

Good and bad practices of supporting LLL in universities.

Introduction.

Lifelong learning (LLL) attitude is curiosity, willingness to adapt new competencies consciously. Lifelong learning requires awareness of the situation of the learning achievements. Lifelong learning ability is knowing how and using methods (mental tools) to continue learning. Lifelong learning might start in the childhood, when getting the first contact to education. (*Should we say that "building up/exciting LLL-attitude might start...education, if the environment is aware of it.?"*) Though the group noted that no one else than the individual can be responsible for the actual learning, the environment can support and influence the process.

In this report the main focus is in the university environment, reflecting the ideas of the discussion group towards the practices of their education. The discussions were held during the IBS Stockholm in January 99. All 25 participants of IBS were asked to write down some examples of good and bad practices of LLL on their own universities. The discussion group listed and combined these answers into 12 main questions, analysed the problems and tried to find solutions. The group *find (occasionally overlapping and contradictory)* solutions of three kind: more resources for education, re-allocate the existing resources and changing attitudes. The last is probably hardest to change, but cause the first two.

We also listed some good practices which on the groups opinion, have positive effect to applying LLL.

The most common problems seem to source from the lack of social connection between students and professors, (*academic stuff?*) and the lack of learning and teaching skills from both parties. The individual needs of a learner should be recognised and various teaching and learning methods should be used in order to maximise the learning outcomes. New structures and methods for measuring the learning should be developed. Learner's responsible of her own education should be emphasised as well supported by the environment.

1. Basic Studies

(The lump basic studies given at the universities often fail in giving a holistic view over the reasons of studying them. Our analysis showed two aspects of this problem: First, the abstract nature of basic physics and maths without practical examples of applications, has only a little if any connection to the ways students learn. Enormous content of the basics, and due that, the lack of time is often mentioned as the reason why presenting applications from the real world or from later studies.

Another aspect is that basic sources seldom refer to other courses, even though it might be possible for students and academics to gain added value from knowing why students are studying the course, what they can learn during it and where they can use the knowledge and skills they achieve late during the studies and work.

The group thought that there might not be an easy solutions to these problems, since it requires more time and effort from academics' side to co-operating in order to develop the courses. If only little support is given from university's side the students should be given more opportunities to broaden their perspective to studies (i.e. more poikkiteollinen) Another solution would be students making their own study plan when they start and up-date it during their studies to make them think of their studies in a broader way. The students should be able to discuss their plans with someone who has a broader perspective.)

The basic studies given at the universities today does not give the transparency to the puzzle. There are too few practical examples of the application of the methods thought in the basic courses. Often lack of time, due to that so much content of basic nature must be covered, is given as the reason that applications is not considered. To give more transparency related courses could be held together in one course. And the teacher should try to give examples of application in the perspective subject. To be able to see the meaning of the basic studies the students should be given the opportunity to broaden their studies to be able to put their studies in it context. An additional book with examples

for each specialisation could also be used. The students should make their own study plan when they start their studies to make them start to think of their studies in a broader way.

2. Not encouraging independent search of information

The universities lack the academic point of view in the way that they are too much school and too less university. The students are not accepted as intellectual human beings. The literature is always given and the teacher often keep themselves very close to the material in the book and the students does not get to see the problems out of different point of views and building their own understanding. There is no time for the search due to too much homework given i classes. To gain time the level of specialisation should increase. The student should also be given obligatory seminars about how to find information out of the perspective why they do want that information – not only practical things. These seminars would be included into 'normal' courses.

3. Lack of relation to the academic staff (social relation)

Though most theories of learning acknowledge the social contact as an important part of learning process, it's not stressed in universities. There is different anticipations towards the role of a teacher. While teachers concentrate on the content, students are looking for the a contact person.

One of the reasons for the gap in social contact, is that when choosing professors the scientific merits value more than pedagogical skills, if counted at all. Lifelong learning applies to professors as well. Another reason is huge classes, at least in the beginning of the studies.

The group thought that right attitude could overcome the gap. A simple mean that could increase the contact is the professors presenting themselves as persons, their background and their own interest in the matter. Another way would be common events, like parties or laboratory tours out side the fixed class,

Since social contacts need the two parties, the students should also take more steps towards the professors. Open dialogue between the students and academics in developing the studies is definitely needed in university level.

The teacher is only teaching the content (one way information) and is not seen as a contact person. The size of the classes and the attitude of the professors are important factors in how good contact. The attitude of the professor is shown by missed contact hours and the priority between research and teaching. A simple thing that could increase the contact would be if the professors could present themselves as persons and if they could attend more common event together with the students. The relation most of cause go both ways so the students should also do more steps towards the professors and protest more in order to make the professors develop better teaching skills (LLL for teachers too).

4. Lack of encouragement/creating self-confidence

There seems like it is to many DOs and DON'Ts when you start the university and the student is not seen as a person. There is a lack of encouragement in the students personal life, the support from academics to a person is missing. There is no confidence about the study content because you can not present them yourself. Through classes upon speech and presentation the students can develop their personal skills in a way that would give more self-confidence.

5. Students seen as objects

Due to the impersonal approach by the University that regards students as numbers without any other personal identification, created by the role of "factory" that University is playing at the time being, students are the input and people holding the engineering degree are the output heading to the employers world. Professors are also considering students a mean for his personal professional development, because they gain extra points per graduated student. The cruelty of the procedure is going further as the demand for shorter studies is increasing. We should also consider that inside University there is no marketing but only teaching quality. Another negative factor leading to students regarded as objects is the large size of the Universities

In order to create a more "friendly" to the student University it is suggested to try to have closer contact between academics and students. (Nuber3) It is also significant to get in touch University and industrial world in order to

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establish communication on educational matters. In this way there will be more information about the need for engineers and the right time to get them. Although large audiences are contributing to this feeling, this can be settled if the classes are split.

6. Lack of starting "Learn how to learn"

Academics are not acquainted with or are completely missing the knowledge of all the teaching and learning methods and that is why they don't use them all.

On the other hand both sides, students and professors are focus on the exam and not on the course itself. Additional to these the lack of knowledge of what and when students will learn, is not helping students either.

Professors should be able to apply different teaching and learning styles and get in touch with the reality of the students world. They should try to build canals of interactive communication with alumni who have already the experience and could give the right feedback.

They should also find ways of improving the exams. A possible improvement should be not having exams at the end of the course but in the meanwhile. A really good attitude would be asking students for feedback about the course.

On the other side students should be aware of their field of studies

7. Demotivated to learn

It is a common phenomenon that students think that after graduation there is no actual need for learning new things. They also seem to be unwilling to learn aspects that are considered to be boring.

Students will be more focused on their education if they get involved with research, attend lectures given by interesting persons e.g. professionals and get from their professor as feedback the latest practices and research. Of course in order to be able a professor to give interesting lectures he should have the required pedagogic skills.

8. Form of exams - study for a day - 4 hours

Students are most of the times just trying to pass courses, in this way they are focusing only on the exam and not on the course. It is also accepted that there is only little connection between good marks and learning achievement. As also students are not given any feedback and there is no processing at information exams are only a tool for the University to control students. So in this way there is a safer for the professors grading system

Students should be more focused on combing information from different courses than on a single one.

An extreme way for the time being of solving this would be having no exams and get a different way of recognising the learning outcomes

There should be also more stress on project work and get aware of their responsibility as students.

9. Lack of interesting lectures

The complaint of not having an interesting lecture is often based on the lack of interaction between the lecturer and the students. The classic lecturing style, where professor speaks and the students make notes, doesn't encourage to ask questions. The problem is often based on insufficient resources and is thus outside the scope of this discussion, but it has also a lot to do with poor methods (i.e. poor allocation of teaching resources & "technical" resources like lecture halls). Very important part is played by the passivity of students: as the teacher doesn't get any sort of impulses from the audience, he gets less motivated and is likely to get even less of them.

Trivial answer to the problem is to rethink the content and the way it is presented. Expecting interactively from a course the exam of which is based completely to the lecture notes is naive, because then the students just work like copying machines and leave the understanding of the matter to be done later - which easily leads to not understanding the point at all.

One solution to create interaction are on-line feedback groups which consist of students attending the course. They know the problem points of the course and with regular meetings with the professors (e.g. 3-4 times during the course) they're also able to get some changes on them. The everyday availability of the lecturer outside the lectures is

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also important, since a student is more likely to ask questions in a personal dialogue than in a lecture hall with 500 students. A good practice could for example be a note at the lecturer's door telling that when he's present he's also available for a visit if not otherwise stated.

To activate the students also physically or with other unconventional teaching methods is good for any learning process, also thinking from the viewpoint of LLL. Students could also give lectures by themselves or at least have some obligatory preparation material to read. The first mentioned would also make the students far more conscious about that how much easier it is to teach when you get questions and feedback. This can also be seen as one way of improving the communication skills of both sides. A certain knowledge on the matter (attained with the preparatory material), on the other hand, gives the student more self-confidence to ask during the lecture.

10. 'Piece by piece' -learning

The learning process is, for traditional and 'practical' reasons, often divided into parts which have a certain hierarchy but which don't help to understand the whole puzzle to be learnt. The order of the courses might be logical so that the information cumulates, but it can easily be forgotten what is the final aim of doing certain course. For a future bridge engineer it is necessary to study mechanics, but this is seldom emphasized in the basic courses - they're more 'science because of science'.

The topic is also discussed in depth in the solutions to the problem set of basic studies. Combining courses with similar content, for example between different faculties, gives better understanding of the subject. This happens especially when the course is held as a project connected closely to a real-world case.

The connection between the courses can also be made more reasonable by changing the hierarchy of courses to the hierarchy of knowledge. This can be done with tests before the course: the teacher gets an idea about the initial level of the students and can either deny the right to attend a course because of lack of knowledge or (better) customize the course to be of the right level to the student.

11. Assumption that LLL starts post-graduate

It is obvious that at the present situation the universities see their role in teaching and forget completely the student's point of view: To adapt what is taught you need to know how to learn, but that's conventionally left as something that the students already can. LLL is, in a way, a trendy term which is only used for marketing some postgraduate commercial courses for a limited audience instead of bringing it down to undergraduate level. This is also often a result of poor communication between the LLL unit and the other departments of the university.

An interesting extract is also that SEFI's A Call to Action -paper doesn't contain the word student.

The solutions are basically the same as for all the other problems in total. LLL-aspect and awareness should be taught thoroughly at all levels of the studies, and the university should take a clear responsibility on offering methods (and, within the resources, also tools) for continuous learning. Interaction between different departments is crucial to let the good practices flow on LLL-matters as well as everything else. For the younger students a very practical proof of the need for continuous education could be the meetings before specialisation, after 2-3 years of studies. The speakers would be relatively young people from 'the real world' - living examples of how you have to learn all the time more to proceed in your career and life in general.

12. Lack of connection to the real world

A common academic problem is doing science because of science, and that's also a common sin for the universities of technology. The industry easily acclaims that the education system doesn't answer to its needs in terms of a graduate profile because the graduates don't have communication, language etc. skills. What is often forgotten is the fact that

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the university has, anyway, given them the basic technical skills which are actually the true base of all what they're about to do in the working life.

The problem should, though, taken seriously in the universities. Representatives of the industry can be taken to the decision-making bodies of the university (the board = rector's aid etc.), at least with the right to speak. The projects and the research currently done in laboratory should be more powerfully brought to the student's level in means of participation to projects or just simply visiting the lab every now and then to stay updated what the staff is actually working with. The solid contact between the job market and the school can also be held by the university as recruitment services for the students. Often this is seen as the task of student organisations only, but taking the responsibility to the University the work becomes more stable (employees don't change each year) and also more credible (the university gives its historical name to be used as a proof of excellence of the students). The contact becomes more high-profile, and the employees get contacts easier than students because of representing an authority.

Good practices + examples

less since Bad news do travel faster and are more interesting

- Freedom to choose courses (choosing courses that are based on previous ones but haven't been attended.
- Encouragement to critical approach to all statements (Chalmers architecture)
- special project courses that are initiated by students (when there is no more interest the course will be cancelled)
- exam not only based on lectures +special literature
- interdisciplinary teamwork (planning a big building project)
- getting into topics in a short time for exams
- excursions company visits (pre-material for excursion)
- practical work (i.e. seminars) (building up a wine shop on the web for companies)
- compulsory internships
- technical/learning in different techniques/methods (contact between professors + beginners)
- flexible creditsystem
- students as teachers
- being encouraged to visit courses at different institutions(structures, contents)
- possibilities of communicating with students coming from different departments

Conclusions

The most common problems seem to source from the lack of social connection between students and professors, and the lack of learning and teaching skills from both parties. The individual needs of a learner should be recognised and various teaching and learning methods should be used in order to maximise the learning outcomes. New structures and methods for measuring the learning should be developed. Learner's responsible of her own education should be emphasised as well supported by the environment.

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Abstract

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