expertise on the ground. They also have innovative ideas and provide the motivation to implement any given policy. A good policy cycle acknowledges a role for both levels and aims to enable them to work together.

The policy cycle acknowledges that policy is made in iterative steps that cannot be fully-planned from the outset. If presented in a model, it can look as follows:

In the coming paragraphs, the six steps referred to above are elaborated in turn one by one, in order to provide some ideas on how to make change happen.

fig. 2 The policy cycle in six steps



4.3 STEP ONE: ANALYSIS OF THE PROBLEM

Many strategies fail at the basic level, as reformers do not really know what it is that they want to change. The first step always needs to be a full analysis of the current situation and a mapping-out of the existing problem. Although the extent and detail to which the latter can be done will differ from one situation to another, it is useful to think clearly about what the main problem is and if an understanding of the problem is shared with colleagues and other stakeholders in a given higher education community. Even if it is clear that not everything can be planned, clear outcomes and a timeline should be set in order to achieve the intended change.

You can also try to ask a number of questions:

- How many of the checklist-items mentioned above are present?
- How do you define SCL?
- How is your higher education environment not student-centred?
- What has already been done to solve the problem?
- To what extent have these attempts been successful or why have they not been successful?
- Who and what needs to change?
- Which competences and resources are needed to solve the problem?

A useful tool at this first stage is the *SWOT analysis*, including a list of:
Strengths
Weaknesses
Opportunities and
Threats
of the current situation, as a basis for changing it.

Analysing the problem is very much linked to thinking about solutions. This stage thus includes thinking of creative solutions and strategies to address the problem pro-actively. In order not to get stuck in simple solutions, it is best to generate many different ideas to deal with the problem and to weigh them up against each other only after coming up with several possibilities for action. This will not hamper creativity in developing solutions. This is especially important for SCL as it is such a broad concept. Solutions can include considerations related to pedagogy, student participation or broader social issues linked to the student experience.

At an early stage, it is important to be aware that the current trend in policy-making is *evidence-based-policy*. In short, this means that ar-

guments and ideas need to be backed-up by scientifically undertaken policy-research. This is because policy-makers prefer to see academic literature that discusses the problem at hand and tried-and-tested solutions to it. Although this may stifle creativity in identifying solutions, it is relevant to consider that the audience is likely to be academic and that it will judge the arguments put forward in a scientific way. In order to improve the scientific basis of such arguments, the following journals and other sources can prove to be useful sources to consult:

- *Active Learning in Higher Education* journal;
- The *Journal of Higher Education*;
- The *International Journal of Academic Development*;
- *Teaching in Higher Education* journal;
- *Scholarship Reconsidered. Priorities of the Professoriate* (Boyer, 1990); and
- *Student-Centred Learning. An Insight into Theory and Practice* (EI, ESU, 2010).

4.4 STEP TWO: IDENTIFYING ROLES FOR DIFFERENT ACTORS

After taking the decision that change is indeed necessary, it is imperative to identify the other persons who also want the same change. Change is often initiated by a >coalition of the willing< or a small grouping of those who agree on the problem and the need to change.

To make higher education more student-centred, it is useful to connect with lecturers, professional associations and student organisations that can support the change project and increase its importance. A number of considerations can be made in choosing such change partners effectively. These include:

- The type of *support* they can provide (moral, financial, expertise, time, influence);
- The type of *relationship* you have with them (trust, personal, hierarchical);
- The type of *resistance* their involvement is likely to pre-empt (as involvement typically leads to participation instead of opposition); and

- The *legitimacy* that they will bring to reforms (on the premise that a smartly constructed partnership sounds more convincing).

Below is a list of the potential different actors that may be involved in such a change process and the interests which they may have:

- ***Students' Unions:*** Not surprisingly, students are often the staunchest supporters of the SCL approach. The joint ESU-EI survey (2010) undertaken during the initial stages of the T4SCL project shows that attitudes of students' unions are most positive towards the idea. Generally, their priority is to promote it as a political issue, arguing for a more supportive learning environment. In many cases, students' unions are also ready to develop projects in institutions, to identify experienced student representatives for project-work or to carry out reviews of learning processes at the institutional or faculty level. In some situations, students' unions may be focused on non-academic issues. Therefore, it will be helpful to clearly identify the broader benefits of the SCL approach.

- ***Higher Education Teachers' Unions:*** Similarly to students' unions, teachers' unions are concerned with professional issues such as teaching and research as well with more traditional union issues such as working conditions of higher education teaching staff. They can provide experienced teachers and researchers and an all-important reality-check of the conditions necessary for change to be implemented. Teachers' unions are important allies as teachers are often seen as having a negative attitude towards the SCL approach. If their voice is involved at an early stage, enthusiasm for change can grow on the ground as well.

- ***Rectors' Conferences or Associations of Higher Education Institutions:*** The modernisation of higher education and of teaching is a clear priority for most associations of higher education institutions. Although often concerned with issues such as research and funding, these organisations can be very important for the successful implementation of change. They actively influence the priorities of the higher education system, they provide resources and have networks of influential thinkers in higher education. By mobilising some of these resources, a change project can be enhanced by means of better visibility and resources. When engaging these associations, it is important to be aware that they require a clear plan and vision of the problem a hand before engaging in the change project.

- ***Leadership of Higher Education Institutions:*** Like their umbrella organisations, leaders of individual institutions can provide resources and expertise and can influence priorities. Usually there are specific structures within institutions to deal with educational matters, such as a vice-rector for academic affairs, a quality assurance unit or a professional development unit. In more decentralised institutions, they exist at faculty or departmental level. These structures are not easily mobilised, as they deal with many different initiatives at the same time and often change rather slowly. Having a clear plan and a scientific basis for argumentation will help to involve them in the change project.

TIP

Once you have gathered a number of people around the table, you can use Responsibility Charting to distribute tasks effectively. Here you try to map out who is involved in your project and what their role is in every stage or activity. You can assign four different roles to a person in each situation: Responsibility (R); Approval or Right to Veto (A-V); Support or Consult (S-C); or Inform (I). Be sure to assign a role to everyone for every activity!

- ***Employer Organisations:*** Business organisations play an increasingly important role in higher education governance. Although their knowledge on higher education is usually not very high, they usually know the problems of graduate employment quite well. Therefore, they are generally in favour of a more student-centred approach that is aimed at personal independence and more effective learning. They can provide expertise on employment issues, as well as resources for projects to which they see a clear beneficial outcome.

Example of Responsibility Charting for a Project Involving Four Actors

Actor	Responsibility	Approval or Veto	Support or Consult	Inform
Students' Union	R	V	·	·
Teachers' Union	R	V	·	·
Rectors' Conference	·	A	C	·
Minister	·	·	·	I

- ***The Media:*** The press is probably not very interested in writing about making higher education more student-centred. Nonetheless, different media can be important with respect to the public image of the higher education system. By publishing selected facts and examples of problems encountered by students in the system, arguments can be put forward publicly for need for more attention and resources to be assigned to SCL.

- ***Individuals:*** Experts, individual students, colleagues or friends can be useful to provide extra people as members of a change team. By gathering the right mix of participants, each with their own area of expertise, a team can be set up that is both motivated and capable in implementing change projects to lead towards the implementation of the SCL approach. For example, educational researchers working on the topic of SCL would be able to give evidence-based technical advice about implementing SCL in a manner suitable to the given institution's profile.

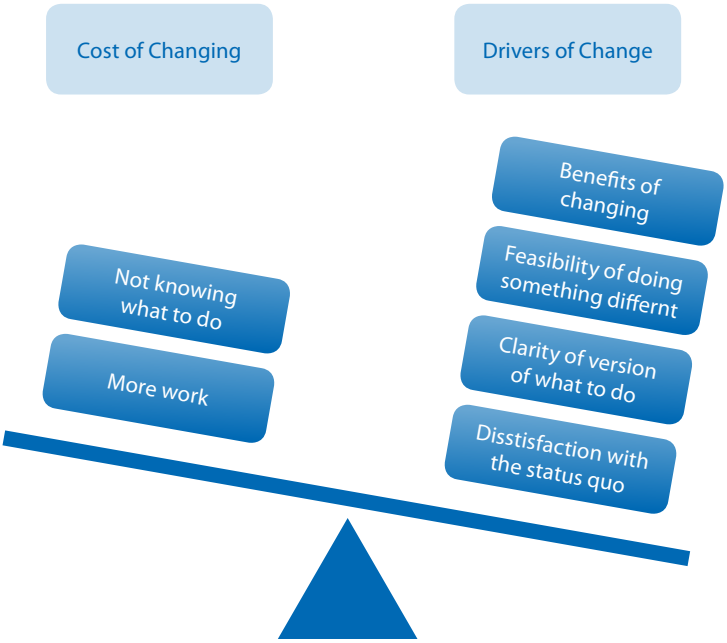
4.5 STEP THREE: IDENTIFYING THE DRIVERS FOR CHANGE

In order to convince people to change, it is important to know what motivates them. Therefore, it is necessary to identify >drivers<, >catalysts< or >incentives< for change. A lesson from theories about reform is that individuals need to see a benefit in changing. This benefit can take multiple forms (such as monetary rewards, quality improvement and higher motivation) and it needs to be identified explicitly. Benefits need to be integrated into concrete and explicit policy in order for them to become drivers for change. Following on the benefits of SCL identified above in Chapter 2, possible drivers for change could be:

R = (D × B × V × F) > C

Where:
R stands for Readiness for change;
D stands for Dissatisfaction with the status quo;
B stands for the perceived Benefits of the change for the actor;
V is the clarity of the shared Vision of what is possible;
F stands for the Feasibility of the steps to implement new ideas; and
C stands for the Costs of changing.

fig. 3 Filling in Gleicher's Formula can Expose the Problems of People who you think should Change!



- ***Personal incentives:*** For teachers, teaching becomes more enjoyable, interactive and rewarding if it is student-centred. For students, learning becomes more interesting if it is interactive;

- ***Educational incentives:*** Teaching can be more effective if it involves constructive learning. Students will be able to learn better in such an environment, making the time they spend in higher education more meaningful;

- ***Scholarship incentives:*** Research work can be integrated into teaching, producing a closer connection with the research activities of the teacher. For students, the link with the academic world and opportunities for an academic career will also improve; and

- ***Economic incentives:*** If academics improve their teaching, it may be possible for them to access higher levels of the career ladder. For students, higher-quality education may give access to higher-level jobs in the labour market

It is possible to assess whether or not people are ready to change. An adapted version of Gleicher's formula can be a useful tool. It is necessary to fill in the formula with respect to the main actors involved in a given reform and assess whether all the factors outweigh the costs of such change. If they do, the readiness to change will be positive. In this formula, factors D, B, V and C can be influenced in order to enhance the readiness for change.

Incentives to change are often already part of the culture in higher education institutions. Citation index scores, the academic career ladder or quality evaluation forms are just a few examples of the tools used by institutions to influence academics' behaviour. It is important to think about how these existing tools link in with, or work against, the aims of the planned change project.

4.6 STEP FOUR: STRATEGIES TO OVERCOME BARRIERS TO CHANGE

Identifying barriers to change is equally important to creating incentives. Negative attitudes towards change are probably the most problematic for reform. Reasons for such negative attitudes can be numerous and include past experience of having been asked to change in several different directions at the same time, or having experienced failed attempts at change. In any case, it is necessary to plan for a number of negative attitudes.

Barriers to change are usually diverse and may include:
Administrative hurdles;
Other priorities for higher education;
Lack of financial support;
Too centralised (or decentralised) decision-making;
Misunderstanding of the concept;
Negative attitudes towards the concept; and
A different understanding of the vision for the future.

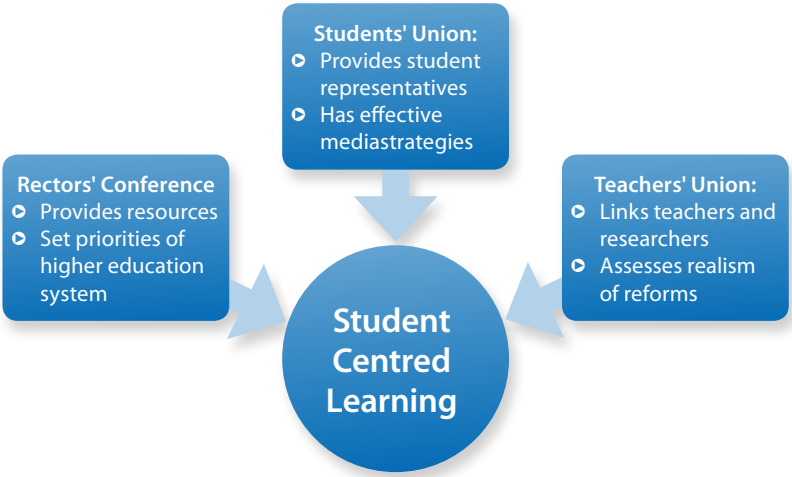
It is useful to identify different types of negative attitudes towards the planned change project, such as people who give constructive feedback, those who are pragmatically sceptical and those who outrightly resist any change plans. Different types of resistance can be tackled by means of different strategies. These may include informing people more, including them in decision-making, trying to build competence and confidence through training or trying to persuade them and negotiate with them to address their needs more directly.

Opposition to change can prove to be useful if it is mobilised towards a positive effect. If opposition is dealt with seriously, it will be useful in exposing negative aspects of the change plan, which can then be adapted accordingly. In any case, it is good to plan for the type of barriers that may arise as well as planning how such barriers could be dealt with along the way.

TIP

A Force Field Analysis can be a useful tool at this stage. This is a discussion tool with the aim of identifying different actors, listing all the different people and organisations that may have an influence and mapping their connections and levels of influence over the situation.

fig. 4 An example of a force-field analysis, using some of the actors presented above.



4.7 STEP FIVE: IMPLEMENTING THE CHANGE

At this stage, it is imperative to find and use the resources to deal with the problem. It is not in the scope of this toolkit to present ideas for fund-raising or to give general suggestions on project management. However, an abundance of literature exists on such issues, some of which can be found in Chapter 10 below, which lists sources for further reading. Many policy manuals also exist which show that plans can run into a number of difficulties. As the change project develops, the planning tools mentioned above and below can be used to recalibrate the change project when needed.

4.8 STEP SIX: EVALUATING THE IMPACT OF THE CHANGE

It is probably not so easy to evaluate the impact of a change project. Simple quantitative indicators such as the amount of people impacted, the amount of teachers trained or the number of positive results in student evaluation forms do not expose much about an actual change in students' experiences. Moreover, as students will probably not have experienced both the situation before and after the implementation of the change project, students themselves will also find it hard to judge the impact of the change after the implementation of Step Five. Standard evaluation models are therefore probably inadequate in assessing whether or not the change which led to the implementation of the SCL approach was successful. Luckily, quality assurance practices in higher education provide some tools to evaluate the impact of the change undertaken.

An integrated model of planning and evaluation is the so-called Plan-Do-Check-Act model or simply the PDCA model. The idea is that all these stages are explicitly integrated in the change project, making it possible to actually check whether what was planned has actually been achieved. In the ›check‹ phase, it is important to try to find out the differences between what was planned and the results achieved. In the ›act‹ phase, it is key to find out the reasons why planned results did not materialise and to try to apply the appropriate changes to the plans.

It is important to realise that the members of the team responsible for steering the change are in a position to evaluate the impact of the work themselves. This can be done by means of a self-evaluation which tries to answer a number of questions. These include the following:

- What were the aims of the change project and the methods in attempting to reach those aims?
- Have these methods been consistently applied?
- Were the resources for the change project adequate and have they been used responsibly?
- Have the different partners carried out their role in the change project to an adequate level?
- Have the different barriers been successfully overcome?
- Have any negative side-effects of the change project arisen?

In self-evaluation of a change project, team members could try to spell out their own experiences and opinions about the project. After this step, a set of methods can be used to see if assumptions about the effectiveness of the project were correct, such as by asking colleagues or students who have been affected by the project to judge the team's self-evaluation. Similarly students' unions, teachers' unions and the other actors mentioned above can be consulted about the impact of the change project. These organisations usually have a more historical overview over the system and might judge its impacts more broadly. It is most important to consult with those who are involved in the learning process itself as they will be better placed to judge the >student-centredness< of the system.

5 IMPLEMENTATION BY TEACHERS

5.1 INTRODUCTION

Learning is often presented in a juxtaposition of either student-centred or teacher-centred learning. In the reality of practice the situation is less black and white. A more useful presentation of SCL is to see it as a combination of the two which are presented as either ends of a continuum, using three concepts regularly used to describe SCL, as follows:

The Learning Continuum

Teacher-Centred Learning	↔	Student-Centred Learning
Low student choice	↔	High student choice
Passivity of students	↔	Activity of students
Teacher as holder of power	↔	Student empowerment

In examining how this might look in practice, it is worth thinking how far up the continuum teachers, in their individual approach, are able to move within the contextual barriers of their given situation. This includes a consideration of their subject-discipline, classroom size, institutional infrastructure and institutional traditions, among other things. Below are a few elements to be taken into consideration by teachers in higher education within their given classroom environment in order to help them to move up the continuum towards the implementation of the SCL approach, for the benefit of their students' learning experience.

Talk to me … and I will forget
Show me … and I will remember
Involve me … and I will understand
Step back … and I will act
Confucius

5.2 STUDENTS MOTIVATION AND TEACHERS' KNOWLEDGE OF STUDENTS

What are students' backgrounds?
What do they already know?
How did they learn in the past?
What brought them to your classroom?
What are their interests?
What are their aspirations?

Within the different roles that SCL envisages for both teachers and students, the key factor in implementing a new approach to learning is the motivation of students. Greater involvement with students by the teacher is central to this. Where students are motivated to come to an understanding of, and engage with, the material with which they are presented, they are more likely to adopt strategies that will lead to deeper levels of learning.

The following are examples of good practice and ideas for teachers to enhance student motivation:

- Including students in co-creating compelling courses;
- Exposing students to extremes of the subject-matter;
- Making students aware of the different career paths that may be available to them upon completion of their studies;
- Making students aware of the importance of what they are doing and its context in an applied situation which shows its value to others;
- Applying their own research to the learning experience of students, questioning used methods and asking for alternatives; and
- Inviting representatives from society with specific expertise and experiences regarding a field of study or inviting alumni to act as role models, connecting practical and learning experiences in their profession with experiences gained during their study.

By making practical experiences more explicit, students as well as professionals will be able to relate theory and knowledge and to share knowledge and skills.

In addition, there is a demonstrable link between students' previous experiences and their performance as learners. By tapping into this information, teachers would be in a better position to assist students by increasing relevance and thereby enriching students' understanding. Previous experiences influence students' views of learning, their motivation for learning and the way in which they approach learning. Teachers

can connect best with students, and vice versa, if they know a bit about who they are, their previous experiences and their understanding of the subject matter.

There are various ways in which teachers can get to know this information about their students. The following are a few examples:

- *In small groups:* Teachers can ask students to interview each other, asking why they chose the class, what they hope to get out of it and what they already know about the subject-matter. Each student can then introduce their interviewee to the rest if the class.

- *In larger lecture groups:* The teacher can try using small groups to briefly summarise each group's knowledge of the subject, sharing this with the whole class.

5.3 CHOICE OF TEACHING AND LEARNING METHODS

In SCL there is an emphasis on skills and competences which demonstrate responsibility for one's own learning, independence and cooperation, problem-solving, understanding and thinking for oneself. There are a number of strategies used in instruction in order to encourage this type of learning. These include:

- ***Making students more active in acquiring knowledge and skills:*** This can take the form of activities in class, fieldwork, and the use of computer-assisted learning packages, among others;

- ***Making students more aware of what they are doing and why they are doing it:*** This can be done by using learning logs, analytical presentations and the like;

- ***Focusing on interaction:*** Such as by the use of tutorials, buzz groups and larger discussion groups; and

- ***Focusing on transferable skills:*** Looking beyond the immediate course requirements to other benefits to students later on in their careers and in life.

TIP

Consider reducing the amount of contact hours, in order to have more SCL formats where possible.

Within the classroom, practical implementation of an SCL approach can include a number of components. The following are a few examples of these:

- Problem-based learning (PBL);
- Group project work;
- Student-centred active learning;
- Resource-based learning;
- Use of the case method;
- Role plays;
- Classroom workshops;
- Group presentations;
- Use of a web-conferencing environment, particularly in distance education; and
- Use of learning logs for students to record their educational experience.

Small group work, often used in PBL, enables students to learn how to work in a team, in the process of which they identify and fill the gaps in their knowledge. This is an effective method of learning as it activates prior knowledge, enhancing learning particularly where the problem-based approach is applied in a relevant context (e.g. with medical students in a hospital).

Whatever the teaching method used, the most important is to ensure an ACTIVE role for the learner.

Building on the above, the following table provides a sample of SCL teaching methods. It contains some ideas for teachers both within and outside the classroom.

What teachers need to keep in mind when opting for one SCL teaching method over another is the audience that they have—the student groups that they have to deal with. Not all students are motivated to learn in the same way, so that different stimuli or a combination of them may be necessary in different cases.

Learning methods

Inside the Lecture Format	Outside the Lecture Format
Buzz groups (short discussion in twos) Snowballing (turning buzz groups into larger groups) Cross-overs (mixing students into groups) Use of tutorial groups Rounds (giving turns to individual students to talk) Quizzes Writing reflections on learning (duration of 3-4 minutes) Student presentations Poster presentations Role play Students producing mind-maps	Independent projects Group discussion Peer mentoring of other students Team work Debates Field-trips Practicals Reflective diaries, learning logs Computer-assisted learning Writing media articles Portfolio development

5.4 CHOICE OF STUDENT ASSESSMENT METHODS

Student assessment is one of the most important elements of higher education. The outcomes of assessment have a profound effect on students' future careers. It is therefore important that assessment is carried out professionally at all times and that it takes into account the extensive knowledge which exists about testing and examination processes.

Learning contracts are goals set by the student depending on their learning gaps, which are in turn negotiated with the teacher in terms of what to study and how to be assessed.

Within the SCL approach, there arise a number of difficulties with respect to the concept of student assessment. This is because assessment typically compares students with one another, thus highlighting competition rather than personal improvement. This is particularly the case with summative modes of student assessment, in which the giving of marks and grades is typically over-emphasised, while the giving of advice and the learning function are under-emphasised.

Student assessment practices need to reflect, encourage and reward the SCL approach. Teachers need to be aware of any discrepancies between what they are asking students and what they really want them to know.

This does not mean that student assessment is incongruent with the SCL approach. Rather, it needs to be tailored to reflect the philosophy and goals of SCL. In SCL, in the same way that teaching methodologies used need to be designed to give feedback to students on the learning process in view of the desired learning outcomes, the best forms of assessment need to be aligned with set learning goals. Thus forms of assessment need to be used that show evidence of student achievement of the set learning outcomes. Otherwise students will not take such goals seriously. In addition, students should be clearly informed about the assessment strategy being used for their programme, what examinations or other assessment methods they will be subjected to, what will be expected of them and the criteria that will be applied to the assessment of their performance.

Examples of Good Practice in Terms of Assessment Methods Compatible with the SCL Approach include:

- ***Formative Assessment:*** As opposed to summative assessment, this emphasises the need to give feedback to students on their learning thus making students' learning experience more authentic and providing a focus for students by highlighting their learning gaps and areas that they can develop. This can take a number of forms including: diaries, logs and journals, portfolios, peer- or self-assessment, learning contracts and negotiated assessment, projects, group work, profiling and identification of own skills and competencies.

- ***Criterion-Referenced Assessment:*** This measures students against the learning criteria in their course, unlike norm-based assessment which measures students against other students. One of the benefits of this type of assessment is that both teachers and students can more easily see where students are succeeding and where they are not. This can be invaluable in improving the course for future students.

- Peer- and self-assessment both give responsibility back to the student, emphasising an increased sense of autonomy in the learner. In setting questions in any form of assessment, the focus should be on the why and how rather than simply on factual information.

- In order to assess learning outcomes which are not reliant on short-term memorising, a range of assessment methods can be used by teachers with clear objectives in mind. The following table indicates a few examples which can be used:

Possible Assessment Methods and their Objectives

Source: University of Adelaide, 2000

Assessment	Example of Objectives	Assessment	Example of Objectives
Take-home essay or assignment	◔ Prepare arguments and analysis ◔ Seek relevant information ◔ Organise effective presentation ◔ Integrate ideas or theories ◔ Express ideas in an appropriate manner	*Coursework (continuous assessment)*	◔ Maintain appropriate motivation ◔ Participate in classwork ◔ Develop techniques in line with course goals ◔ Sustain interest or energy ◔ Relate different tasks to each other
Open-book examination	◔ Retrieve information and ideas from sources ◔ Reference material adequately ◔ Apply information to relevant situations ◔ Remember key ideas or structures	*Simulated tasks*	◔ Show appropriate attitudes ◔ Interact with others in applying knowledge or experience ◔ Analyse or synthesise ideas ◔ Display creativity or imagination
Assignments proposed by students	◔ Show knowledge of course aims ◔ Display understanding of course structure and materials ◔ Display understanding of key issues	*Group projects*	◔ Cooperate ◔ Benefit from ›real life‹ situations ◔ Evaluate personal skills ◔ Integrate with other views or models
Oral communication	◔ Cope with questions and arguments ◔ Show reasoning behind statements or ideas ◔ Interact with others ◔ Use general /technical language in an appropriate manner ◔ Express ideas fluently	*Project work*	◔ Seek information ◔ Reason ◔ Plan study in appropriate depth ◔ Organise information for special purposes ◔ Present ideas ◔ Be original ◔ Sustain appropriate motivation

- Choice is one of the key terms in the SCL approach. In assessment, choice is in relation to the criteria and standards to be used, the judgements that are made and by whom such judgements are made. It is not easy for teachers to actually provide students with autonomy and decision-making influence in an area such as assessment, especially in view of the manner in which assessment has traditionally taken place. The following are a few ideas of how this can be done, with respect to two key stages—when the task is set and after the task is completed.

Areas for Involving Students in Assessment

Areas for involving students when the task is set	Areas for involving students after the task is completed
○ Choosing the assessment task ○ Setting the assessment task ○ Discussing the assessment criteria ○ Setting the assessment criteria	○ Making self-assessment comments ○ Making peer-assessment feedback comments ○ Suggesting self-assessment grades/marks ○ Negotiating self-assessment grades/marks ○ Assigning self-assessment grades/marks ○ Assigning peer-assessment grades/marks

Teachers might consider moving assessment practices slightly up the teacher/student-centred continuum with small but significant changes, for instance by providing a choice of essay topics and exam questions as a manageable starting point. It is important to remember that as long as learners are properly prepared for assessment, they will adjust to various forms of use.

5.5 USING COURSE EVALUATION IN SCL

In addressing the quality of the learning experience at the course or programme component level, the basic question to be answered in evaluation is: Do programmes ensure that students achieve the intended learning outcomes of the course or programme component?

Q *What is Effective Evaluation?*
A Ensuring that the course or programme component enables students to achieve the intended learning outcomes.

Course evaluation can fall within two broad categories (cf. University of Adelaide, 2000):

Outcome Evaluation: This looks at the qualities a course instils in students. In this type of evaluation, teachers might want to find out any of the following:

- Did my students acquire the knowledge goals I set for them?
- Are they better critical thinkers than when they began?
- Are they better at problem-setting and solving than my previous students taught in a similar manner?

Process Evaluation: This considers what happens during the learning/teaching process and examines the course in operation. This evaluation depends on what the teacher aims to do. It may involve the following questions:

- *Did I give my students the incentive (through assessment and structure) to develop their own independent learning?*
- *Did the activities I offered really get my students involved?*
- *Could the students generalise their subject-knowledge to aspects of the non-academic world?*
- *Was I an effective communicator?*

TIP In outcome evaluation, baseline measures are needed. E.g. To find out if graduates have better problem-solving skills in their post-university lives, teachers will need to know the current problem-solving skill levels of graduates.

TIP Try not to evaluate too much at one time. It is better to evaluate a few carefully selected and manageable aspects of the course.

It is important for teachers to choose the most appropriate strategy of evaluation for each of their courses. There are a number of sources of information which may be available for an evaluation. These include (cf. ibid):

- *Learners:* For information on implementation and teaching quality;
- *Observers:* For descriptions of class process;
- *Professional Associations:* For comparative data pegged to agreed standards;
- *Employers:* For information on satisfaction with graduate skills;
- *Course Materials:* For information on teaching plans and philosophies;
- *Graduates:* For perceptions about relevance of the course to the world of work; and
- *Assessment Results:* For information on whether learning outcomes have been achieved.

Different methods are available to gather information from these sources, including questionnaires, interviews, learning logs/diaries, discussion, comments (un/solicited), observation, feedback sections on web-pages and results of student work.

In particular, in assessing the quality of the learning experience, learners can be asked to give their opinion about a variety of matters, including:

- Lectures and teachers;
- Textbooks used;
- Technical aids available;
- Student workload;
- Learning activities;
- Time used by the learner for different activities;

TIP

While questionnaires are helpful, they are not the only way of obtaining student feedback;
Simple questions to students or open class discussions of the course content and methods could prove to be more useful than questionnaires;
Collecting feedback from students needs to have a clear purpose—including reacting to such feedback and following it up.

- Course content and any overlap with other courses;
- Perceptions regarding transferable skills attained;
- Room for discussion available during the course or programme component;
- Adequacy of assessment methods used; and
- Perceptions regarding whether intended learning outcomes have been attained.

5.6 USING INFORMATION TECHNOLOGY TO ENHANCE SCL

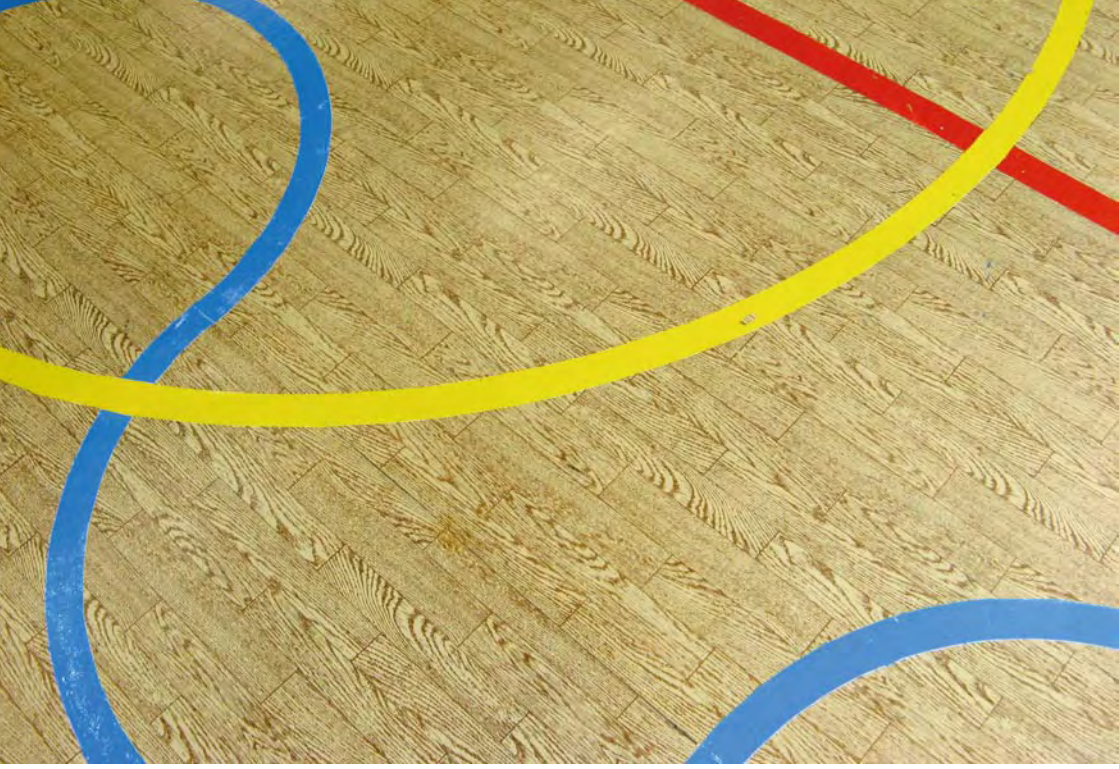
As methods of teaching and learning develop over time, so do the ways in which knowledge is imparted and the tools that students use to learn. This is attested in the rise of online and distance education and in the everyday day use of computers, the internet and online interactive spaces in teaching and learning as well as in the advanced information management systems that a large number of institutions use.

TIP

It is important for teachers to be able to impart to students the need for an adequate balance in the use of internet resources outside the classroom—helping students to identify the hierarchy between different resources and to use them adequately in their learning process.

In applying SCL, possible approaches as to the use of information technology include:

- The use of e-mail (electronic mail) which enhances SCL as an active rather than a passive medium, allowing for a combination of distance and on-campus learning in flexible mixtures and helping to build user feedback, staff monitoring and course revision in the process of running the course;
- The use of (wireless) internet within the classroom which can improve collaboration and communication among classmates and teachers and make the class more active and interesting;
- The use of internet outside the classroom, enabling learning to occur in places where it normally does not, extending information to places where it is not usually available, expanding the learning day and opening the learning



place. It helps students find information from a variety of sources, adapting to their personal learning styles and supporting critical thinking.

The infrastructure necessary for students to engage in some form of interaction with teachers, study groups and librarians, leading to the mastery of subject content, includes all forms of media, whether digitised, print or multimedia. Information Technology therefore can be of use both inside the classroom to help teachers in creating an interactive classroom environment, as well as outside the classroom, in order to enhance students' learning processes and complement what is learnt in a classroom setting. This can empower students to access information and analyse it critically in their own time and space. It can also prove to be a highly useful component in designing professional development programmes.

TIP

It is important that teachers use IT tools in the classroom in such a way that is truly interactive and not simply passive. E.g. the use of power-point presentations can risk being a passive tool if not used adequately.

6 IMPLEMENTATION BY INSTITUTIONS

6.1 INTRODUCTION

The concept of SCL extends far beyond the classroom, making it pertinent to examine how SCL can be implemented in practice in terms of a wider institutional approach, with the aim of creating powerful learning environments in the philosophical, pedagogical, practical, organisational and infrastructural sense. In this respect, the role of higher education institutions is to stimulate the SCL approach by providing the right environment in which SCL can be nurtured over time. In implementing SCL, the principles mentioned in the Chapter 1 need to be kept in mind. In particular both the subjectivity of SCL as well as the diversity between different institutions is key to understanding that there is no *one-size-fits-all* method to implementing SCL, particularly at the institutional level. A variety of areas are examined below in relation to what *can* be done, rather than what *should* be done, in the form of a portrayal of *good* practice in the implementation of SCL. In particular, it is important to keep in mind that while we may be completely unaware of any SCL practice in our institutions this does not mean that SCL is not present within the daily work of academics.

»I never teach my pupils; I only attempt to provide the conditions in which they can learn.«
Einstein

6.2 CURRICULUM DESIGN AND THE USE OF LEARNING OUTCOMES

One of the key foci of any given institution is curriculum design, as the main cog around which the teaching mission of any institution is centred. Curricular design is central both to the organisation of learning and to the methods by which teaching can take place in order to enhance learning. It is important to keep in mind, at all times, that SCL *incorporates the idea that students have a choice in what to study and how to study*. The use of credits (in Europe primarily by means of the European Credit Transfer System—ECTS—across the European Higher Education Area) and by means of modularisation provide an institutional structure that allows students an element of choice in what to study.

A growing practice in course design is that of writing *learning outcomes* focusing on what the student will be able to do, rather than on the content being covered by the

teacher. This practice is an indication of the move towards SCL in curricula and helps to shift the emphasis onto the learner. This is an emphasis on process and competence, rather than on subject content.

An institutional policy for the *identification, use and communication of learning outcomes* by all teachers and across all courses is beneficial to the institution as it helps to ensure that there is a focus on the needs of students across all courses at the early stage of curriculum design, thus holistically enhancing the institution's teaching mission. Additionally, *it is important for learning outcomes to be specifically assessed and that feedback is provided to students* in a way that shows students the importance of the learning process undertaken by them.

Students' work needs to show how well students go about processes such as critiquing what they read, making models, solving problems, writing academically, applying principles and thinking about concepts.

It is be helpful for institutions to set a structure in which learning outcomes are written. One way of doing so is by setting up a framework in which the *knowledge, skills* and *competences* to be acquired by the end of any given course are made explicit. In this respect:

- >*Knowledge*< refers to subject content, such as mathematical formulae, chemical reactions, historical events, theories, models in existence, etc.
- >*Skills*< refers to abilities, such as interview skills, team-leadership skills, etc.; and
- >*Competences*< refers to the thought processes involved in deploying skills such as critical thinking, active listening, a proactive attitude towards learning, respect for the opinion of others, etc.

Learning outcomes statements are typically characterised by the use of active verbs expressing knowledge, comprehension, application, analysis, synthesis, evaluation and the like. It is important for learning outcomes to be written in a way that describes what the student will be able to do and will know as a result of their experiences, while enabling learning to be assessed. According the *ECTS Guide* (European Commission, 2009) two approaches exist

Learning Outcomes

- Enable students to understand what is expected of them and what they have achieved;
- Are to define the essential material (core) in a unit or module;
- Should define the totality of the material that the learner will know or be able to do on completing the unit; and
- Define what can be assessed by whatever means.

with respect to incorporating assessment into learning outcomes, these being:

- By writing learning outcomes as threshold statements, showing the minimum requirements to obtain a pass; or
- By writing learning outcomes as reference points describing the typical expected level of achievement of successful learners.

TIP

Writing Learning Outcomes:
Learning Outcomes should be *clear, positive, ›can do‹ statements* and should:

- Contain a single verb;
- Contain verbs that are active and unambiguous;
- Contain verbs which are used to encourage deeper understanding by students. These include *reflect, hypothesise, relate, argue, theorise, explain, analyse.*

The number of learning outcomes should be limited!

Statements of learning outcomes should therefore always be accompanied by clear and appropriate assessment criteria for the successful completion of a course or other programme component, which make it possible to ascertain whether the learner has acquired the desired knowledge, skills and competences. In addition, they should also clearly indicate which approach, from the above two, is being used.

Example 1: A First Year Level/10 Credit Unit in Biological Chemistry

On completion of the Course the learner will be able to:

- Give examples of biocatalysis;
- Give examples of chemical nomenclature in complicated structures;
- Identify organic reactions in biochemical systems;
- Interpret the mechanisms in natural polymerisation; and
- Associate biological reactivity with structure.

Example 2: Similar Course, Second Year Level

On completion of the Course the learner will be able to:

- *Apply* chemical nomenclature to complicated structures;
- *Classify* organic reactions in biochemical systems;
- *Distinguish* the mechanisms in natural polymerisation; and
- *Deduce* biological reactivity from structure.

Note: The change in the use of verbs indicates that the second year course credits correspond to more advanced outcomes than the course at first year level.

Source: Presentation by George Francis; t4scl Launch Conference, Romania; May 2010

6.3 INTERNAL QUALITY PROGRAMME EVALUATION OF ASSESSMENT PRACTISE

Within internal programme quality evaluation, at system level, the institution needs to ensure that there is a *strong focus on the quality of assessment practices*, with importance being given to the achieved learning outcomes of the student when compared to the intended learning outcomes as written at the point of curricular design. While the choice of student assessment methods is a key component of the considerations to be made by the teacher in applying the SCL approach, as seen above, it is also a central aspect of learning outcomes designed for a given course or programme component.

Students should be assessed using published criteria, regulations and procedures which are applied consistently. ESG

At the institutional level, in view of the need to interlink learning outcomes and assessment, it is useful to keep the following considerations in mind:

- Assessment must be aimed at showing achievement of specific learning outcomes;
- Assessment should be undertaken within a holistic framework that does not override the achievement of other, non-explicit outcomes;
- Assessment should be designed to ensure that appropriate links are made between the assessment of a course or programme component and the overall learning outcomes of the programme; and
- Emphasis needs to be placed on the careful use of assessment methods, in particular in terms of their validity and reliability.

The *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG) (ENQA, 2005) adopted by Ministers responsible for Higher Education under the auspices of the Bologna Process in 2005 are very explicit with respect to the need for published procedures which are to be applied consistently.

The ESG (Standard 1.3) are useful to support institutions' efforts to assure the quality of their assessment processes. In this respect, the ESG refer to the need for student assessment procedures to:

- Be designed to measure the achievement of the intended learning outcomes and other programme objectives;

- Be appropriate for their purpose, whether diagnostic, formative or summative;
- Have clear and published criteria for marking;
- Be undertaken by people who understand the role of assessment in the progression of students towards the achievement of the knowledge and skills associated with their intended qualification;
- Where possible, not rely on the judgments of single examiners;
- Take into account all the possible consequences of examination regulations;

Principles to Ensure the Quality of Student Assessment
Source: ENQA, 2009

Comparability and Consistency	Employing *assessment strategies and procedures* which: Focus on learning outcomes; Are applied equitably and constituently across disciplines and the institution; and Allow for comparability.
Accountability	All individuals and committees involved in assessment need to be aware of, and act in accordance with, their specific and identifiable responsibilities.
Transparency	This involves the following components: Making the *assessment strategy* used for a programme clear and easily available to all staff and students involved; Informing students on the form and extent of assessment they will be subject to and what will be expected of them; and Making the criteria used available to all staff and students involved and relevant to the programme's learning outcomes.
Involvement	All staff involved in the delivery of a programme or its parts need to be involved in the design and implementation of the overall assessment strategy and students must have the opportunity to offer their views on the amount and type of assessments they undertake and whether they are regarded as both ›fair‹ and ›effective‹ measures of their learning and abilities.

- Be subjected to clear regulations covering student absence, illness and other mitigating circumstances;
- Be conducted securely in accordance with the institution's stated procedures; and
- Be subjected to administrative verification checks to ensure the accuracy of their implementation.

It is recommended that institutions, in implementing assessment practices, ensure that these are:

- Carefully designed and proportionate;
- Reviewed on a regular basis, including feedback from students;
- An integral part of, and a contributor to, the teaching process;
- Focused on identified learning outcomes;
- Based on objective criteria made available to all staff and students involved; and
- Subject to quality assurance at programme and institutional levels.

The table below outlines four overarching principles which are recommended for consideration by institutions in their efforts to assure the quality of student assessment.

A clear understanding of the terms assessment, standards and quality and learning outcomes needs to be present within a given institution.

Particularly in relation to accountability and comparability, at the institutional level, it is important that faculty-level reports are reviewed against reports of the institution's external examiners where these are available or against other institutional or national indicators.

It is paramount that institutions undertake reviews of assessment practices in order to ensure that the impact of learning environments is recognised. This is particularly pertinent in trying to implement the SCL approach, being that the choice of mode of assessment can directly reflect whether the learning approach is one that is more student- or more teacher-centred. Indeed, quality assurance at the programme level, with a focus on assessment, provides valuable information for institutions about the effectiveness of learner support.

6.4 ONGOING PROFESSIONAL DEVELOPMENT OF ACADEMIC STAFF

The ongoing development of the SCL approach within any given institution is largely determined by professional development of higher education teaching staff, as further examined in the following chapter of this toolkit. Teachers need guidance to enable them to actively use the concepts of SCL in their own development or in course development, which could further improve their teaching. Successful professional development models use SCL approaches in and of themselves in order to train teachers in higher education in using the SCL approach. The philosophy and methods used in SCL thus are to feature as a key aspect of the learning process for teaching staff, who, in a manner of learning by doing, are encouraged to develop their own SCL approaches which are to be used in their own instruction. Such programmes of professional development are to be used both with new teachers and with teachers who are more experienced, thus reinforcing the idea that SCL is an approach which requires continuous change, effort, reflection and updating.

6.5 USING INFORMATION SYSTEMS TO SUPPORT SCL

The out-of-classroom setting is of central importance in enhancing SCL, which setting is largely dependent on the use of information systems and technologies. The use of information literacy technologies such as e-portals via which access to information is central in this respect as a measure to help learners to master content and extend their investigation, become more self-directed, and assume greater control over their own learning. It is the role of institutions to provide the infrastructure for such online learning spaces.

Technology-rich online environments which, in practice, serve as a physical space for student collaboration, discovery and innovation support the learning that takes place inside the classroom. In addition, they offer a number of virtual services by making assistance, courses and resources available online and at all times. For learning to be extended beyond the physical confines of the classroom, and for such learning to continue to be student-centred, whether the learner is the presence of a teacher or otherwise, it is necessary *to create an inviting out-of-classroom environment for active learning, growth and enrichment through student-focused research assistance, outreach to all students and innovative instructional services* which enable students to work at their own pace.

6.6 THE CENTRAL ROLE OF LIBRARIES IN SCL

The above leads us to consider the *crucial role of libraries* in SCL, as the main place where information is kept, accessed and disseminated. In this respect, libraries are expected to continuously adapt for them to maintain a central role within the teaching and learning environment. Librarians are also expected to play various roles in furthering the aims of SCL.

The role of libraries and librarians, via the use of technology, are part and parcel of the process of SCL in four key areas, as follows:

- ***Providing Information Resources:*** In such a way that the library's traditional role of selection, organisation, storage and retrieval of information becomes more crucial as such information needs to be made available in off-campus sites;

- ***Fostering Partnerships and Collaboration:*** In such a way that librarians collaborate more with personnel from other departments within their institution, including teachers, in planning curricula and lessons, as well as other staff employed to deliver the computing services within their institution. This is with the aim of enabling librarians to help teaching staff in using technology in innovative ways across the curriculum, in selecting appropriate technology resources and in collaborating with the learning community to plan, design, implement and continually refine an effective student-centred technology plan. This is also aimed at enabling librarians to help students evaluate the sources available to them and to help computing staff understand students' needs in the design and implementation of ITC-based student support systems;

This particular use of technology, within the wider approach to SCL, can help to improve the retention rate of students at a given institution, attesting to the idea that students consider an SCL approach to be more worth their while.

- D***eveloping Students' Information Literacy Skills together with Members of Teaching Staff:*** This is in order to ensure that students know when they need to find information, identify the information relevant to addressing their problem and find, evaluate, organise and use the information effectively in addressing the problem they are faced with. For this purpose, librarians themselves need to be equipped with the skills to deal with diverse student needs and technological usage in order to maintain the principle of equal access to information; and

- ***Developing Outreach Programmes:*** In order to ensure that information can be accessed outside the physical walls of the library building, in order to be able to accommodate varied student and teacher needs.

Institutions therefore need to ensure that modern technologies are manipulated and used intelligently not only by teachers but also by librarians and all staff connected to the students' learning environment in such a way so as to provide multiple places and spaces for learning for students with the highest possible degree of access to information and of interaction with others.

6.7 PROMOTING A NATIONAL POLICY AND CULTURE OF SCL

While the above focuses highly on creating the ideal environment for SCL directly in relation to enabling learning on and off campus, promoting the SCL approach at the institutional level also depends highly on the context in which a given institution operates. Thus beyond the physical or virtual walls of an institution, it is important for institutional leaders to garner the support of the organisations within their given country or region, which include political, educational, economic or social organisations. In this respect, institutions need to urge Ministries of education to take a leadership role by emphasising a unified philosophy of education which is student-centred, with a view to solidifying a well-defined policy of SCL.

It is therefore important to realise that, as a necessary condition, in any context and in any continental, historical or geographical setting, *national or regional policy, whichever is the most applicable, is key*. With this in mind, it must be cautioned that any student-centred approach needs to be clearly and simply articulated and mechanisms need to be in place to allow for every stakeholder in the educational process to be fully informed about the processes arising from such an educational approach. Thus, institutions need to develop, in line with a national or regional policy, as the case may be, a sense of belonging to the wider applicable policy on SCL, if the application of the student-centred approach is to be applied with any measure of success, particularly in the quest to motivate students and to apply innovative methods to stimulate learning.

7 MAINTAINING A CULTURE OF SCL

7.1 INTRODUCTION

As the need for regular and system review of assessment practices within a given institution attests, beyond any requirement of change or first-time implementation of a widespread institutional SCL approach, SCL is a culture that has to be maintained across an institution in an ongoing manner, so as to truly create an SCL approach that is genuine, reflexive and open to development and improvement. SCL implementation in an ongoing activity. Organisational reflection and development needs to take place constantly within each given institution with the members of its community in order for any SCL system to remain sustainable.

7.2 CONSEQUENCES OF AN UN-NURTURED LEARNING APPROACH

An example of implementation of problem-based learning (PBL) at Maastricht University over a span of three decades (cf. Moust et al, 2005) highlights the need to revitalise the learning process after the passage of a period of time, in order to effect educational innovations of a more solid basis. The Maastricht University example shows how PBL, referred to above as one of the teaching methods used in SCL and applied at Maastricht University since its establishment in 1976, eroded over a thirty-year period due to a number of changes which either occurred by coincidence, creeping in erroneously and becoming stabilised afterwards, or by conscious decisions made by faculty officials. These changes included:

- ***Changes connected to processing of information by students in the tutorial group.*** These crept in over time and negatively affected the learning process, resulting in a watered-down process of running tutorial groups. This manifested itself in: a drop in the time of self-study; minimalist preparation by students for the tutorial group; elimination of the brainstorming and elaboration phases originally designed for tutorial groups; a deterioration of the synthesis and integration phase originally designed, reducing it to a short report on minor issues; and a decrease in student interest and the quest for learning, manifested in students' attempt to study the same sources, among others;

- ***Changes due to inadequate student-staff ratios in a faculty.*** These changes were a direct consequence of financial constraints related to national funding considerations and manifested themselves by an increase in the number of students in tutorial groups and the contracting of advanced students to guide tutorial groups once or several times per year; and

- ***Changes caused by the exaggerated fears of teachers that the subject-matter was not being sufficiently covered.*** These changes occurred because some members of staff did not believe that the students were able to cover a sufficient amount of subject-matter through independent, self-directed learning, trying to steer their students' activities in various ways. This manifested itself in: teachers giving students specific sources rather than a long list of learning resources; making tutor guides for tutors more subject-matter oriented rather than process oriented; gradually ignoring the analysis and synthesis part of the tutorial, thus posing less of a challenge to students' thinking processes; and the erosion of the role of the lecture, which was originally intended to be delivered after students had totally immersed themselves in a given area.

The Maastricht University experience shows that the lack of funding, poor understanding of underlying principles by both staff and students, misguided attempts to make the approach more efficient and a focus on content at the expense of process all contribute to the erosion of a set of intertwined principles that make the PBL method work. Often subtle changes, taken together, could lead to the collapse of the application of such an innovative teaching method over time, as staff and students could become dissatisfied with an inconsistent and failing educational framework.

7.3 IDEAS TO CONSTANTLY IMPROVING THE SCL APPROACH

The changes referred to above show how the PBL approach, which represented the pillar of the learning process at Maastricht University, eroded over time. They also attest the need for an SCL culture (or any other given learning culture) to be nurtured and developed for the benefit of learners, via:

- *Organisation* *Monitoring*
- *Consistency* *Regular Review* and
- *Transparency* *Renewal*
- *Promotion* … at all levels and in all places within an HEI.

Pursuing a path of continued renewal is the ideal measure to fight waning interest and lack of adherence to the learning approach employed in a given institution.

Building on the experience of Moust et al (2005) and of Kember (2008), who examined the implementation of SCL across an entire university, some measures by which institutions can counteract erosion in the application of the SCL approach and revitalise their programmes are put forward below:

- ***Addressing Teachers' Concerns in Implementing Educational Innovation:*** By investing time and money in professional development programmes which help teachers understand and apply ideas, skills and attitudes about innovative teaching methods. It is of paramount importance that teachers be trained to discuss and identify solutions to problems in teaching and learning whilst undertaking an SCL approach in their learning as well;

- ***Stimulating Good Practice in Teaching Activities:*** By recognising the efforts of teachers who steer the SCL approach forward, awarding exemplary teaching and giving the opportunity to such awardees to systematically share good learning practices;

- ***Building Learning Communities:*** By splitting new students into groups which regularly meet each other in tutorial groups, guided by a fixed group of teachers, making the lines of feedback shorter and more visible and enabling teachers and students to discuss the way in which information has been processed and the advantages and disadvantages of activities offered, enabling the setting up of special activities of interest for the given learning community;

- I***nforming Students More about the Ideas underlying SCL:*** by giving students initial training in SCL skills (e.g. working in groups, chairing a meeting, giving feedback, giving a presentation) and confronting students on a regular basis with theoretical ideas that underlie SCL, aimed at helping students to understand the >why< of this approach to education;

- ***Helping Students more Extensively to become Self-Directed Learners:*** By equipping teachers and students with a clear conceptual framework to guide them to ensure that the goals of self-directed and independent learning are understood and interpreted in a more consistent way, thus helping to achieve the goals that SCL intends to achieve. In this respect, teachers can have considerable influence on the development of students as self-directed learners, helping them to gradually master cognitive and regulative learning skills to become independent and lifelong learners;

- ***Offering Students more Variety in Educational Formats within the Context of an SCL Environment:*** By offering them an array of teaching methods, thus giving them various opportunities to enhance their competences and learning skills in various collaborative environments and by allowing them to experience different self-directed learning activities;

- ***Developing Computer-Supported SCL Environments:*** By using multimedia to provide a richer learning environment, facilitating more authentic assessment and individualising practice, feedback and reflection;

- ***Adopting New Forms of Assessment:*** By adopting innovative forms of assessment which move away from simple paper-and-pencil tests to more stimulating forms such as portfolios, peer- and self-assessment, and assessment of performance skills in a tutorial group; and

- ***Adopting and Improving Processes of Programme Quality Review:*** Whereby student evaluation is a key component and programme teams produce a self-evaluation report which address programme management, quality assurance, desired learning outcomes, content, learning activities, student assessment and professional development of teachers, with related statements expected to be backed by evidence.

It is important to keep in mind that the above are proposed ideas that need to be applied to the extent to which their context requires, which context includes considerations of diversities in the student body and teaching corps as well as in the national context and institutional history.

7.4 PROFESSIONAL DEVELOPMENT OF TEACHING STAFF

Although one may assume that the role of the teacher becomes easier in the SCL approach as the focus shifts onto the student, this cannot be further from the truth. The role of the teacher is crucial in implementing the SCL approach and in equipping students with a clear understanding of this learning approach. Furthermore SCL moves away from the concept of a teacher as a *lecturer* and envisages a more intense role for the teacher.

The role of the teacher is not only to communicate knowledge, but to act as initiator, frame-builder and consultant.

It is specifically due to such a central role of the teacher that, from all of the suggestions put forward in the previous section, professional development is the main indispensable component of maintaining an SCL culture which enhances the learning experience of students and truly helps them to achieve the intended learning outcomes of a given course or programme component.

When referring to the high pedagogic effort required of teachers in an institution in which SCL is applied, it is important to view the necessity of pedagogic development of teachers as complementary to the self-directed learning of students which is contemplated in SCL. It is interesting to examine ways in which such professional development efforts have been undertaken within institutions, in order to both foster and maintain a true culture of SCL.

Professional development of teachers should be included as an important part of the scholarship of teaching and run in parallel to the active SCL approach used for students to enable life-long learning among teachers as well.

The following are a few elements of good practice in professional development programmes for teaching staff (cf. Kember, 2008; Lavoie et al, 2007) which can be tried and tested by institutions, mindful of the context in which they are being applied:

- ***Using an Interactive SCL Approach in Professional Development Programmes:*** Participants of such courses become students in this process and learn how to design courses that promote active SCL and information literacy in the classes that they teach. In this way teachers, learn how to work towards effective student-centred learning over efficient teaching, to ground information literacy contextually rather than to offer general bibliographic instruction and to use inclusive multiple styles of learning over exclusive pedagogy;

- The SCL approach in teacher training involves an ongoing reflexive process for teachers in which they are engaged in thinking about their thinking in order to improve their pedagogy and delineating how they teach.

- ***Focusing Teachers' Knowledge about the use of Technological Tools in Learning:*** Where participants learn about using technology in a manner which is relevant to their subject-discipline and to their students, rather than in a random manner;

- ***Using Constructive Criticism to Improve the Teaching Process:*** Where teachers are not only given the opportunity to develop their own approaches to learning in their respective courses but are also given the space to provide constructive criticism to their peers and share their experiences in a dialogue as a community of scholars;

- ***Focusing on Problem-Solving:*** Where participants are asked to identify problems they have encountered in their teaching which are then discussed in order to identify potential strategies to overcome them.

- Learning by doing in professional development programmes respects the academic freedom of teachers to critically evaluate which practical mode of teaching would be better. This mirrors the freedom and the concomitant responsibility of any student engaged in a learning process which is student-centred.

- ***Applying Ideas and Teaching Methods in Practice:*** This can be applied by means of a group project which allows participants to try out and experience forms of interactive teaching in a supportive environment.

7.5 PROFESSIONAL DEVELOPMENT AND WORKING CONDITIONS

At the launching conference of the T4SCL Project, one of the workshops specifically addressed the issue of professional development and working conditions of teachers in higher education. During this workshop it emerged that, apart from constraints that may be related to financial and human resources within institutions to carry out professional development programmes for teaching staff, there may be further barriers to setting up such professional development programmes. These include the following:

- ***Teachers' Resistance to Taking Up such Training:*** This may be due to a higher interest in research than in teaching, an excessively high workload or the lack of realisation of the need for upgrading their pedagogic skills, among other reasons;

- ***Lack of Awareness by Governance Structures of the Need for Teacher Training:*** There is a high risk of this where governance structures are not representative. In such cases, the system may not fully appreciate that teachers need the necessary support to teach in the same way that students need the necessary support to learn.

TIP

Start with those who are willing and then gradually increase the coverage of professional development programmes over time.

While there may be resistance to such professional development programmes from some teachers, it is of paramount importance to work with those who are willing to develop their skills to enhance the SCL approach. This will also help the institution to test the pedagogical methods used in such courses and fine-tune them over time, in order to constantly improve this service for teachers.

It is important to note that such programmes of professional development for teaching staff are of key importance in maintaining the SCL approach in a given institution and are to be used both with new teachers and with teachers who are more experienced. Where some form of resistance to continued teacher training may arise by teachers who have already participated in similar courses, it is important to identify roles for such teachers, particularly when it comes to sharing of good practices, problems experienced and solutions applied.

In addition, it is of *key importance to address the issue of workload of teaching staff* concomitantly with their professional development. This is because, as findings of a recent

EI study confirm (cf. EI, 2010), over the past decade, academics have experienced an increase in their workload and particularly in their bureaucratic tasks while their job security has gradually eroded. In OECD countries (cf. Santiago et al, 2008) one of the main reasons for the increase in bureaucratic tasks has been the massification of higher education, which was not accompanied by an increase in teaching staff, therefore reflecting a higher student-staff ratio and a higher workload on teaching staff, accompanied by increasing demands for more output in research.

In the above-mentioned workshop, teachers and students agreed that teachers need both disciplinary and pedagogic training within their professional development programmes. Together they identified what the *desired outcomes of professional development programmes* would be. This included that teachers would be able to:

- Constantly upgrade their knowledge about their subject-discipline and be able to impart this to their students;
- Use innovative teaching methods which are applicable to diverse class formations and diverse student groups;
- Use diverse assessment methods in order to genuinely assess whether or not their students have reached the intended learning outcomes at the end of their course or programme component;
- Communicate effectively with students, understanding both their strengths and the problems they may face, helping students realise the full potential;
- Motivate students and stimulate them to be innovative in their own learning;
- Communicate with students about the SCL approach that they are employing, the importance of this type of learning and what it aims to achieve;

It is important that professional development programmes are in and of themselves INNOVATIVE in the way in which they are delivered!

Important! It is paramount to address the issue of working conditions of teaching staff hand in hand with the upgrading of their pedagogical skills through professional development programmes.

- Foster critical analysis in students—*teaching students how to think*—and also transferable skills—*teaching students to be able to act in every situation that may require their input;* and

- Understand the importance of, and learn how to use, constructive criticism, for the development of both their teaching and research work.

In addition, teachers and students in the workshop agreed that professional development programmes should bring together teachers across disciplines in order for them to be able to discuss the methods applied across subject-areas, the strengths and pitfalls of such methods and their applicability in other disciplines. In particular, teachers and students in the workshop emphasised *the need for teachers to be able to understand that they can never finish learning about their own teaching*, since SCL is not a closed box with one method which is applicable across time. Rather, teachers need to understand that a *culture of discussion and constructive criticism* regarding both their disciplinary and pedagogic skills will serve to upgrade both their teaching and research. In this context, students in particular advocated for a *community of masters and scholars* in which students and teachers regularly interact, both within and outside the classroom setting, with a view to fostering discussion that leads to the improvement of teachers' overall teaching experience and students' overall learning experience.

Q How can we teach teachers all of this?
A By employing the teaching methods that are outlined in Chapter 5 for teachers to use in SCL. *Teach teachers in the same way that you would teach students* within the SCL approach.

8 COMMON MISCONCEPTIONS

Below, many of the pre-conceived ideas about SCL are set out, explained and dispelled. These are general preconceptions and misconceptions about SCL. Given the benefits listed in Chapter 2 above, it can be useful to go beyond these misconceptions, in order to fully embrace the elements of the SCL approach.

SCL DOES NOT MEAN ANYTHING IN PRACTICE

While it is clear that SCL does not refer to one specific method in any given setting, this does not mean that SCL does not amount anything in practice. Rather it means that SCL is flexible enough to be adapted and applied to all areas of study and teaching. One must first ensure that students are at the centre of their own learning and that the teacher is a facilitator in this learning process, enabling learning, rather than enforcing it. Once this culture is in place, studies good practice ideas exist for application in particular cases. What must be kept in mind is that each teacher and each student is unique and thus SCL can be adapted to all needs.

SCL REQUIRES A HIGHER AMOUNT OF RESOURCES

The biggest challenge in the first-time implementation of the SCL approach is in changing the mindset of students and teachers with a view to helping them arrive at an acceptance of such a learning approach. This is something which does not require additional resources. While institutions cannot necessarily build new classrooms or install multi-media packages without additional financial resources, much can be done to achieve SCL without additional funding in terms of encouraging students to be active learners in the ways explored in the above chapters.

SCL IS NOT APPROPRIATE TO TEACH A LARGE AND DIVERSE STUDENT BODY

While it is true that the student body in higher education institutions is becoming increasingly larger and more diversified, the ideas put forward above for implementing SCL can be very effective in dealing with large and diverse student groups. A good example is that of a teacher giving a small slip of paper to students asking them to write down one aspect of the course that they really like and another which they are unsure of and want to ask questions about. Even having one such session is a concrete step towards implementing SCL.

SCL requires imaginative thinking, but can be done!

SCL UNDERMINES THE TEACHING PROFESSION

Some assert that the teaching profession will no longer be valued if SCL becomes the norm as it takes the focus away from the teacher and places it on the student. As explained above, while the role of the teacher is somewhat different in SCL, it is not diminished in its importance. Rather it is a role of enabling students to learn, guiding them through the course or programme component, rather than feeding them information. It is likely that the teaching profession will actually become more valued with a higher emphasis being placed on SCL because SCL brings students in as part of the academic community, where research-led teaching can become a reality and where feedback is more constructive.

STUDENTS HAVE MORE WORK TO DO IN SCL

SCL does not necessarily pose a higher workload for students. Rather it requires a reorganisation of students' study-time, focusing more on genuine learning activities rather than memorisation of information. This enables graduates to be more effective and adaptable, making them better-equipped to solve problems as they may arise.

TEACHERS HAVE TO DO MORE PREPARATORY WORK IN SCL

In more traditional methods of teaching, it is quite often the case that teachers have a lot of preparatory work to do in order to make sure their students will be able to take notes from what they say in class and then repeat this in their examination. While teachers may have to re-think their ways of teaching, it is likely in the long-term that the preparation work will not increase and that their work will be more enjoyable.

PROBLEM-BASED LEARNING IS THE SAME AS SCL

Problem-based learning (PBL) is a method of learning in which students collaboratively solve problems and then reflect upon their experiences. PBL is one teaching method in which the wider SCL approach can be applied but there are many alternatives to this method, as explored above. SCL is therefore the umbrella under which PBL falls. They are not one and the same thing.

SCL IS NOT SUITABLE TO ALL ACADEMIC FIELDS

SCL is easily adaptable to all subjects and courses, though the practical manner in which it is implemented may differ. In all courses and programme components, students can be put at the centre. The increasing use of quality assurance in higher education, applicable across academic fields, can be a tool which enhances the application of this approach. Some differences do arise when teaching across different subject-disciplines, with a notable distinction being between the humanities and the sciences. However, SCL provides an underlying learning philosophy which can be used in both areas.

SCL STUDENTS LEARN VERY LITTLE SUBJECT-MATTER

On the contrary, students who have learned in this way are likely to know more. They may know fewer repeatable facts but are likely to know more about solving problems for themselves, thinking for themselves in an analytical manner and engaging in research. Upon leaving higher education, it is more useful for graduates to be able to apply transferable skills rather than to regurgitate exact accounts of information imparted to them.

NOT ALL TEACHERS CAN TEACH IN A STUDENT-CENTRED WAY

All teachers are able to apply the SCL approach! It does not matter whether a teacher has been in the profession for a few months or for many years. Nonetheless, as explained above, all teachers require support for their teaching in the form of professional development which is imperative for the success of the implementation of the SCL approach.

SCL REQUIRES BEING TECHNOLOGICALLY-MINDED

SCL may incorporate aspects of e-learning for students and the possibility of distance-learning, thus providing added flexibility to where and how learning can take place. As seen above, the use of technology is also useful both inside and outside classroom settings in enhancing the learning experience of students, enabling them to give feedback in various ways and to source information as necessary. However, the use of the internet and of online learning spaces and sources all represent developments which have already weaved their way into the practice of higher education institutions. Thus SCL requires no more than what is already required in many cases.

9 SCL AND THE BOLOGNA PROCESS

9.1 INTRODUCTION

There is a general acceptance across Europe that SCL is a learning approach which focuses on the needs of the learner rather than those of others involved in the educational process. It is also widely agreed that SCL ultimately has a far-reaching impact on the design and flexibility of curricula, on course-content, on learning methods used and on consultation with students.

Often broken down into smaller action lines, the Bologna Process did not deal directly with SCL from the outset. The concept itself was only substantially included in the communiqué of the Leuven/Louvain-la-Neuve Bologna Process ministerial conference of 2009. However, in the communiqué adopted at this meeting, no official definition of SCL was put forward and reference is only made therein to the aspect of flexibility and to the procedures according to which consultation processes should take place in leading towards curricular reform.

This notwithstanding, the Bologna Process has come to include several elements which can help to establish a functioning SCL system. Many of these are tools which offer students increased flexibility and allow for better visibility of the qualifications

»We reassert the importance of the teaching mission of higher education institutions and the necessity for ongoing curricular reform geared toward the development of learning outcomes. Student-centred learning requires empowering individual learners, new approaches to teaching and learning, effective support and guidance structures and a curriculum focused more clearly on the learner in all three cycles. Curricular reform will thus be an ongoing process leading to high quality, flexible and more individually tailored education paths. Academics, in close cooperation with student and employer representatives, will continue to develop learning outcomes and international reference points for a growing number of subject areas. We ask the higher education institutions to pay particular attention to improving the teaching quality of their study programmes at all levels. This should be a priority in the further implementation of the European Standards and Guidelines for quality assurance.«

Leuven/Louvain-la-Neuve
Communiqué, 2009

that students gain, enabling increased comparability and compatibility across the European Higher Education Area. As outlined below, these tools also prove to be helpful in fostering SCL, since Bologna-inspired reforms also provide and opportunity for change, replacing some of the more traditionally rigid elements in higher education.

9.2 HOW CAN THE BOLOGNA PROCESS HELP IN SCL?

At the T4SCL launching conference, where a workshop specifically addressed the link between the Bologna Process and SCL, many students and teachers who participated in the conference felt that shifting mentalities, changing methods and increasing flexibility in higher education institutions is extremely difficult. The elements that students and staff found important for a move towards an SCL approach included:

- Flexible learning paths based on the use of learning outcomes;
- Student participation in curriculum design;
- Focus on the individual learner and the importance of learning how to learn;
- Portfolio models for assessment;
- An interactive learning process which includes peer learning; and
- Increased consultation and participation of students in curricular design;

In addition, the heightened responsibility of students related to their higher influence on curricula in SCL was perceived as an important element in the implementation of the SCL approach. The personal development of learners was also identified as a valuable outcome of higher education. Participants stressed that, through SCL, learners should be empowered and autonomous, allowing their creativity to flourish and fostering critical thinking in a lifelong learning approach. All of these are desired but do not fully exist in current higher education systems. Some of these desired changes can be brought about by a reconsideration of policy but a solution to the struggle to make the educational system more flexible and learner-centred can be found in various Bologna Process tools and concepts.

As can be seen below, the Bologna Process can help enhance SCL since it is a system that has introduced change in a large number of European countries, which change,

where properly implemented, has fostered increased flexibility and the use of outcome-based learning.

9.3 ECTS AND THE USE OF LEARNING OUTCOMES

The European Credit Transfer System (ECTS) is often seen as the most basic of all Bologna tools because it was implemented in the Process from a very early stage. It actually predates the Bologna Process as it was first applied in the context of the European Commission's Erasmus exchange programme in order to facilitate mobility of students. From the very start of the Bologna Process in 1999 there was a clear commitment to the setting up of a European-wide credit system, which was later determined to be the ECTS model. Many countries started to adopt ECTS as their credit accumulation and transfer system, this being the Bologna action line which they chose to implement first. However initial implementation was quite flawed as there was very little good practice available by way of measuring workload or defining ECTS in terms of learning outcomes.

ECTS is a standard for comparing the attainment of learners across the European Higher Education Area. It helps make education flexible by offering students the possibility to transfer and accumulate credits for the knowledge, skills and competences acquired.

In order for ECTS credits to fulfil their function, they need to be based on learning outcomes and measured workload. One ECTS is normally considered to correspond to 25–30 hours of workload, which, in an SCL setting, might vary based on the specificity of subjects and of the learning styles adopted by students. ECTS would be worthless without the proper steps taken to ensure the use of learning outcomes. Very careful attention needs to be paid to how learning outcomes are written, so as to facilitate learner-centred education. This issue was examined in depth in Chapter VI above.

How can ECTS benefit SCL?

ECTS is a flexibility tool which can help to a great degree in applying SCL. The benefits which ECTS can bring to the educational process include the following:

No learning is lost: ECTS gives students the possibility to have their learning attainment recognised and to accumulate credits for their learning;

Mobility is made much easier: ECTS credits are transferable, enabling mobility of students where adequate recognition procedures are in place;

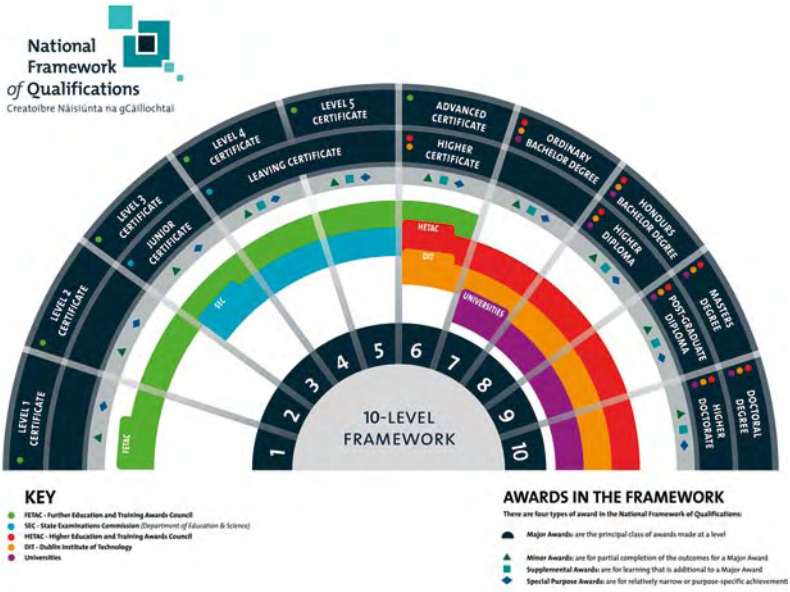
ECTS enables the recognition of prior learning: This feeds into students' education if they prove that they had a learning experience outside the formal educational setting, being granted ECTS as recognition for it; and

ECTS enables recognition of the entire spectrum of students' work which is dedicated to achieving the goals of their studies.

9.4 QUALIFICATION FRAMEWORK

Qualification frameworks are represented by systems that map out existing qualifications and correlate them with attained learning outcomes and levels of education. Qualifications frameworks do not only apply to higher education, but to the entire span of education levels. Though not all European countries have as yet set up functioning qualification frameworks, for the ones that did, qualification frameworks are vital in offering students flexible learning paths and enabling them to apply a constructionist approach to their learning through a step-by-step approach to their learning process. If combined with recognition of prior learning and the proper use of ECTS, this can enable maximum efficiency to be applied to student workload by not making learning repetitive and establishing specific goals applicable at a given level of the qualifications framework.

fig. 5 Irish Qualifications Framework
Source: Dublin College University



9.5 QUALITY ASSURANCE AS AN AID TO SCL

The joint EI-ESU survey undertaken with member organisations at the beginning of the T4SCL project brought to the fore a number of policies and areas which impact upon the advancement of SCL. Quality assurance was one of the areas most-frequently identified as influencing reform in teaching and learning. The is because quality reviews influence institutions in many ways, including with respect to funding and institutional prestige, so that it acts as an incentive more than any other action line of the Bologna Process. However the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) do not take into account issues of teaching and learning in an adequate way, as the onus of the quality assurance process remains highly procedural, focusing largely on mechanisms and regulations as such, rather than on setting up a quality culture at all levels.

An important step that needs to, and can, be taken in quality assurance within the framework of the Bologna Process is to try to include considerations related to quality teaching, inclusion of students in curriculum design and improvement of teaching/learning methods in the internal quality assurance guidelines of a given institution. Going beyond the bare minimum as stipulated in the ESG is a must in order to enable quality assurance to have an impact that extends beyond bureaucratic procedures.

How can Qualifications Frameworks help in SCL?

They emphasise the usefulness of every particular learning outcome in developing qualifications;

They encourage lifelong learning and help students plan their careers and their learning;

They help students choose what to learn based on their own life goals and can become a significant aid to self-directed learning; and

If certified comparable to European or international qualifications frameworks, they can become a tool for both vertical and horizontal mobility of students by making qualifications readable and transferable.

How does Quality Assurance Contribute to SCL?

Quality assurance is the main Bologna tool that influences decision-making within institutions. Where quality is deemed to include teaching and learning, it has the potential of influencing institutional priorities;

The quality assurance processes as envisaged in the Bologna Process delineate a clear role for students, thus being a positive example in student inclusion within decision-making processes in institutions; and

Quality assurance is aimed at creating a quality culture within institutions which can lead to the enhancement of the educational models used, including a move to a more student-centred education.

One major danger posed particularly by policy-makers who make an erroneous association with quality assurance, is in the form of rankings, typologies and league tables. While these have been dismissed by many stakeholders of the academic community, their influence still looms large in higher education policies, leading to a re-orientation of internal institutional policies aimed at fulfilling the criteria that is set out by the rankings.

Criteria for ranking institutions most often involve an exclusive focus on research and technical aspects that are distinct from core educational activities. Since teaching and learning do not provide strictly measurable parameters, it is often the case that they are sidelined or represented through criteria which are not fully relevant. This has the potential to cause much damage should these rankings increase their clout over quality assurance as the process by which institutions evaluate their results and set their goals.

9.6 RECOGNITION OF PRIOR LEARNING

One of the first premises that needs to be overcome in order to apply SCL adequately is that by which higher education institutions claim a monopoly on learning. Learning, in terms of knowledge gained at the individual level, takes place in far more numerous settings than in the classroom, but is often only recognised when it happens in academic settings.

Recognition of Prior Learning (RPL) is fairly widespread for employment or educational access purposes but is rarely used to feed learning outcomes into the coherent set of qualifications that a student gains as a result of the learning process. That is, if learning outcomes X, Y and Z lead to competence W, most students in Europe need to attain all 3 outcomes in their institution, rather than contribute by learning outcome Z from external experiences. It is noteworthy that RPL is not intrinsically

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What is the Value that RPL brings to SCL?

It can help students complement learning in the academic setting with informal learning that takes place in real-life situations, giving the learner more control over the way certain learning outcomes are attained; It facilitates successful completion of higher education for students with a general background, such as those who start working upon finishing secondary education; and used in conjunction with ETCS and qualification frameworks, it can become a vital tool in supporting self-directed learning.

linked with the development of a comprehensive National Qualifications Framework, though referring RPL to a specific level of a given qualifications learning can prove to be doubly-beneficial.

Overall, the best use of RPL in order to help bring about functional SCL can be by using it to recognise learning outcomes both for access to higher education studies and for their contribution in gaining various qualifications within the educational system.

9.7 MOBILITY OF STUDENTS AND STAFF

Mobility has proven to be a valuable experience for both students and staff. In fact, mobility of students and staff is one of the best tools to exchange examples of good practice in teaching and learning across Europe, allowing innovative teaching and learning methods to be analysed and applied in different contexts. Mobility is a complementary tool to the scientific approach of reporting and analysing approaches to teaching and learning. One thus need not use trial and error approaches in applying different educational approaches within institutions if working examples from other institutions can be studied by direct contact.

In the SCL approach, mobile students also have the possibility to give input and feedback based on their mobility experiences, in order to provide ideas as to how educational practices can change within their home institution. For the people engaged in mobility programmes, one added value is represented by the opportunity to study in different environments with different people and using different methods.

It is important to discuss the experiences linked to a mobility period which students and teachers experience in a different institution. In order for mobility to have a concrete impact on the institutions involved, it is vital to observe, report and discuss what is learnt during one's mobility period. Increased cooperation that follows exchange of good practice also provides enhanced opportunities for both staff and student mobility.

Mobility and SCL

It is a good tool for exchanging examples of good practice between institutions and individuals, provided positive experiences are followed up and actually influence practices in teaching and learning;

It gives learners the opportunity to study in different environments and helps them cope with different educational methods and contexts; and

In and of itself, it develops various skills complementary to those attained in the educational process (e.g. language skills, capacity to work in different environments and inter-cultural communication).

9.8 THE SOCIAL DIMENSION AND SCL

One of the elements of the Bologna Process which is often sidelined and yet which is the most necessary in order to implement SCL in a genuine and effective manner is a functional social dimension in higher education. Students from disadvantaged backgrounds often start their higher education studies with severe drawbacks and often need to be exposed to different learning styles and teaching methods in order to succeed. Students with work or family responsibilities also require extra flexibility in their learning paths and may need to have their studies spread out over a longer number of years in order to combine their ongoing commitments with their studies in an effective way.

Consideration of the social dimension is important so as to make flexible education available to those who have a lot of time to devote to learning as well to those who have limited time and resources to support their studies. The social dimension needs to delve into the educational process itself, referring not only to access into higher education, but also to successful progression through all levels of higher education. One of the most important elements in this respect is the adaptation of learning methods to different student groups. Using a single path to attain learning outcomes is almost certain to put some student groups at a disadvantage.

The social dimension, if understood in a broad sense and if mindful of both social and educational aspects of students' lives, can have a positive impact on the inclusiveness of the educational process, adapting it to all different types of students, not just the ones who benefit from optimum secondary education and adequate personal finances.

The Link between the Social Dimension and SCL

This is needed in order to guarantee that no student starts his or her education at a disadvantage;

This needs to go beyond measures of social support and also address the educational process. Students from disadvantaged backgrounds often have the handicap of poorer secondary education or a difficult family environment which needs to be taken into consideration in the planning of teaching methods to be used; and

Offering adequate social support ensures that students can devote enough time to learning as opposed to being conditioned with respect to the time which they have available for their learning.

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The European Students' Union

ESU—The European Students' Union—is the umbrella organisation of 44 national unions of students from 37 countries, and through these members represents over 11 million students. The aim of ESU is to articulate and promote the educational, social, economic and cultural interests of students at a European level towards all relevant bodies and in particular the European Union, Bologna Follow-Up Group, Council of Europe and UNESCO.

www.esu-online.org

Education International
Internationale de l'Education
Internacional de la Educación

Education International represents nearly 30 million teachers and education workers. The 402 member organisations operate in 173 countries and territories, from pre-school to university. Education International protects the rights of every teacher and education worker, and every student they educate. EI's European Standing Committee on Higher Education and Research (HERSC) represents higher education staff and their unions in the Bologna Follow-Up Group and towards relevant European institutions.

www.ei-ie.org