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Work Related Learning in Higher Education – Roles and Responsibilities

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Abstract

Work Related Learning in Higher Education – Roles and Responsibilities

Several actors demand an increase in work related learning in higher education. To meet this demand, a project aiming at increasing faculty awareness of work life issues was initiated at two Swedish HEIs. The aim of this paper is to study the organisational capability to integrate work related learning as regards support structures, incentives and responsibilities. To collect data, a questionnaire and case studies were conducted. The results indicate that the support structures are rather limited, academic staff request clear goals, and it is not clear who has the primary responsibility for integrating work related learning into the educational programmes.
Presentation

Work Related Learning in Higher Education – Roles and Responsibilities

Introduction

From several different actors, there are requests for an increase of work related learning in higher education. These actors are both national and international. In Swedish as in European higher education, fuelled by the Bologna process, employability has become a priority across disciplines and higher education institutions (Bologna Process, www.ehea.info). Another policy initiative, “the Knowledge Triangle”, highlights the need to collaborate with different actors outside academia, in order to foster innovation and entrepreneurship (Maassen & Stensaker 2011).

To meet the demand for stronger links between academia and the world of work, a joint project with two universities in Stockholm has been initiated. The project, called “Science and Technology in Society”, is funded by the European Social fund (2012-2014). The project aims at increasing faculty awareness of work life issues at KTH Royal Institute of Technology and Stockholm University, the Faculty of Science (SU), and, in addition, at investigating academics’ ability and capacity to act as well as the room for manoeuvre in terms of support and incentives.

In a previous paper (Magnell & Geschwind 2013) reporting results from the project, the findings indicated that there are some differences between KTH and SU, e.g. that academic staff at KTH seem to have more work experience outside academia and that they have integrated more work related learning than academic staff at SU. The results also indicated that an increase in commitment from employers as well as an opportunity for academic staff to work outside academia could increase work related learning in engineering education as well as in science education.

In this paper, we will focus on whether the organisational structure supports the integration of work related learning, as stipulated in several policies, and examine the following research questions:
- Which support structures are present at the universities as regards integration of work related learning?
- Which incentives and reinforcing factors would encourage academic staff to give work related learning a higher priority?
- Who has the responsibility for the integration of work related learning in higher education?
In each of these questions, we will also examine similarities and differences between the two universities.

Context

Higher Education in Sweden

Higher education in Sweden is conducted in first cycle (bachelor), second cycle (master) and third cycle (doctoral) programmes. Students can apply for full study programmes, some of which lead to professional or vocational qualifications. In addition to study programmes, students can also study self-contained courses which also can lead to a degree. In Sweden, the higher education institutions are to a large extent free to make their own decisions, e.g. about the content and design of courses and study programmes. Nevertheless, according to the Swedish Higher Education Act, higher education institutions are obliged to interact with the surrounding society (Higher Education Act, www.hsv.se).
The Faculty of Science, Stockholm University

The Faculty of Science at Stockholm University, SU, is the largest science faculty in Sweden (Faculty of Science, www.science.su.se). The academic staff consists of 1 300 employees. There are approximately 70 first and second cycle programmes and a large number of self-contained courses. At the Faculty of Science, there are 4 000 undergraduate students.

KTH Royal Institute of Technology

KTH Royal Institute of Technology is the largest technical university in Sweden and one-third of Sweden’s technical research and engineering education capacity at university level is provided by KTH (This is KTH, www.kth.se). At KTH, the academic staff consists of 2 900 employees, including lecturers, assistant professors, associate professors, post docs, researchers, professors, and doctoral students. There are about 100 first and second cycle educational programmes, mainly professional programmes in engineering and approximately 14 000 undergraduate students at KTH.

Background

According to Teichler (1999) there has been a debate whether higher education in general should prepare students for their future occupation or not. More specifically, the debate regards to what extent higher education should directly prepare students for a future professional role and aim at preparation for the world of work, or rather lay the foundation and focus on knowledge without having possible future professional roles in mind. Consequently, employability and subsequent responsibilities for HEI:s have been increasingly in focus since the 1990’s.

Employability is often understood as the ability to get a job after graduation or as a list of skills, but Knight and Yorke (2004) suggest that there is something more to it. They stipulate that employability “consists of making convincing claims in four areas: Understanding (propositional knowledge), Skilful practices (procedural knowledge), Efficacy beliefs (belief that one can make impact on situations), and Metacognition (awareness of what one knows and can do)”. Knight and Yorke also suggest that employability can be enhanced in several ways during the whole period of education, preferably by programme-wide activities. Such learning activities are designed for students to gain knowledge and learn skills that are of value in the world of work and if these activities are grounded on the context of work they can be called work related learning (Knight & Yorke 2004, Hills et al 2003).

Hills et al (2003) define work related learning as “learning activities through which students experience activities which are based on, or derive from, the context of work or the workplace”. Such activities can be work-based (at a workplace), non-work-based (not located at a workplace) and also overlapping. Work-based activities include e.g. placements and projects and non-work-based activities include e.g. case studies, role play, scenarios and projects. Consequently, the students have to conduct some kind of learning activity related to work or a work place, otherwise it is not work related learning.

When it comes to the design of work related learning activities, Hills et al (2003) suggest to start with identifying learning outcomes in terms of those skills that employers demand as well as the required knowledge and understanding. However, higher education institutions must not meet expectations from employers uncritically. Teichler (2000) stipulates that “higher education has to translate the expectations raised from outside and define its own proactive role with regards to job tasks and employment patterns”.

The above implies that employability issues and work related learning should be integrated into the curricula, which in turn could mean that it is a task for academic staff. The academic staff are
expected to tackle several tasks, e.g. teaching, research, leadership and administration (Kogan & Teichler 2007, Bentley & Kyvik 2012) and, in addition, they are increasingly interacting with the surrounding society, both in research and in education (Gibbons et al 1994, Clark 1998, Slaughter & Leslie 1997). However, institutional projects in e.g. student transition and cooperation with industry can also be performed by professional staff, or by staff (professional or academic) in the so called ‘third space’ between the professional and the academic area (Whitchurch 2008, Rhoades 2010). The ‘third space’ is also a space where new activities and projects in e.g. community partnerships can evolve (Whitchurch 2013).

Another point of departure is the difference between disciplines and vocational, programme based education. In science education, there is a tradition of focusing on disciplinary knowledge and the pure science discipline is atomistic and discovery oriented (Becher & Trowler 2001). The engineering discipline, on the other hand, is pragmatic and purposive (Becher & Trowler 2001). Since the emergence of engineering education in the 19th century, there has been a controversy between having a practice based orientation or having a more theoretical focus (Jorgensen 2007). The growing demands of research and teaching based on theory and science have led to a loss of the “original roots to practice and industry” (Jorgensen 2007). Since the 1960s, engineering education has become less practice-based and more focused on the teaching of theory, e.g. science and mathematics (Crawley et al 2007).

Methodology

A mixed methods approach with a sequential design was conducted (Creswell 2009). We started with quantitative data collection by using a questionnaire. Then, to examine questions as support structures, incentives and responsibilities in depth, we conducted a qualitative data collection by performing case studies. Each step was analysed separately and eventually a final interpretation was conducted.

Questionnaire

A questionnaire was constructed. In a number of questions, we chose to use six point rating scales. Since people tend to avoid the extremes and tend to choose the mid-point (Cohen et al 2011) we decided to offer a larger scale than e.g. a four or five point scale and also to have no middle point. Another reason for using a larger scale was to prepare for the follow-up questionnaire when continuity or change regarding the variables in question will be measured in the end of the project. The response options in some of the questions were “Grade your answer from 1 = Not at all, to 6 = To a great extent”, i.e. ordinal scale.

After a pilot testing, and some improvements, the questionnaire was sent out by e-mail to all academic staff at KTH (2 900 recipients) and SU (1 300 recipients). After two reminders, the response rates were as follows: KTH management 34%; KTH academic staff 31%; SU management 44%; and SU academic staff 13%. A reasonable explanation for the rather low response rate could be the “survey fatigue” among academic staff, which Kyvik (2013) refers to, due to the growing number of questionnaires.

We have focused on a descriptive analysis of the collected data. Since there are mainly rating scales, either median values or frequencies are presented.

Case studies

For the case studies, four organisational units were chosen based on the results from the questionnaire, mainly on the extent to which they have integrated work related learning in the educational programmes. Two cases/units with a lot of work related learning and two cases/units...
with less work related learning were selected. As regards the KTH cases, the extent of work related learning in the educational programmes was also confirmed by another source (KTH Career Report, www.kth.se/alumni-old/erbjudanden/karriaruppfoljning-1.14501).

The four cases are:
Case study 1: SU; science education in a pure science field; not much work related learning
Case study 2: KTH; engineering education in a similar pure science field as in Case study 1; not much work related learning
Case study 3: KTH; engineering education, applied with an additional management focus; a lot of work related learning
Case study 4: KTH; engineering education, applied with a focus on product development; a lot of work related learning

A case study protocol was constructed including case study questions (Yin 2009). Then, semi-structured interviews were conducted with in total 16 members of academic staff from the four units. Out of these 16, nine also have management positions, e.g. Programme Leader, Director of Studies or Head of Undergraduate Studies. The interviews were documented, recorded and fully transcribed in verbatim.

The documented interviews were coded in NVivo 10 by adding labels to text segments, at first concept-driven, i.e. by using codes developed in advance, and eventually data-driven, i.e. by using codes developed when reading the text (Kvale & Brinkmann 2009). Then, we used a method appropriate for analysing multiple cases, cross-case synthesis, and created word tables in which the cases are presented. This kind of analysis will show if there are any cross-case patterns, i.e. whether cases, or groups of cases, have similarities (Yin 2009).

For this paper, the documentation from the interviews have been coded and tentatively analysed. The transcribed interviews will eventually be coded and analysed.

Results

The tentative results as regards support structures, incentives and responsibilities are as follows:

Support structures

The questionnaire included a couple of questions regarding support structures and resources within the organisation, as shown in Table 1 and Table 2. In Table 1, the results indicate that there are mostly individual initiatives and the structured approaches seem to be rather few.

<table>
<thead>
<tr>
<th>Working methods for sharing knowledge on how to integrate work related learning</th>
<th>KTH Management</th>
<th>SU Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>No, nothing at all</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>No, but individual initiatives occur</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>No, but it has been discussed</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Yes</td>
<td>25%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Another question regarded whether there are any resources allocated to support contacts with the labour market, as shown in Table 2. The results suggest that it is not very well known whether there
are any resources of this kind, at least at KTH. As regards SU, it seems as if the most offered resource to support contacts with the labour market is employees maintaining contact with alumni.

Table 2. Resources allocated to support contacts with labour market, questionnaire, %.

<table>
<thead>
<tr>
<th></th>
<th>KTH Management</th>
<th>SU Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee(s) with responsibility for upholding labour market contacts</td>
<td>Yes 25%</td>
<td>No 46%</td>
</tr>
<tr>
<td></td>
<td>Yes 30%</td>
<td>No 55%</td>
</tr>
<tr>
<td>Employee(s) maintaining contact with alumni</td>
<td>Yes 31%</td>
<td>No 34%</td>
</tr>
<tr>
<td></td>
<td>Yes 50%</td>
<td>No 32%</td>
</tr>
<tr>
<td>Financial resources for organising labour market contacts</td>
<td>Yes 26%</td>
<td>No 39%</td>
</tr>
<tr>
<td></td>
<td>Yes 33%</td>
<td>No 53%</td>
</tr>
</tbody>
</table>

The issue of support structures was also a question during the case study interviews, as shown in Table 3. For example, we wanted to find out whether there were any differences as regards support structures between the cases with a lot of work related learning and those with less. The results show that except for a joint organisation with faculty and industry in Case study 4 (where mostly research was discussed, but also activities for students), there are no support structures. In none of the four cases they are convinced that there is a need for a support structure, and if they would ask for some kind of support, the suggestions are very diverse, from practical issues to long term strategic support.

When it comes to assigning someone to be responsible for the support, in three of the case studies, they suggest either an academic or a professional, to some extent depending which kind of support they have in mind. In Case study 3, they ask for an academic to take care of the support. A respondent commented in the questionnaire: “Academic staff have to do this, not specifically recruited resource staff since they will not be able to keep contacts within the discipline as academic staff can do” (Management, KTH). In Case study 1, they ask for a dedicated person to take care of the support.

In order to find out more about working methods for sharing knowledge on how to integrate work related learning, we discussed this issue as well during the interviews. The results indicate that in all four cases there are meetings for academic staff, but work related learning is not, or at least seldom, on the agenda. In Case study 2 and 3, they explicitly requested working methods for quality assurance and knowledge transfer.

Table 3. Support structures, case study interviews.

<table>
<thead>
<tr>
<th></th>
<th>Case study 1</th>
<th>Case study 2</th>
<th>Case study 3</th>
<th>Case study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a support structure?</td>
<td>No support structure.</td>
<td>No support structure.</td>
<td>No support structure.</td>
<td>One kind of support (a joint organisation industry+faculty), otherwise no support structure.</td>
</tr>
<tr>
<td>Is there a need for a support structure?</td>
<td>Not sure if it is needed.</td>
<td>Not sure if it is needed.</td>
<td>Not sure, at least not to create or list contacts.</td>
<td>Not sure, at least not to list contacts.</td>
</tr>
<tr>
<td>What kind of support is requested?</td>
<td>Practical support, e.g. list of contacts.</td>
<td>Practical and strategic support, e.g. list of projects and for quality assurance.</td>
<td>Strategic support, e.g. regarding top management in companies and</td>
<td>Practical and strategic support, e.g. on course level and for making surveys.</td>
</tr>
</tbody>
</table>
Who should be responsible for the support?

- A dedicated person, academic or professional staff.
- Academic or professional staff.
- Academic staff.
- Academic or professional staff.

Are there working methods for sharing knowledge on work related learning (WRL)?

- There are meetings, but WRL is not on the agenda.
- Mostly informal, there are meetings, but WRL is not on the agenda.
- Mostly informal, there are meetings, but WRL is not on the agenda.
- Mostly informal, there are meetings, but WRL is not on the agenda.

Incentives and reinforcing factors

The results of the questionnaire show that a vast majority of management staff at both KTH (88%) and SU (97%) think that there is a need for additional incentives to increase work related learning in education. In the questionnaire, the recipients were asked to assess possible incentives that would make academic staff give work related learning a higher priority. The results, as shown in Table 4, indicate that management suggest the following to be reinforcing factors: staff getting more time to work on labour market relations and an academic qualification system where labour market experiences are recognised. Directives from management do not seem to be a reinforcing factor, while both management and academic staff at SU seem to value Resource staff that support labour market contacts as an incentive that would make them give work related learning a higher priority. The response options were from 1=not at all, to 6=to a large extent.

Table 4. Incentives that would give work related learning a higher priority, questionnaire, percentiles 25, 50 and 75.

<table>
<thead>
<tr>
<th>KTH</th>
<th>SU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management</strong></td>
<td><strong>Academic staff</strong></td>
</tr>
<tr>
<td>P25</td>
<td>P50</td>
</tr>
<tr>
<td>Time to work on labour market relations</td>
<td>4</td>
</tr>
<tr>
<td>Academic qualification system where labour market experiences are recognised</td>
<td>3</td>
</tr>
<tr>
<td>Resource staff that support labour market contacts</td>
<td>2</td>
</tr>
<tr>
<td>Directives from the management</td>
<td>2</td>
</tr>
</tbody>
</table>

The question of incentives was also discussed during the interviews, as shown in Table 5. As regards Dedicated time to work on labour market relations, in Case study 1, 2 and 3, the respondents suggest it would stress the importance of the issue, but they also say it would not be feasible. In Case study 2 and 4, they also think it would lead to strengthening of labour market relations. In all four cases, respondents suggest Clear goals, and in three of the cases also Support from management, in contrast to results of the questionnaire where Directives from management was not a highly valued incentive.
Table 5. Incentives that would give work related learning a higher priority, case study interviews.

<table>
<thead>
<tr>
<th>Case study 1</th>
<th>Case study 2</th>
<th>Case study 3</th>
<th>Case study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Would Dedicated time to work on labour market relations be an incentive for you?</strong></td>
<td>Not feasible, but would stress the importance.</td>
<td>Not feasible, but would stress the importance.</td>
<td>Not feasible, but would stress the importance.</td>
</tr>
<tr>
<td><strong>Would An academic qualification system where labour market experiences are recognised be an incentive for you?</strong></td>
<td>Would not have any effect.</td>
<td>Slightly positive, but not unanimous.</td>
<td>Slightly positive, but not unanimous.</td>
</tr>
<tr>
<td><strong>Are there any other incentives for you (1)?</strong></td>
<td>Should be stated in the curricula and course plans.</td>
<td>Should be a clear goal for both academic staff and management.</td>
<td>Should be stated in the programme leaders’ instructions.</td>
</tr>
<tr>
<td><strong>Are there any other incentives for you (2)?</strong></td>
<td>More focus on education and work related learning from the school management would be helpful.</td>
<td>Management can give financial support and also directives on what to do.</td>
<td>If school management gives directives, and program leaders would get resources, then we would know what to do.</td>
</tr>
<tr>
<td><strong>Are there any other incentives for you (3)?</strong></td>
<td>If it promoted students’ employability, then we would focus on this.</td>
<td>No, but this is what our students need and request.</td>
<td></td>
</tr>
</tbody>
</table>

**Responsibilities**

The questionnaires included questions on who the recipients think should have the primary responsibility for increasing work related learning in the education and the results show that management and academic staff at both universities point out different groups of staff, and even employers, as responsible, as shown in Table 6 (the recipients could choose two alternatives).

Table 6. Responsibilities for increasing work related learning in education, questionnaire, %.

<table>
<thead>
<tr>
<th></th>
<th>KTH</th>
<th></th>
<th>SU</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Management</td>
<td>Academic staff</td>
<td>Management</td>
<td>Academic staff</td>
</tr>
<tr>
<td>Program Leader / Director of studies</td>
<td>46%</td>
<td>28%</td>
<td>23%</td>
<td>17%</td>
</tr>
<tr>
<td>School Management</td>
<td>33%</td>
<td>21%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Department Management</td>
<td>13%</td>
<td>13%</td>
<td>28%</td>
<td>26%</td>
</tr>
<tr>
<td>Teaching staff</td>
<td>34%</td>
<td>40%</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>Student counsellors</td>
<td>3%</td>
<td>5%</td>
<td>18%</td>
<td>20%</td>
</tr>
<tr>
<td>Employers</td>
<td>33%</td>
<td>33%</td>
<td>23%</td>
<td>33%</td>
</tr>
</tbody>
</table>
In order to find out more on how the academic staff think about this issue, we also asked questions about the responsibilities during the interviews. The results, as shown in Table 7, confirm the results from the questionnaire as regards the uncertainty about who is responsible for integrating work related learning. In Case study 1, they suggest that someone else, rather than the Director of studies or the Department Head, should be responsible. In Case study 2, 3 and 4, they suggest that School and Department management should give directives to the Program Leader who in turn should support teaching staff to integrate work related learning. In Case study 1, 2 and 3, they do not think employers have any responsibility, but in Case study 4, they suggest both HEIs and employers are responsible for the integration of work related learning.

Table 7. Responsibilities for integrating work related learning (WRL), case study interviews.

<table>
<thead>
<tr>
<th></th>
<th>Case study 1</th>
<th>Case study 2</th>
<th>Case study 3</th>
<th>Case study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Leader / Director of studies</td>
<td>They have no responsibility, preferably someone else.</td>
<td>They need to state how WRL should be integrated.</td>
<td>They can order what they think is needed, can support teaching staff.</td>
<td>They are responsible for progression in the programme, WRL should be stated as a clear task.</td>
</tr>
<tr>
<td>Teaching staff</td>
<td>A few integrate some WRL.</td>
<td>They invite guest lecturers, arrange company visits.</td>
<td>They invite guest lecturers, should be in all courses.</td>
<td>They arrange projects and company visits, they make sure what is requested really is integrated.</td>
</tr>
<tr>
<td>School management</td>
<td><em>(not applicable)</em></td>
<td>They should give directives, their priority is everybody’s priority.</td>
<td>They should give directives and support teaching staff.</td>
<td>They should give directives and set clear goals.</td>
</tr>
<tr>
<td>Department management</td>
<td>They have no responsibility, preferably someone else.</td>
<td>They should give directives.</td>
<td>They should give directives and allocate tasks and resources.</td>
<td>They should set goals and aim for strategic contacts.</td>
</tr>
<tr>
<td>Employers</td>
<td>They have no responsibility, but they can give information.</td>
<td>No responsibility, but they can give information and offer contacts.</td>
<td>No responsibility, but they can offer contacts and mutual exchange.</td>
<td>Both are responsible, they are stakeholders and they have to take responsibility.</td>
</tr>
</tbody>
</table>

**Reflection on findings**

We expected similarities between Case study 3 and 4 since they have a lot of work related learning, and also between Case study 1 and 2 since they are in similar fields and both have less work related learning in the educational programmes. The cross-case synthesis showed the following pattern:

Case study 1: They see work related learning and additional support as a task for someone else rather than for academic staff/management; they ask for resource staff and request practical support e.g. lists of contacts.
Case study 2: They have less work related learning but see most of it as a task for academic staff and some support as a task for professional staff; they request both practical and strategic support to increase it; they also ask for clear goals and support from management.

Case study 3 and Case study 4: They have come further as regards integration of work related learning; they see it as a task for academic staff; they ask for clear goals and support from management; they request practical and strategic support e.g. how to share knowledge.

Case study 1 stands out, Case study 2 is more similar to Case study 3 and 4 than to Case study 1. The pattern found is a difference between the two universities, rather than between the Case studies as regards the extent to which they have integrated work related learning.

The overall results regarding support structures indicate that they are rather limited, except the fact that there are resources in terms of employees working with alumni contacts to a higher extent at SU than at KTH. Staff at SU also request such support to a higher extent, shown both in the questionnaire and in interviews.

As regards incentives to increase work related learning, the results of the case studies, in contrast to the results of the questionnaire, show that support from management and even directives from management in terms of clear goals are requested, primarily at KTH, but also at SU. In terms of responsibilities, the results show that there is a need to clarify the responsibility.

The results regarding support structures and responsibilities both indicate that academic staff at KTH to a higher extent than academic staff at SU work in the ‘third space’ (Whitchurch 2008, 2013), but this need further research. The differences found might possibly be explained by differences between engineering education and science education as such, or between a professional discipline and a pure science discipline, which also are areas for further research.

References


Higher Education Act,
www.hsv.se/lawsandregulations/theswedishhighereducationact.4.5161b99123700c42b07ffe3956.html (accessed 2013-07-03)


This is KTH, www.kth.se/en/om/fakta (accessed 2013-07-03)

