Symposium: Enhancing Future Skills Learning in Higher Education – a Toolbox

Abstract

Participants are invited to an interactive symposium on FS-teaching and learning in practice-oriented higher education. Together, we want to explore the character of the FS concept as well as its relevance and integration opportunities in higher education – and what role the integration of theory and practice can play in this. In order to stimulate discussion, we will provide a first prototype of a FS learning toolbox. In groups, participants are encouraged to reflect on the provided materials and discuss how to use them to promote students' FS learning as well as ideas for further development.

Keywords:

Future Skills; Practice integration; Dual higher education

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Introduction

Future Skills (FS), the necessary competences to master global future challenges, have become one of the hot topics in the debate on future higher education. Students must learn and enhance the competencies needed to master today's and future challenges such as digitalisation, globalisation, and climate change. FS learning can be promoted by integrating theory and practice and fostering reflection on it – with an important potential for FS learning in practice-oriented or dual higher education (Ehlers, 2020, pp. 256–257). Recently, we launched a research initiative, which is targeting dual study programmes for developing an integrated approach for students' FS learning journey. An ePortfolio tool is being developed for accompanying the students' individual learning journeys, allowing for peer feedback, coaching, and mentoring processes in all parts of the student lifecycle. We are convinced that there is potential for FS learning in all study programmes, especially with integrated practice phases. The developed tools and materials of this project will also be provided as open access solutions for other institutions to adapt them for their own needs.

Educators and teaching professionals from all disciplines and especially those with a focus on management, leadership, and organisational behaviour are invited to an interactive symposium on FS-teaching and learning in practice-oriented higher education. Together, we want to explore the character of the FS concept as well as its relevance and integration opportunities in higher education – and what role the integration of theory and practice can play in this. In order to stimulate discussion, we will provide a first prototype of a FS learning toolbox. In groups, participants are encouraged to reflect on the provided materials and discuss how to use them to promote students' FS learning as well as ideas for further development. Participants are encouraged to bring in their own perspectives and experiences in order to develop innovative ideas for FS learning and share them in plenary.

At the end of this session, participants…

- know the FS concept and can explain its relevance for their field of teaching

- know different tools for promoting FS teaching and learning in (professional or practice-oriented) higher education

- have developed ideas on how to integrate FS via self-reflection and self-assessments actively in their lectures.

We are looking forward to different perspectives and will valorise diversity in participants' professional profiles.

Theoretical Foundation/Teaching Implications

FS are competencies that enable individuals to solve complex problems in a self-organised manner and to act (successfully) in emergent contexts. They are based on values as well as on cognitive, motivational, volitional, and social resources and can be acquired in a learning process (Ehlers, 2020). The diagnosis that current concepts do not represent convincing future concepts for the urgent challenges of our societies (Hippler, 2016; Kummert, 2017) is the starting point for the debate about FS in educational science and policy. With the NextSkills studies, Ehlers (2020) identified 17 FS profiles, each containing a bundle of individual reference competencies adding up to a competence constructs with a particular content profile (Figure 1).
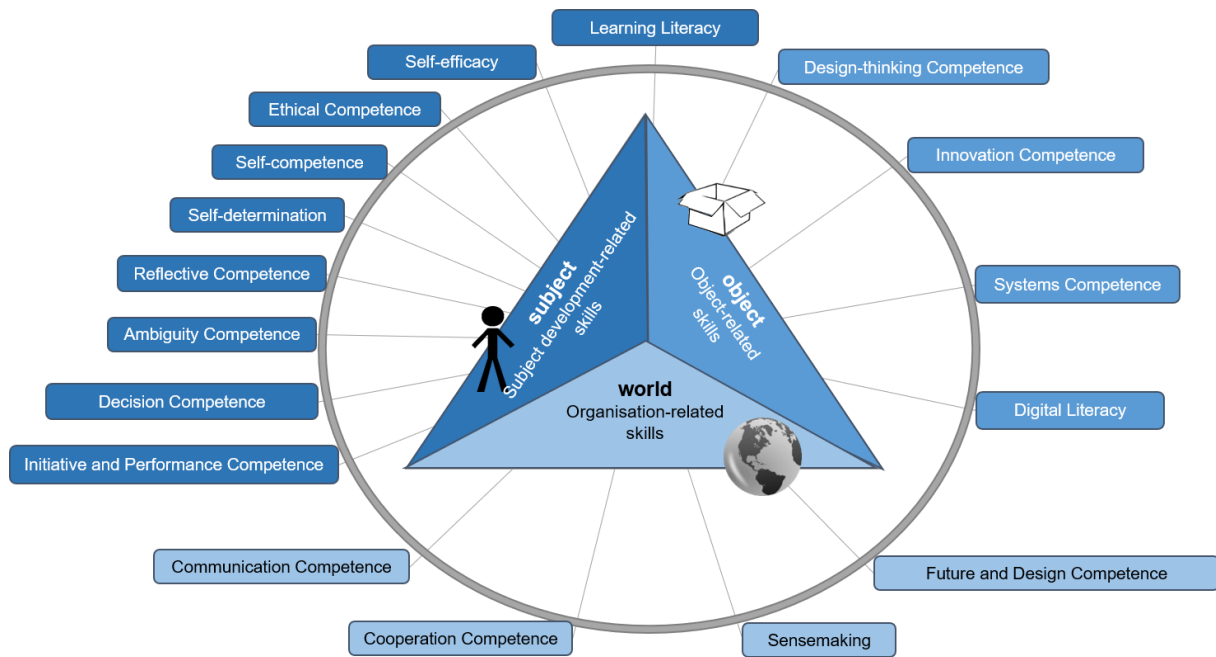
Figure 1 - Overview of Future Skills Profiles and Dimensions

The concept of emergence is decisive for delineating FS from competencies that are not particularly future-oriented: Contexts of action that exhibit emergent developments of life, work, organisational, and business processes require FS to for successful coping. The dividing line that separates previous/traditional areas of work from future areas of work is fluid. Consequently, the relevance of FS is an evolving area and not a binary "either-or-state".

Figure 1 shows the breakdown of FS into the three competence fields. This division is based on the recognition that the FS required to cope with the demands of action can be structured on the basis of the three following interacting dimensions, which influence each other:

1. individual development-related FS: relating to one's ability to develop as a person,

2. individual object-related FS: relating to the handling of specific objects, work tasks and problems, and

3. organization-related FS: relating to dealing with the social, organizational and institutional environment.

Future Skills development in dual and practice-oriented study programmes

Despite the enormous successes of dual study programmes in the last years, students see unused potential in the interlinking of theoretical and practical study phases (Deuer & Wild, 2018, p. 6; Statistisches Landesamt Baden-Württemberg, 2018, 57 ff.). While the development of important action competencies using portfolio-based learning and reflection methods has been proven and researched for quite some time in the area of the transition from university to work (see Miller & Volk 2013), it has never been specifically tested and made usable for dual study programmes.

Research points to a gap between the conceptual claim of dual study programmes and the empirically ascertainable reality. This claim refers to dovetailing the theoretical study content with the learning experiences of the practical study phases, i.e., combining them in intentional, planned and controlled learning processes that then lead to the acquisition of professionally relevant and individually meaningful action competencies (Schröder-Kralemann et al., 2015). Gerstung and Deuer point out that students perceive by far the greatest need for improvement in the interlinking of theory and practice in the teaching and learning processes of dual studies (2020, p. 16). According to Schröder-Kralemann et al. (2015, p. 51), competencies in the area of theory-practice transfer are a central area of development in dual studies, which is also considered important by the dual partners and which can be classified in more general challenges of integrated competence acquisition for dual universities (2015, p. 94). From an educational science perspective, the existing gap can be closed by a student-centred learning reflection approach that supports students in their self-directed competence development between theory and practice.

A reflection-based learning approach is particularly suitable for the development of action competencies (Ehlers, 2020). The basis for this is a cyclical reflection model or learning cycle according to Kolb, which consistently combines learning based on practical experience (Hilzensauer, 2008, p. 4). Four phases are central to this: a concrete experience (1)

is observed and reflected upon (2), abstracted (3), and transferred back into an experience in practice (4). These phases are primarily associated with reflexive skills or competencies on the part of the students (on this fundamentally Kolb & Fry, 1975). Accordingly, the dual study programme is particularly suited to stimulate reflective learning in students and a tool that contributes significantly to supporting reflection and abstraction, for example by linking concrete experiences with a FS self-assessment is being developed on the basis of this model. The model's circularity is considered by continuous processing over the student lifecycle.

Research on the use of ePortfolios at the interface of university and profession as well as in the education of students in the teaching profession indicate the suitability of these concepts for successful competence development (Miller & Volk, 2013). A corresponding model must also be developed for the interlinking of theory and practice phases in dual studies.

Symposium Overview

The symposium focuses on the question how FS learning can be truly integrated into lectures and study programmes via reflection, self- and peer-assessment, and coaching/mentoring. This challenge holds a big potential, especially in study contexts that strive for a strong interlink between theory and practice, such as the dual study system.

We will present a project developing an ePortfolio tool and coaching/mentoring concept to promote and support the FS development in theory-practice-learning-spaces throughout the whole student lifecycle. After elaborating on the concept of FS and FS learning through self-reflection and experiential learning, the starting point of the discussion will be the presentation of a "construction kit" containing several modules and building blocks which can help to foster FS learning in theory-practice contexts. However, many different framework conditions need to be considered to promote competence development throughout the study experience depending for instance on the type of university, discipline,

study mode. The symposium should give all participants the chance to exchange opinions, experience and expertise on the topic of FS development across different backgrounds.

Participants are invited to (1) discuss how FS development can be promoted in higher education via self-reflection and self-assessment, (2) evaluate and select modules from the "construction kit" that fit their needs in this context, (3) debate on framework conditions that impact the implementation of these measures.

Therefore, we will give a short presentation on the FS theory and research as well as a research initiative. Afterwards participants will share their experiences with competence learning and discuss the above topics in groups of five to eight people. Since we will offer a hybrid session, we will also make sure the people participating online will form a separate group. They will de-construct the given construction kit, identify which framework conditions and requirements exist regarding FS learning in their own lectures, and then re-build the construction kit according to their needs. The result might be one or even more modified FS learning kits per group, displayed via flip charts and/or pinboards. If there are enough participants who are interested in and responsible for whole study programmes, they might form a separate group, who is discussing the issues on a level above singular lectures/modules. At the end, each group will present their findings briskly in the plenary and a guided discussion follows. The aim is that before leaving the session each participant will formulate one concrete take-away and tell the others which steps they are planning to undertake after the conference to enhance FS learning in their lectures.

Session Description

Before the symposium

When entering the room, participants are asked to note their profession / field of teaching on a pinboard. This step is important for the group work phase, because participants with similar professional backgrounds and current tasks are gathered in one group (e.g. all educators teaching in MBAs in one group and all participants leadership in undergraduate economic degrees in another group) in order to bundle common goals and interests.

Part 1 (20 minutes) – Impulse contribution

In the first 20 minutes we will pitch the research initiative, present the demonstrator of the tool and the "construction kit", and give a brief introduction to the FS concept and why FS are gaining more and more relevance in higher education.

Part 2 (40 minutes) – Group work

Participants will gather in groups of five to eight people and discuss the following questions / follow these steps:

1. Think about one of your lectures which is especially suitable for integrating FS learning. Do you already enhance FS leaning pro-actively in this lecture? If yes, which methods do you use? If no, why not? Note your thoughts on cards and share with your colleagues.

2. When de-constructing the research initiative construction kit, which methods and occasions for reflection and FS learning do you consider most suitable for your lecture? Why? Are there any suggestions you find irritating and/or unsuitable for reflection and FS learning?

3. Together with the whole group, try to re-assemble the building blocks of the construction kit in a way that it suits your lecture. You can leave blocks out and add

new ones with your ideas and innovations. Which special framework conditions that are crucial for a successful implementation did you identify?

4. Present your results on a flip chart or pinboard.

We will accompany the process and support the groups with further information on FS learning, self-reflection, and self-assessment if needed. Furthermore, we can support the documentation process and the discussions by giving further guiding questions.

Part 3 (15 minutes) – Presentation of group work results

Each group will present their results in an elevator pitch (two minutes maximum) and the plenary can ask questions for a further two minutes. We will take notes of the most pressing questions from the audience and can get back to them in the next step.

Part 4 (15 minutes) – Conclusion, feedback and flashlight query

The symposium closes with a short discussion of the most pressing questions from the audience and a conclusion of key findings. Participants have the chance to give feedback on the symposium and are encouraged to formulate a key take-away on what they are going to do concretely to enhance FS learning in their lectures in a flashlight query.

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