HOW TO ENSURE WORKING LIFE SKILLS IN HIGHER EDUCATION – PLANS IN A NEW HIGHER EDUCATION COMMUNITY IN TAMPERE, FINLAND

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Abstract
A good knowledge in substance, regardless of the topic area, is not anymore enough for any newly graduate, without adequate general working life skills and the ability to apply the knowledge into practice [1]. The importance of transferable skills as a part of university education has been recognized already a couple of decades ago [2] and has even increased during the last few years [3,4].

Starting from the beginning of 2019, a new Higher Education Community was established in Tampere when two universities, Tampere University of Technology and University of Tampere, merged and were joined in a corporation with Tampere University of Applied Sciences. In this new Higher Education Community of Tampere, a decision was made to enforce the presence of working life skills in all degrees. It was decided that the following areas of expertise should be included in the learning outcomes of all degrees and that every graduate should have these working life skills upon graduation:

- Learning skills and critical thinking
- Ethics
- Employability skills
- Information technology and digital skills
- Innovation
- Interaction and communication skills
- Social understanding and economic and leadership skills
- International outlook and global responsibility

These learning outcomes are mainly to be achieved integrated within the study units and theses, not in specialized courses. In practice, this means that these skills should be included at least in the degrees’ learning outcomes but preferably in the learning outcomes of study modules and courses as well. This requires new kind of leadership from faculties and collaboration between teachers to ensure that all the skills are gained in a meaningful way from the courses and that they develop as the student furthers theirs studies. This requires competency-based curriculum planning that is done in co-operation between all the teachers of the degree. A problem that arises here is how to ensure that all degrees really consider these generic skills when they are planning the curriculum for the degree? Another problem that arises is how to ensure flexible study paths and at the same time make sure that each student develops these working life skills? For these issues we in the support services are planning some actions.

Keywords: Higher education, competency-based education, transferable skills, working life skills, Tampere University, higher education community of Tampere, curriculum.

1 INTRODUCTION
For newly graduates, a good knowledge of own subject is no more enough without adequate generic working life skills such as communication and team working skills. [1,5] For universities this has meant a radical change in their curriculum: instead of concentrating in traditional teaching of academic subject, the transferable skills should also be added into the curriculum.

Universities have adopted this change very diversely [6]. As Chan et al. [7] remark, there are stills academics who believe that it is not universities role “to provide skills training”. In many cases the integration of transferable skills into curriculum has been dependent on the interest of single faculties and individual teachers. In general, the lack of interest in students’ generic competencies in universities has hindered the implementation of generic competencies in higher education. [7]
In integrating transferable skills into the curriculum, some changes will occur on institutional level, some on degree level and some on course level. For the change to be successful, it requires vision, but it must also be accepted by those who are responsible for delivering the curriculum. [6]

As a part of Bologna process, many universities have adopted competency-based curriculums. In competency-based education, the competencies are the main focus, “defining the goal means defining which competencies students should acquire” [8]. In competency-based education, the focus is on what skills the students have actually learned, not on, what the teacher has taught. [9]

Tampere is a city situated in southern Finland. Starting from the beginning of 2019, a new Higher Education Community was established in Tampere when two universities, Tampere University of Technology and University of Tampere, merged to create a new multidisciplinary foundation-based Tampere University. The priority areas of the new university, the second largest in Finland, will be technology, health and society. Tampere University foundation that operates as Tampere University became at the same time on January 1st 2019, the majority shareholder of Tampere University of Applied Sciences. This new higher education community in Tampere is made up of 30 000 students, 330 professors and 4 400 employees.

In this new Higher Education Community of Tampere, a decision was made to enforce the presence of working life skills in all degrees. This was done by defining collectively eight learning outcomes that from now on should be included in all the degree program learning outcomes in addition to the substance skills and that all the students graduating from both Tampere University and Tampere University of Applied Sciences should master (Table 1).

Table 1. The common learning outcomes of the Higher Education Community of Tampere

<table>
<thead>
<tr>
<th>The competence</th>
<th>Examples what kind of learning outcome this could be</th>
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| Learning skills and critical thinking | The student  
- evaluates and develops his/her know-how and learning methods  
- continually enhances his/her skills  
- is able to solve new and complex problems and make decisions even in unexpected situations  
- gathers, processes, evaluates, analyses and uses information in a versatile, critical and ethical way  
- evaluates and develops his/her information gathering processes  
- cooperates in the higher education community to construct information, and understands the importance of sharing information as a part of building his/her skills  
- understands scientific thinking, reasoning and explanation |
| Ethics | The student  
- takes responsibility for his/her actions and the consequences of those actions  
- is familiar with the principles of sound scientific practice and acts accordingly  
- complies with the research and professional ethics of his/her field  
- applies the principles of equality, accessibility and fairness  
- is able to influence the community and society on the basis of ethical values and by using the competence he/she has gained |
| Employability skills | The student  
- is able to act as a member of a work community and promote the community’s and his/her own well-being  
- takes into account the diversity of actors in the work environment  
- functions appropriately in complicated situations  
- understands the importance of networks in working life and has the ability to develop his/her own networks |
| **Information technology and digital skills** | The student  
- is able to use information and communications technology  
- understands the importance of digitalisation in his/her field and utilises the digital operating environments available in the field  
- promotes the development of digital operating environments in his/her field  
- knows the risks associated with digital environments and takes them into account in his/her own actions |
| **Innovation** | The student  
- implements research and development activities by using existing knowledge and methods in his/her field, and produces new knowledge and methods for the field  
- finds and creates new customer-oriented, sustainable and economically viable solutions  
- thinks creatively and sees alternative solution-oriented ways of working in a variety of cross-disciplinary and working life situations  
- understands the importance of the global problems humankind is facing, as well as the significance of development and innovation in solving them  
- has entrepreneurial skills |
| **Interaction and communication skills** | The student  
- works in communication and interaction situations in working life as required by the task as a member of the community, such as in a team or a project group  
- is able to engage in constructive and expert social debate  
- is able to discuss research-based knowledge and understand the status of different presentations and media texts  
- is able to communicate and work with people from different cultures and master the language skills required in his/her field  
- has mastered at least one foreign language at a level that allows him/her to follow the developments in the field and to work in an international environment |
| **Social understanding and economic and leadership skills** | The student  
- has sufficient economic and leadership skills in his/her field and a willingness to expand this know-how  
- is able to manage his/her work in a goal-oriented manner in working life  
- is capable of planning work, working independently in expert positions and acting as an immediate supervisor when necessary  
- understands the importance of economics and leadership in his/her field and knows how to build competitiveness through them  
- understands the meaning of his/her work in the societal context and is able to participate in the public debate in his/her field |
| **International outlook and global responsibility** | The student  
- actively follows up on the international developments in his/her field and understands the effects and opportunities involved  
- works in international operating environments and is capable of international and intercultural communication in his/her work and in its development  
- anticipates and takes advantage of the impact and opportunities offered by the development of the international outlook in his/her work  
- identifies local and global issues related to sustainable development and their interrelationships within the ecological, socio-cultural and economic dimensions of sustainable development  
- orients him/herself to the future by identifying the consequences that decisions and choices have for sustainable development  
- is familiar with sustainable development issues and ways of forming knowledge about sustainable development in his/her scientific or other field  
- is able to critically specify and analyse sustainable development aspects in his/her field and in cross-disciplinary settings, and be committed in the way he/she applies the things he/she has learned  
- is able to act in a goal-oriented manner and organise activities to find and implement solutions that promote sustainable development |
In the same document following instructions for implementing the common learning outcomes in the curricula were given:

“These common learning outcomes are mainly to be achieved within the study units and theses integrated in degree studies. However, depending on the field of study, separate courses may also be offered focusing on one of these themes. These common learning outcomes are integrated into degrees by taking into account the perspective of the competence needs in the degree programme. Each degree programme may apply the outcomes in a manner that is appropriate for the degree in question. Achieving the learning outcomes is supported by different teaching methods, such as project work, innovation projects or the like. The learning outcomes may be goals on the degree-, study module- or study unit-level. If general learning outcomes are applied on the study unit-level, they also should be considered in the assessment of the study unit. This document is used to support curriculum design.”

The document was released in May 2018 and it was expected that all the degree programs describe these common learning outcomes in their curricula for academic year 2019-20 that were accepted in February 2019.

2 METHODOLOGY

In this presentation we will give an overview of how the integration of these common generic learning outcomes are planned to be integrated into degree curriculums, in degree levels, in study module level and in individual course level. We will also describe what kind of actions will be needed from the heads of the faculties, teachers and support services for the integration to take place.

Some of these actions have already started during the year 2018 but mainly the integration is expected to be realised from the year 2019 onwards.

3 RESULTS

3.1 Integrating of common learning outcomes into degree curriculums

In Tampere universities the integration of common learning outcomes started in the beginning of the year 2018 by making a current-state-analysis of the learning outcomes of all technical degrees (engineers in B.Sc., M.Sc. and D.Sc. levels). It was found out that in some degrees, many common learning outcomes the students are expected to achieve during the studies were recognized very well whereas in some others there was a clear lack either in recognizing the skills or in describing them as learning outcomes. At this point, however, these university-wide common learning outcomes had not yet been defined, so the faculties were not expected to have included those specific skills in their degree learning outcomes, rather this was more an attempt to recognize what is the starting point for the future work.

The next step was taken in autumn 2018 when all study modules in Tampere University were evaluated to see, how these common learning outcomes were integrated in the learning outcomes of study modules. Again, the same observation was made that there was variation in the recognition of these generic skills and how they are described as learning outcomes. Although it is obvious that all study modules do not need to contain all generic skills transformed as learning outcomes, some study modules were found in which the learning outcomes were given a recommendation to be re-evaluated by the faculties.

During the latter evaluation it became obvious that more instructions are needed and the following instructions for describing and considering the common learning outcomes of the Higher Education community of Tampere in the curricula were given in November 2018:

- In the document, more specific examples are given for each area of expertise. It is not mandatory to include these more specific examples in the learning outcomes of the degrees but the eight larger areas of expertise must be included in the degrees in some format. Each degree can interpret the common learning outcomes from the perspective of the competency needs of the degree.
- In university degrees, it is not necessary to include all the common learning outcomes in both Bachelor’s and Master’s degrees but some of them can only be included in either one. However, all of the eight areas must be included in the Bachelor’s + Master’s degree combination that the student has been accepted to.
The common learning outcomes can be defined either on degree level, study module level or study unit level. It is recommended to describe the common learning outcomes in the study modules or study units if they are genuinely present there. If the transferable skills are described in the learning outcomes of a study unit, they must be in some way taken into consideration in the assessment of the study unit.

3.2 Supporting faculties and teachers in integrating generic competencies in learning outcomes

Assessing the learning outcomes of degrees, study modules and individual courses is recommended to be done by each faculty during the coming years, specifically regarding the common learning outcomes. To achieve the most comprehensive results, the faculties are recommended to do the assessment together with all their teachers so that there are not too many similar generic competencies overlapping in simultaneous courses and at the same time some other generic competencies being left out by mistake.

To support faculties and individual teachers in integrating generic skills in the learning outcomes, some actions have been already taken and several others are to take place. First, three workshops in different campuses were held, in Spring 2018, where these newly defined common learning outcomes were presented and teachers were given examples of competency-based learning outcomes. In autumn 2018, three following workshops were held, where the focus was on both learning outcomes and assessment in competency-based education and the teachers had an opportunity to get their own courses learning outcomes evaluated.

In addition to these, pedagogical training on themes of competency-based curriculum, defining learning outcomes, constructive alignment and assessment will be given in one 1 ECTS online course and as a part of a more comprehensive pedagogical training.

During the next academic year, all the faculties are going to be informed about how they can revise their degree level learning outcomes and the support services of the university will help the faculties if needed. Also new workshops will be held and the teachers will be given guidance in planning how to integrate these generic competencies in their courses, course learning outcomes and evaluation.

4 CONCLUSIONS

In Tampere universities, the importance of generic competencies in addition to solid knowledge of one's own field has been recognized and a set of common learning outcomes have been defined to be included in all degrees.

These learning outcomes are mainly to be achieved integrated within the study units and theses, not in specialized courses. In practice, this means that these skills should be included at least in the degrees’ learning outcomes but preferably in the learning outcomes of study modules and courses as well. This requires new kind of leadership from faculties and collaboration between teachers to ensure that all the skills are gained in a meaningful way from the courses and that they develop as the student furthers theirs studies. This requires competency-based curriculum planning that is done in co-operation between all the teachers of the degree.

A problem that arises here is how to ensure that all degrees really consider these generic skills when they are planning the curriculum for the degree? Another problem that arises is how to ensure flexible study paths and at the same time make sure that each student develops these working life skills? For these issues we in the support services have already started and are planning to do more actions e.g. in the form of pedagogical training and workshops. To succeed in integrating generic skills in curriculums, commitment is needed both from faculties and from individual teachers.

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REFERENCES


