International Journal of Teaching and Learning in Higher Education 2023, Volume 35, Number 2, 171-xxx
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Meanings of Authentic Learning Scenarios: A Study of the Interplay Between Higher Education and Employability of Higher Education Graduates

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The study is a part of the Erasmus+ project *Skill-UP: Matching graduates' skills and labour world demands through authentic learning scenarios*. Higher education provides many different opportunities for students' learning, though there are limited possibilities for them to learn through collaboration in authentic learning experiences. The article reports on a study which investigates meanings of authentic learning scenarios in higher education in relation to the employability of higher education graduates in a course within the bachelor's programme in study and career guidance at Stockholm University, Sweden. Pre- and post-questionnaires on the employability skills of new graduates were completed by final year students. In a focus-group interview, higher education teachers discussed how they achieve authenticity in these learning scenarios. The course helped the students improve their employability skills such as creative thinking, teamwork, subject-specific skills, communication and interpersonal skills, and analytical thinking. The teachers' conclusion was to keep the authentic learning scenario in the course and further develop the teaching instructions. We consider that authentic learning scenarios are of considerable benefit to higher education in relation to the employability of graduates. The conclusions drawn from the study are that the intervention with authentic learning experiences supports students to improve several employability skills. The teachers' deduction is to keep the authentic learning scenarios in their teaching at university and further develop the teaching instructions which shows that the authentic learning scenarios can support university teachers to improve their course design in higher education by incorporating the model of authentic learning.

In the knowledge triangle (research, education and innovation), the European Commission (2009) emphasises the importance of universities in the development of a knowledge-based society. According to Europe 2020 (European Commission, 2010), it is necessary to make education and training more related to future profession because students have to be better prepared for the transition from education to work. In Higher Education (HE) and continuing professional education, this has not been the case where the focus is often on specific cases and specialised knowledge. For universities, it is no longer good enough to reproduce knowledge as purely surface learning (Trilling & Fadel, 2009). Formal education can be effectively enhanced by problem-oriented approaches, since any kind of problem-solving process is inevitably a creative learning process (Richards, 2015).

Linked to the priorities of Europe 2020 strategies, the Erasmus+ project *Skill-UP Project: Matching graduates' skills and labour world demands through authentic learning scenarios* aimed to promote the employability of new graduates by strengthening the links between HE and the labour market. This study emanates from that project (skill-up-project.eu).

The aim of this study is to develop a research-based intervention in HE, in order to develop the employability skills of higher education graduates. Our research questions are:

1. What are students' statements about an implemented learning scenario in relation to ranked employability skills?
2. How do HE teachers perceive the implementation of a learning scenario in relation to employability skills and course design?

Literature Review

First, in this section the concepts of employability, competences, and skills are presented. Second, career counselling and guidance is presented in order to understand the context of the study. Third, the concept of authenticity is presented and previous research on authentic learning is described.

Employability, Competences, and Skills

The European Commission (2009) stresses the importance of universities in the development of the knowledge-based society. A deeper understanding of employers' skill requirements is necessary in order to bridge the gap between education and labour market. Hillage and Pollard (1998) argue that employability is about gaining employment, maintaining employment, and obtaining new employment if required. According to Yorke (2006), employability is what makes the students more likely to get employment, and is a combination of achievements, skills, understandings, and personal qualities. This is a more competence-centred view of employability compared to Hillage and Pollard (1998). The European Commission (2014) gives two types of definition for employability, which cover the two perspectives mentioned previously. From an

employment-centred viewpoint, close to Hillage and Pollard (1998), employability is "the ability [of graduates] to gain initial meaningful employment, or to become self-employed, to maintain employment, and to be able to move around within the labour market" (European Commission, 2014, p. 63). Then there is the competence-centred view, close to Yorke (2006), which focuses on the skills and competences graduates' gain. However, the European Commission emphasises that employability is not equal to employment. Employment-centred definitions can weaken the difference—especially when using the employment rate as a proxy to measure employability. However, the competence-based definitions can help clarify the relationship between employability and employment. When employers talk about employability beyond issues of sector-specific skills, they are usually talking about the 'soft,' 'transferable,' or 'generic' skills that they expect students will gain in HE. Regarding the notion of employability skills, we take a competence-centred approach, understood as a combination of knowledge, personal qualities and beliefs, skilful practices, and the ability to reflect critically and productively on experience (Yorke, 2006).

In order to promote graduates' employability, several taxonomies have been produced. Employability skills have been classified under diverse labels such as 'soft' skills, 'transferable' skills, or 'generic' skills. Haselberger et al. (2012) aiming to integrate soft skills into the curricula in some European higher education institutions, classify soft skills into three different groups: social, methodological, and personal. These are the soft skills considered to be most relevant both by labour market representatives and universities.

Career Counselling and Guidance

The HE programme featured in this study is the bachelor's programme in study and career guidance at a Swedish university. Career guidance and counselling (CGC) helps clients choose a career and cope with career transitions. Higher education focuses on students' pathways through their education and, to a lesser extent, on transitions from education to working life. Swedish HE has a 'third task' besides education and research, and one name given to this task is extended recruitment to HE. Universities are receiving an increasing number of students with a non-academic background, who have limited experience of transitions of working life in the academic profession. An important task for expanded recruitment is to develop career-oriented activities supporting students' career management competences.

Following Arulmani et al. (2014), researchers stress the reciprocal relationship between theory and practice. Froidevaux (2018) pays attention to a life design perspective on the transition from working life to retirement, whose purpose is to bridge the gap between two recent but distinct areas that are highly important for the 21st century. It focuses on the ways the individuals design their own lives contrary to the traditional career counselling question of what to do. With similarities to Froidevaux (2018) and Niles (2014), we define career as a lifestyle concept.

Authenticity and Authentic Learning

Authenticity has been the topic of much theoretical and empirical work. Constructivist learning and situated learning theories emphasise both social and physical settings in which learning appears. According to these theories, learning occurs in the learner's social relationships, which are unintentionally situated within the authentic activity (Amory, 2014; Lave & Wenger, 1991). The students' perception of a task connected to their lives is authenticity, according to Behizadeh and Fink (2015). According to Savery and Duffy (1996), some argue that only real-problem contexts should be presented to guarantee authenticity. Rather than physical authenticity, cognitive authenticity is the key principle (Herrington et al., 2003; Smith, 1987). Their interpretation is different in comparison to the constructivist's apprehension when it comes to physical authenticity. Thus, the understanding of authenticity differs in some ways. But there are not differences in a high extent. Authenticity occurs in the interaction between the learner, the learning environment, and the task itself (Barab et al., 2000), which certainly stress something common for the researcher. Although authenticity is composed of a number of dimensions, we refer the concept of authenticity in this study to Herrington and Herrington (2006, p. 3) where "the cognitive authenticity is the prime importance in the design of authentic learning environments. Authenticity goes beyond mere relevance."

Authentic learning is part of a growing trend toward making education and training more relevant to future professions and to better prepare students for work. According to Dahlback et al. (2020 p. 315) from their study, they experienced the authentic exam as "strongly realistic for working life." The findings also indicated that it "contributes to a learning process in which student-teachers develop authentic pedagogical and vocational didactic competence" (p. 315). Analysing a 16-week, experiential learning programme for upper-level equine science students, Splan et al. (2016) report that the students felt the programme prepared them for a professional career, but the most valuable outcomes were improvements in communication and/or the ability to work with, and value, others. Laiken's (2006) analysis of a 3-month implementation of an authentic learning environment for adult learners shows that differences among students were seen as recourses rather than

challenges, and reflection and critical thinking were encouraged. Referring to Cranton (1994), Laiken (2006) argues that the role of the authentic adult educator is to assist learners in questioning their assumptions through reflective judgement after engaging in different activities. A critical factor in her study seems to be sharing control with the facilitator, and she asks if the level of support offered to each student equalled the level of challenge. In Ladyshewsky and Ryan's (2006) investigation into peer coaching and reflective practice in a programme of postgraduate management, the students were required to form personal learning objectives linked to the course content and aligned with their authentic practice situations. Intense debate and disagreement within that environment of reliance and support stimulated deeper reflection and learning and further grounded what participants did and did not know about their management and leadership skills. Parry and Reynoldson's (2006) study of a learning environment where students construct an understanding of economics through an authentic learning task reveals a greater student engagement and a deeper conceptualisation of the role of economics in business compared with the traditional approaches.

The traditional approach to the design of learning environments holds that the best way to deal with complexity is to simplify a topic by breaking it down into its component parts. However, Perkins (1991) proposes that the temptation to oversimplify learning environments should be resisted, and that designers and teachers should search for new ways to provide suitable scaffolding and support. In this situation, the teacher provides skills, strategies, and links that the students need to complete the task. The groundwork for the notion of scaffolding lies in Vygotsky's (1978) zone of proximal development, which is described as "the distance between the actual developmental level as determined by interdependent problem-solving and the level of potential development as determined through problem-solving. Under adult guidance, or in collaboration with more capable peers" (p. 86). Vygotsky's ideas encouraged others to develop the notion of 'scaffolding,' which refers to the temporary support structure the learner needs to develop in the zone of proximal development. This structure offers only limited support, so the learner is able to solve the task on his or her own (Wood et al., 1976). Instead of providing and delivering information, the university teacher's main function is to construct collaborative, authentic, and supportive learning environments within which the learner functions. The university teacher's role moves from one where they organise content and monitor progress, to one coach (Herrington & Oliver, 2006).

One essential idea of authentic learning is that students may be more motivated to learn new information and skills compared to theory-based learning only. Results from previous research show that a high level of commitment in reflective and collaborative learning appears during the activities in authentic practice (Luo et al., 2017). The research also acts as a catalyst for university staff to design higher education and integrate authentic learning.

In the study, we used the authentic learning theoretical framework (Herrington, 2006; Herrington & Herrington, 2006; Herrington & Herrington, 2008; Herrington & Kervin, 2007; Herrington et al., 2007), in order to develop a research-based intervention. We will further develop this idea in the following section.

Method

The purpose of this study is to remodel a lecture-based course by applying authentic learning strategies, and to report on career development and counselling students' (and their university teachers') perceptions of the attempt. The higher education course Career Development and Counselling: Theories and Knowledge Traditions (7,5 ECTS) was chosen according to the *Skill-UP* project, where three different HE professional educational programmes were included. The study was carried out during Spring 2019. Two researchers (the authors), three university teachers, and 86 students participated in the study. There was one distance-based group of 26 students and two campus-based groups of 30 participants each. The career development and counselling students' assigned task was run in secondary and upper-secondary school. The majority of the schools already had a relationship with the university whereas the majority of the students were choosing schools to host their internships. The schools were not formally involved in the assessments, but they gave the students feedback during the presentations of their tasks.

The course is within the bachelor's programme in Study and Career Guidance at a Swedish university. The programme consists of broad-based occupational guidance and orients the students in the labour market and working life. The course runs in the final year of the programme. The learning outcomes of the current course, are to develop students':

- understanding of relationship between career theories and career guidance and counselling (CGC) practice, and
- capability of discussing and developing a CGC practice from the perspective of career theories.

Designing an Authentic Learning Scenario in Relation to Employability Skills

The authors took their point of departure in the *Skill-UP* project's definition of 'employability skill'—a competence-centred approach, understood as a combination of knowledge, personal qualities and beliefs, skilful practices, and the ability to reflect critically and productively on experience (Yorke, 2006). Together with one of the university teachers, a learning scenario—an authentic task—was developed for the course curricula.

Step 1: Questionnaire Design

In order to define employability skills in the *Skill-UP* project, the project members made a literature review. A total of 25 documents were reviewed, including international and national (Spanish, Swedish, and German) reports. The analysis was focused on the dimension of soft skills for employability. The ModEs project's list of soft skills was taken as a starting point, because it was considered to be the most relevant both by labour market representatives and universities. The skills that are vital for the workplace and that should be developed mainly throughout higher education training were considered. As shown in Table 1, the listed skills were sorted into four clusters, defined in a taxonomy, and based on previous research (Cinque, 2016; Davies et al., 2011; Haselberger et al., 2012; Humburg et al., 2013).

In order to relate the authentic learning scenario (ALS) to employability, a pre-questionnaire on the 'employability skills of new graduates' were completed by a pool of final-year career development and counselling students (in total 86 participants) in the selected course. The sixteen employability skills listed in Table 1 from the *Skill-UP* taxonomy were evaluated in the pre-questionnaire. The students were asked to rank the five most important skills in order to be employable in their work field. The ratings were done on a 5-point scale, where five points was the highest ranked skill and one point was the lowest ranked skill of the five most important employability skills. The pre- and post-questionnaires were electronically completed. The pre- and post-questionnaires were sent out electronically and completed online. They contained different questions. The pre-questionnaire was implemented after the course-introduction in January 2019. Sixty students out of 86 (70 %) completed the pre-questionnaire. The post-questionnaire was implemented after the course was completed. Twenty-six students out of 86 (30%) completed the post-questionnaire. The response rate was much lower in the post-questionnaire in comparison with the pre-questionnaire.

Step 2: Construction of an Authentic Learning Scenario

In order to develop a research-based intervention for the course—an authentic learning scenario (ALS)—we took the theoretical framework authentic learning (Herrington, 2006; Herrington & Herrington, 2006; Herrington & Herrington, 2008; Herrington & Kervin, 2007; Herrington et al., 2007) as our point of departure. The elements of authentic learning presented in Table 2 and the guidelines of implementation (Herrington et al., 2010) were used to develop the scenario in relation to the course's curriculum.

The course was based upon a task that aims to help the students develop their ability to discuss and develop the practice of guidance based on career development theories. The design of the development plan should be based on career development theories and career guidance and counselling (CGC) methods. The norm-critical perspective on CGC is the focus and aims to challenge perceptions and norms about career choices.

In order to provide an authentic context (the first element in Table 2), the knowledge is applied in real workplaces such as schools. The learning environment is flexible because the students choose both workplace and where to study which ordinary courses not usually offer. Due to the curriculum, the task is limited to "a plan for guidance activities and content that supports work with norm-critical guidance," but the design of the task is non-linear. The students can choose their own pathway through the task, although there are suggestions what they can start with.

Regarding Element Two, which is an authentic activity where the task mirrors the real world, every workplace must have a plan for norm-critical guidance. The students are able to work with the task over a 4-week period.

Element Three concerns access to expert performance, which was out of the university teachers' control, because it depended on which workplace the students had chosen. No experts other than the university teachers, themselves, were offered to the students.

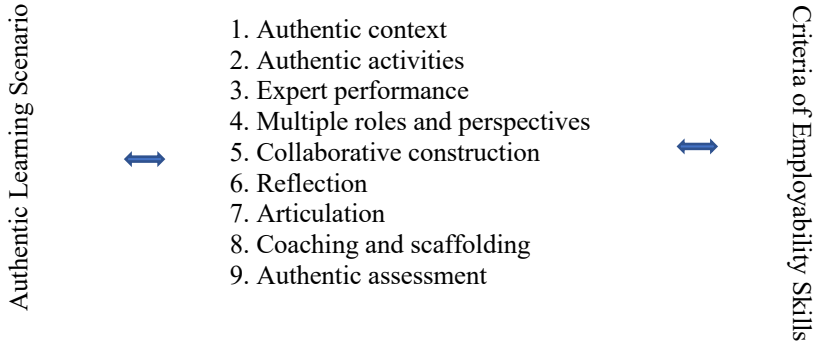
In order to plan for Element Four—to provide multiple roles and perspectives—the students were supposed to analyse different career guidance and counselling services where real counselling activities are in focus and they are able to choose information from a variety of sources. The important thing with a norm-critical perspective is to see something from different perspectives.

In order to support collaborative construction of knowledge (Element Five), the students had to work in groups of four to six and decide themselves how and where to complete their assignment. They also had to present their results together, although the grades were individual due to the curriculum.

Table 1
Part of Skill-UP's Taxonomy of Employability Skills Required for New Graduates

Cognitive	Analytical thinking Creative thinking Foreign language
Methodological	Learning to learn Problem-solving Decision-making Digital skills Results orientation Self-management
Social	Communication and interpersonal skills Teamwork Cross-cultural and diversity competence Capability to cope with change Conflict management Stress management
Subject-Specific Skills	The set of knowledge and abilities required to successfully perform a specific occupation (i.e., lawyer, accountant, teacher)

Table 2
The Nine Characteristics of Authentic Learning (Herrington et al., 2010)



To promote reflection (Element Six), the task includes decision-making, e.g., where to start the norm-critical guidance work, what workplace documents the students should use or build on, as well as what kind of theories they should use.

In order to promote articulation (Element Seven), the task required discussion and an understanding of the theories that promoted articulation of their personal ideas and reflections both on the student group and on the learning management system where they communicated. The students presented the task at the end of the course where they had to articulate their decision-making and justify their choices.

Regarding Element Eight—providing coaching and scaffolding, university teachers were available with scaffolding, e.g., the two-step construction of the task and the suggestion to use a strengths, weaknesses, opportunities, and threats (SWOT) analysis. The Learning Management System (LMS) and the internet were allowed to the students as a means of technical support.

The last element, to provide for authentic assessment, the students presented the task at the end of the course for the other students, teachers, and stakeholders.

Step 3: Post-Questionnaire

In Part One of the post-questionnaire, the students were asked to rate their improvement in the sixteen assessed skills identified in Table 1 from the pre-questionnaire. It was done on a 5-point Likert scale: 1 = not at all, 2 = somewhat, 3 = uncertain, 4 = partially, 5 = a lot. The teachers were asked to what extent the students had been able to improve those skills during the course.

In the second part of the post-questionnaire, 16 statements were formulated in order for the students to assess the ALS being used in their course. The 16 statements were based on evaluations questions from Herrington, Reeves, and Oliver (2010). The students were asked about their agreement with the statements on a 5-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree. The teachers were asked the same question.

Step 4: Interview Design

To answer the second research question—How do higher education teachers perceive the implementation of a learning scenario in relation to employability skills and course design?—a focus group interview (Marshall & Rossman, 1999) was done. According to Wibeck (2010), there are three factors that characterise a focus group. First, it is, in itself, a research technique. Second, data is collected through group interaction. Third, the researcher has determined the topic. This type of interview can result in ethical problems, for example, someone who dominates the discussion where not all voices are heard. In addition, transcription takes a long time and can often be harder than in individual interviews (Trost, 2010; Wibeck, 2010).

In this study, three university teachers who taught the course were interviewed on one occasion. Before the interview, the teachers were asked to rank the five prioritised 'employability skills' as the students were asked in the pre-questionnaire. The teachers were also asked to what extent they agreed with the statements about the learning scenario in the course, as the students did in the post-questionnaire. The teachers got the questions in advance. The interview was recorded and transcribed verbatim. The transcription was simplified and some elements removed, for example, sighs, smiles, or breaks.

Ethical Considerations

We dealt with the security, anonymity, and the confidentiality of our data. The participants were well informed, and the conditions and implications of participation were clearly defined for them. The pre-questionnaire and post-questionnaire were anonymous and the focus group interview was confidential. Participation in the survey was voluntary, as well as in the interview, and they could cancel their participation whenever they wanted. The empirical data will be available only for research purposes (Swedish Research Council, 2017). It is important to acknowledge that some of these findings may be driven by bias resulting from sample selection, due to us only being able to evaluate the students who enrolled in the course where the authentic learning scenario took place and the three university teachers who ran the course.

Results

The results that follow are presented according to the research questions.

Students' Statements About the Authentic Learning Scenario on Employability Skills

In Table 3, the first column shows the percentage of students who ranked each employability skill as one of the five most important skills in the pre-questionnaire. The question was "Please check the five employability skills you consider the most important to be employable in your field." The highest-rated skills were: communication and interpersonal skills, creative thinking, cross-cultural and diversity competence, and problem-solving; with self-management and teamwork tied for fifth place. These illustrate the social, cognitive, methodological cluster in Table 1, but not the fourth cluster subject-specific skills.

The second column in Table 3 shows the percentage of students who thought the course had helped them improve each of the 16 employability skills. The question in the post-questionnaire was: "Which skills has the course helped you to improve?" The employability skills the course most helped the students to develop were: teamwork, creative thinking, learning to learn, analytical thinking, and subject-specific skills tied for fourth place. Comparing this to the results in the pre-questionnaire, subject-specific skills was ranked among the top five and, with that, all four clusters of skills in Table 1 were covered. Creative thinking was still highly ranked as in the pre-questionnaire, whilst cross-cultural and diversity competence was not highly rated in the post-questionnaire. In the pre-questionnaire, the students did not highly rate subject-specific skills (Table 3). In the

post-questionnaire, however, subject-specific skills, was among the highest-ranked options (Table 3).

In the second part of the post-questionnaire, evaluation of the ALS applied in the course was also in focus (Table 4). Sixteen statements were formulated in accordance with the theoretical framework authentic learning (Herrington, 2006; Herrington & Herrington, 2006; Herrington & Herrington, 2008; Herrington & Kervin, 2007; Herrington et al., 2007).

The students' five highest-ranked statements about alternate learning systems (ALSs) embraced all of the clusters mentioned in Table 1—social, methodological, cognitive, and subject-specific skills. The students worked in collaborative groups (92%) that enabled discussions and social reflection (social and cognitive). They were able to explore issues from different points of view (80%, cognitive), were required to make decisions about how to complete the task (79%), and had to choose relevant information from a variety of inputs (76%, methodological and subject-specific). The students said they could compare their thoughts and ideas to others (75%) such as experts, university teachers, guides, and fellow students (subject-specific and social). According to the evaluation, the students favoured more cognitive skills—even though there was a spreading of methodological, social, and subject-specific skills.

How Do Higher Education Teachers Perceive the Implementation of a Learning Scenario in Relation to Employability Skills and Course Design?

Table 5 shows the results of the teachers' ranking of employability skills and which of these skills the course helped the students to develop. During the interview, the teachers argued for their chosen statements and the relationship between their teaching, the authentic learning theory of the learning scenario, and the various employability skills. Remarkable to the understanding of the teachers' ranking of the employability skills, in both rankings previously mentioned, is the relations to all clusters of employability. One of the highest ranked skills, before ALS and after, is subject-specific skills. The teachers found that the students needed theoretical knowledge to define and experience different choices to find solutions of the current task. The teachers' arguments are summarised after each category they considered to be most important in the pre-questionnaire. Ultimately, these are excerpts of their general thoughts about authenticity and possible deficiencies.

Skill 1: Creative Thinking

The teachers speak about theories and subject-specific skills as necessary pre-conditions for creative thinking.

> C: With the help of the theories, they can think outside the mind-sets that are already in the business. They showed that they were thinking more based on current needs rather than on a routine basis.

Skill 2: Subject-Specific Skills

In this example, the importance of theoretical knowledge emerges. Even here, the teachers stress that subject-specific skills are pre-conditions for problem-solving.

> C: Problem-solving was encouraged in the task because there was no right answer. It is more about this being a situation that you need to handle and it is what real business looks like. There are no right ways. Problem-solving can also be about starting from the resources and opportunities that exist. And it was what failed for one of the groups when they neither made their development plan in relation to the business nor used the theories.

Skill 3: Self-Management

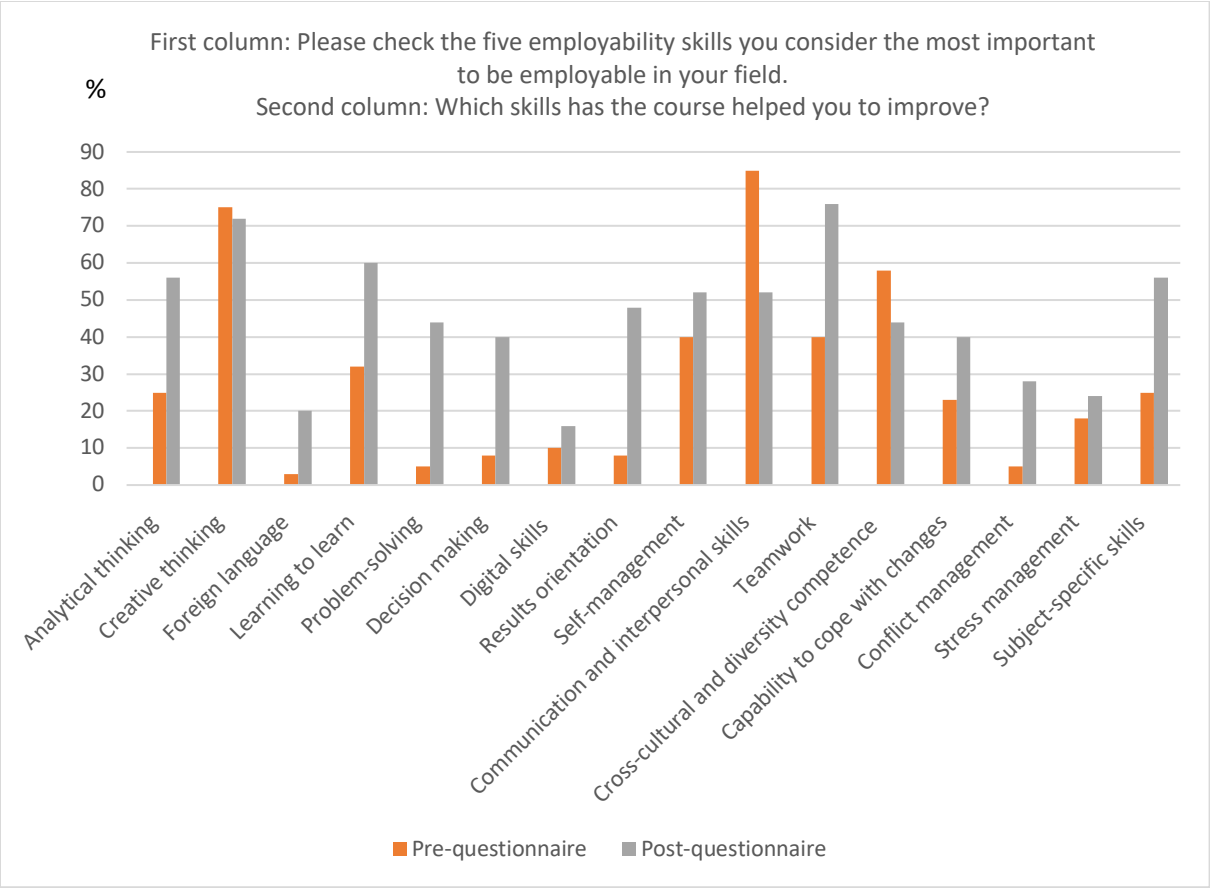
This excerpt shows the belief that the course represented a setting where the skill or knowledge could apply. It also encompasses time management, organisation, responsibility, and self-reliance. After some time, the teachers also thought that the students' engagement increased. In this case, the task was open and complex, but in some respects pre-defined. The teacher intended to include ill-defined activities that had real-world relevance.

> C: I think that the form of the task was in some way pre-defined, but they got to control it themselves, and they felt lost and I think that is a good sign that the task was open and complex. They were frustrated and thought it was a difficult task, but after a while they were really engaged and thought it was very good, they had to organise how they should conduct it, how they would do the interviews and how they would perform. I think you can say that the engagement was far better than usual.

Skill 4: Communication and Interpersonal Skills.

The teacher experienced the importance of theories in almost all activities related to the task. The theoretical aspect seemed to be embedded in the task and was inevitable in an authentic learning scenario. The teachers said the ALS allowed the students to train this skill, although it was not ranked among the five most highly ranked skills after the ALS by the teachers.

Table 3.
Results of the Pre-Questionnaire and the Post-Questionnaire Part One



A: The theories were another thing that got them started with this task. This is the very thing to make a development plan or an idea of one—that is the part that makes them solve problems and think creatively. It encouraged argumentation and exchange of ideas and perhaps also stimulated creativity.

Skill 5a: Capability of Coping with Change

The teachers said that the ALS allowed the students to train this skill, although it was not ranked among the five most highly ranked skills after the ALS by the teachers.

A: It was the combination of theories that they should go through, and then they became a little insecure when they should do this practical task. In other courses, one should have a literature seminar instead. It was that they did not receive any solid instructions. Then there may have been uncertainties about what a development plan was.

Skill 5b: Teamwork

Teamwork includes collaboration with fellow students, experts, university teachers, and stakeholders, both face to face and in online environments.

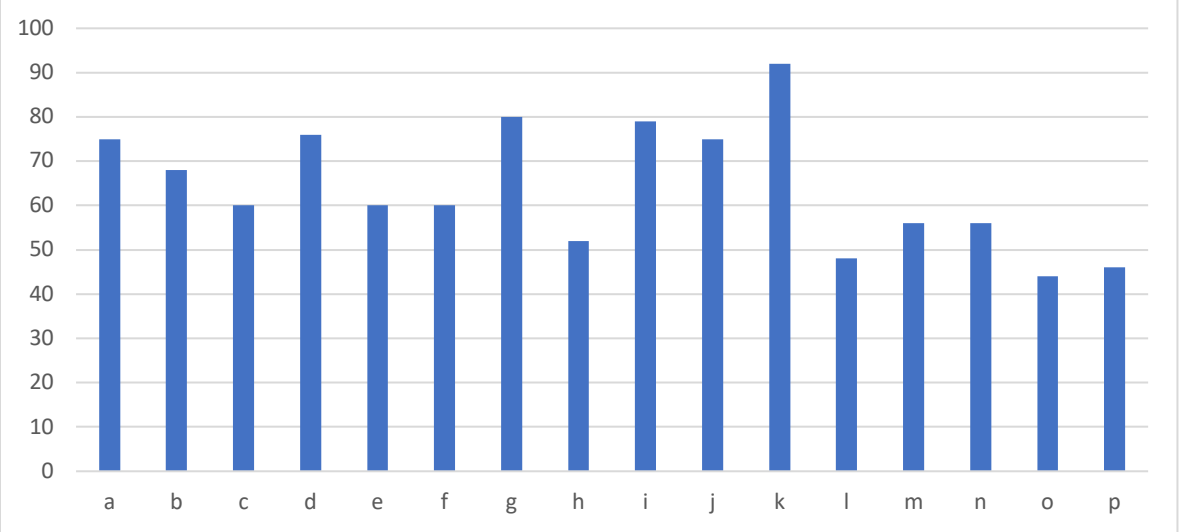
C: They really had to discuss both with each other and with others.

B: I think the most important difference, compared to our former assignment, was that they really had to collaborate with the school staff .

Apart from statements about the employability skills, the teachers reflected on the authentic learning scenario (ALS) concerning the theoretical framework of authentic learning, and talked about deficiencies and further development.

C: The task is what is expected of the students in working life. It was demanding. It required something completely different, not just

Table 4
Students' Evaluation of the Authentic Learning Scenario



Note: (a) The context represented workplace settings. (b) The task mirrored real world applications. (c) The task presented a complex problem. (d) We could choose from a variety of inputs. (e) The tasks and strategies are relevant to other disciplines and broader knowledge. (f) The learning environment provided access to expert skill. (g) We were able to explore issues from different points of view. (h) Grades were given for group effort. (i) We were required to make decisions about how to complete the task. (j) We could compare our thoughts and ideas with those of others. (k) We worked in collaborative groups. (l) The task enabled articulation and defence of arguments. (m) A teacher was available. (n) Performances were polished and refined. (o) We participated in the activity for extended periods of time. (p) There were multiple assessments.

Table 5
The University Teachers' Ranking

Highest-Ranked Employability Skills Among Teachers Before the ALS	Highest-Ranked Employability Skills that the Course Helped the Students to Develop
1. Creative thinking	1. Subject-specific skills
2. Subject-specific skills	2. Creative thinking
3. Self-management	3. Problem-solving
4. Communication and interpersonal skills	4. Teamwork
5. Capability of coping with change/teamwork	5. Communication and interpersonal skills

Table 6
The Teachers' Five Highest-Ranked Statements About the Authentic Learning Scenario

1.	The context of the course represented the kind of setting where the skill or knowledge is applied.
2.	The students were able to choose relevant information from a variety of inputs, including relevant and irrelevant sources.
3.	The learning environment provided access to expert skill and opinion.
4.	The students could compare their thoughts and ideas with those of experts, teachers, guides, and to other students.
5.	A teacher, guide, or helper was available to provide contextualised support.

> conducting a business without actually doing anything in relation to that business.
>
> A: I think that some of the presentations would have been more refined and polished if they had had more time. Maybe it has to be implemented earlier in the education.
>
> B: Then it was the time aspect—there was too little time for them.
>
> B: Perhaps it was a shortcoming that we had not prepared them for what a development plan might be. They might have needed a little more support than they got, at the same time, they solved it. It may be that everything is not predefined because it is so it will be.
>
> C: We need to integrate the development plan and work together with norm-critical theory. We will certainly keep this authentic learning scenario in the future but further develop our teaching according to it.

The teachers thought that the course did not help the students develop two of the highest-ranked skills before the ALS (*Self-management* and *Capability of coping with change*). Instead, the skill of problem-solving was highly ranked in third place.

The statement with the highest score from the teachers ("The context of the course represented the kind of setting where the skill or knowledge is applied") could relate to the skills of *Problem-solving* and *Creative thinking*, which were highly ranked by the teachers as the second and third most important skills. The second highest statement ("The students were able to choose relevant information from a variety of inputs, including relevant and irrelevant sources") relates to skills such as *Decision-making, Problem-solving* and *Creative thinking*. *Decision-making* was not ranked before the ALS or after. The third statement ("The learning environment provided access to expert skill and opinion) could relate to highly ranked skills such as *Communication* and *Subject-specific skills*. The fourth ranked statement ("The students could compare their thoughts and ideas to experts, teachers, guides, and to other students") relates to *Communication and interpersonal skills* and *Teamwork*. This was the only statement that agreed with the students' five highly ranked statements about the ALS. The fifth statement ("A teacher, guide or helper was available to provide contextualised support") could also relate to *Communication and interpersonal skills.*

Discussion

In this section, we will discuss the students' statements about the authentic learning scenario in relation to employability skills and the teachers' perceptions of the implementation of a learning scenario about employability skills and course design.

The students in this study considered the course and the ALS enhanced many different employability skills. The focus of the four clusters (cognitive, social, methodological, subject-specific) of employability skills changed; before the course there was a focus on social competences such as communication and interpersonal skills as well as cross-cultural and diversity competence. After the ALS, the students said to place cognitive skills in first place and there was an even spread of social, methodological, and subject-specific skills, which shows the ALS offered various possibilities to enhance different employability skills. The first-ranked skill in the post-questionnaire was teamwork, which correlates with Splan et al.'s (2016) research where the ability to work with others was one of the useful effects. The second most valued employability skill in the post-questionnaire was creative thinking, which could mean the learning environment was perceived as trustful and supportive, encouraging disagreements to promote deeper reflection and learning (Ladyshewsky & Ryan, 2006). Regarding the nine characteristics of authentic learning, the students did not include authentic context, authentic activities, or authentic assessment (1, 2, and 9) among the five highest-ranked statements. They did not express perceptions of authenticity as per Behizadeh and Fink (2015), but were more focused on the course process in their statements. Maybe the students did not have enough work experience to judge what an authentic task was, although both researchers and teachers were surprised over the result since the task was performed in a real business. Regarding the assessment, stakeholders were invited but no one showed up so the assessment was not any different than usual, apart from the researchers' presence. Concerning the students' perceptions of constraints with the ALS, they mentioned a need for more teacher support halfway through the period and during the work, in their post-questionnaires. Specifically, the extra support required was related to how to do a SWOT-analysis and a definition of a development plan, which can be interpreted as a lack of scaffolding (Wood et al., 1976).

The teachers ranked all four clusters of employability skills before and after the ALS. The subject-specific skills were ranked highest in the post-questionnaire and the teachers kept talking in the interviews about the importance of theoretical knowledge, which is interpreted as a subject-specific skill. They stressed that theories as subject-specific skills

are necessary as a pre-condition both for cognitive, methodological and social skills, and that the ALS really had made them pay attention to the reciprocal relationship between theory and practice (see Arulmani et al., 2014). Reciprocal relationship seems to be differentiated from students in the study Ferm (2021) performed. In here, investigation "students selected and made use of theoretical knowledge that supported their workplace-based learning. This meant that they handled the academic/vocational divide by attributing meaning not only to practical knowledge, but also to theoretical knowledge that they thought was useful for mastering a vocation and forming a vocational identity" (p. 13). In this case, theoretical and practical knowledge has been attributing meaning, but without reciprocal relationship. Regarding the nine characteristics of authentic learning (Herrington et al., 2010), the teachers included all characteristics except the last one (authentic assessment) among their five highest-ranked statements about the authentic learning scenario. The first-ranked statement included both the characteristics of an authentic context and an authentic task, which the students did not express at all. That was the most prominent difference compared to the traditional task, which was to suggest a developmental plan. This type of authenticity coincides with the notion of authentic problems as per Strobel et al. (2013) even if it is also aligned with the educational curriculum's purposes. The teachers expressed several constraints of the ALS. Concerning the time-aspect, the teachers considered the scope of the task too big for the estimated time, even though there is often a lack of time in an authentic context. A longer period of time may have resulted in greater student engagement, higher motivation (Luo et al., 2017), deeper conceptualisation of their role as career counsellors (Parry & Reynoldson, 2006), and more higher order thinking (Herrington & Oliver, 1999). There was also a lack of access to more experienced. At the end of the focus group discussion, the teachers concluded that the students solved the task anyway and, if everything had been predefined, it may not have been authentic. This shows that there is a delicate balance for the facilitator's role regarding between how much coaching and scaffolding should be offered to create an authentic learning environment. If teachers offer as much coaching and scaffolding as the students want, it would be to the cost of the task's authenticity, which can lead to less reflection among the students (Herrington & Kervin, 2007). This also highlights the delicate balance required when authentic activities are designed, as well as the critical component Laiken (2006) addresses, which is sharing control of the facilitator.

Conclusions

According to the results, the course helped the students improve several employability skills. The framework of authentic learning (Herrington, 2006; Herrington & Herrington, 2006; Herrington & Herrington, 2008; Herrington & Kervin, 2007; Herrington et al., 2007) supported the university teachers regarding the reciprocal relationship between theory and practice. The teachers' conclusion was to keep the ALS in the course and further develop the teaching instructions which showed that the ALS and the model of authentic learning can act like a springboard for university teachers to design higher education and incorporate authentic learning (Luo et al., 2017). The framework of authentic learning provides university teachers with a holistic perspective for supporting learners by creating environments that value the social, experiential, participatory, and interpersonal dimensions of experience (Herrington & Herrington, 2006).

Based on these results, we consider that ALSs are of high relevance to HE regarding employability, and an important area for development regarding course design. For further research, we suggest studying the possibility of introducing ALS to different professional programmes in different countries.

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