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WORK-INTEGRATED LEARNING FRAMEWORK AT UNIVERSITY

Abstract: Work-integrated learning helps to coordinate the theoretical training of students with future practical activities in the workplace, gives an opportunity to business, university and the state to participate in joint activities for innovative development in all sectors of the economy and achieve their organizational and national goals. Work-integrated learning is practiced in most countries, but it is not a common feature of all universities. Stakeholders, university, industry organizations and students, there is a gap in empirical research in terms of identifying the interactions and roles of stakeholders in work-integrated learning framework. The purpose of the study was to create a framework of work-integrated learning at a university, with the inclusion of three stakeholders involved in this process: an industry and an academic mentor, and a student. In this framework, the stages of work-integrated learning were developed, the functions of the participants of work-integrated learning at each stage, teaching methods and learning outcomes were characterized. At the theoretical level, this framework contributes to the amount of knowledge about work-integrated learning in universities. On a practical level, the study has a positive impact on students, the university and industry organisations that become partners in work-integrated learning. The created framework will contribute to the improvement of educational results, better preparation and compliance of graduates with the requirements of the labor market.

Keywords: framework, work-integrated learning, industry mentor, academic mentor, student, university, labor market, employment.

Introduction

Universities play a key role in shaping the future of society's human capital. In order for graduates to successfully interact with the ore market and fulfill social roles in society, they must be prepared for effective participation in the economy and social life. To do this, it is necessary to integrate new framework of training, with an emphasis on the connection between theory and practice. Work-integrated learning is one of the tools to solve this problem, as it contributes to increasing the effectiveness of training through the practical experience gained in the workplace. Work-integrated learning also offers a partnership approach between business, universities and the state for the joint development of industries and solving current problems.

The movement of students between universities and industry enterprises contributes to the development of new framework of education and increases the motivation of students. Cooperation between industry organizations and universities helps to improve educational programs, improve employment opportunities, develop management skills and contribute to adaptation to working conditions.

The introduction of work-integrated learning in the educational programs of universities remains an important task. The problems of introducing work-integrated learning are associated with the flexibility and variety of framework offered by universities. There are several common framework of work-integrated learning at a university. Some frameworks include bilateral relations between universities and industry organizations, the transfer of knowledge and resources, and the development of educational programs. Other frameworks

include the involvement of industry organizations in the early stages of program development, the use of new equipment. The only common characteristic for all framework is the acquisition of practical experience.

To ensure the success of work-integrated learning, it is necessary to work to ensure that the work experience gained by the student has a real effect. This implies active interaction between students, industry organizations and universities, as well as the coordination of educational programs. This requires a framework of work-integrated learning at the university, reflecting the interaction of all participants in the process.

The presented framework of work-integrated learning at the university gives students the opportunity to contribute to the improvement of the organization's work by performing tasks in the working environment. Universities, using the working environment in the training of students, receive information about the current situation in the industry and thereby graduate more qualified workers.

Universities are the main center of concentration of the country's future human capital. According to Becker, human capital "is a set of knowledge, skills, and abilities used to meet the diverse needs of a person and society as a whole" (Barabanova et al., 2018). Universities should provide education that allows graduates to find employment and perform socio-economic roles in the labor market and society, effectively and efficiently contribute to and develop the local and global economy (Nicholas, 2017). To do this, new frameworks of training should be integrated, contributing to the connection of theoretical training with real practical experience. One of the solutions to this issue may be the introduction of the work-integrated learning framework into the pedagogical process.

Work-integrated learning brings an element of "realism" to learning, which increases its effectiveness. On-the-job training, as one of the stages of work-integrated learning, creates an environment in which trainees are active participants in the learning process. This increases their self-confidence, complements theoretical training, improves practical knowledge and skills, and expands opportunities for further employment.

Work-integrated learning provides business, the university and the state with the opportunity to achieve their goals according to the "triple helix" framework for the effective development of new industries and solving problems in existing ones (Etzkowitz and Zhou, 2017).

In the process of work-integrated learning, there is a circulation of subjects between institutional and sectoral spheres, as a result of which new ways of organizing the work of teachers appear in universities.

It is necessary to develop and adapt frameworks of work-integrated learning in such a way that students are highly motivated (Kim et al., 2015). Cooperation between industry organizations and universities in the development of such learning frameworks is extremely important, as it contributes to improving employment opportunities, career development, development of managerial skills, as well as readiness to adapt to production conditions (Khasanah, 2020). Leaders of industry organizations believe that the best way to teach professional skills is on-the-job training, where students gain practical work experience (Leong et al., 2013). An important goal is the convergence of supply and demand in the labor market, especially in relation to specialists who excel in their fields (Muslih, 2014). Training that integrates with work (work-integrated learning) aims to create training that is as close as possible to natural work situations.

Work-integrated learning provides students with the opportunity to gain work experience and improve their work skills. It is considered an important means of preparing graduates for work in a real working environment. Conducting work in practical conditions occurs through the interaction of students with industry organizations to gain practical experience (Karim et al., 2019). In some fields, such as business, psychology and industry, work-integrated learning

helps to fill significant gaps in graduates' readiness for the workforce (Jones, 2016). The process of implementing work-integrated learning includes the exchange of information and ideas about work, support in the process of making decisions about employment and the development of strategies for the performance of work (Jackson, 2015).

Work-integrated learning solves the following main issues that may arise in the learning process:

- development of cooperation between industry organizations and universities in the introduction of work-integrated learning, which is necessary to improve the quality of graduates;
- involvement of employers in the process of training future specialists;
- combining academic learning experience with practical industry experience;
- Introducing alternative approaches to teaching methods and student assessment;
- development of professional skills of students;
- increasing the number of high-quality graduates who are ready for professional activities.

Despite the latest achievements in this area, the introduction of work-integrated learning in educational programs remains an important task for universities.

Types of work-integrated learning may include placement in an industry organization, framework ing, industrial projects and internships.

Placement in an industry organization – students undergo on-the-job training for a certain period of time, it can vary from one to two semesters. Accommodation can be full or partial.

Simulation – allows students to apply theoretical knowledge in practice and develop skills for solving real problems in conditions that are as close as possible to the working environment. This type allows students to get a realistic and valuable experience.

Industrial projects are tasks that involve specific activities, are performed in the workplace, and offer specific activities, including product development. These projects can be carried out individually or in groups, and the students who participate in them learn the relevant areas in collaboration with industry mentors, to the mutual benefit of all parties involved.

Internships include fieldwork, internships, and other similar activities.

The problems of implementing work-integrated learning programs are widely known in the professional environment. These problems are related to the flexibility and variety of frameworks implemented by universities.

There are several common frameworks of work-integrated learning in universities.

Work-integrated learning frameworks that create a two-way relationship between a university and an industry organization, through various activities and resources (Lynne B., 2003).

Frameworks in which industry organizations participate in the early stages of the development of educational programs, install new equipment in the laboratories of the university. This involves modernizing the teaching facilities of higher education institutions to meet the needs of industry organizations, in particular for the dissemination of new technologies. Also, these frameworks involve the study of theory at a university under the guidance of teachers from industry organizations (25%) and training in the industry field (75%). Evaluation is done at the end of each course's program. The limitation of this framework may be that the basis for one specific industry is created, and not for a wider one (Ariffin T., Asmah, 2009).

Frameworks that describe the relationship between universities and industry organizations, in which universities implement education that corresponds to the technological developments of the industry and produce students with knowledge and skills that meet the needs of the relevant industry (Smith, 2002).

Frameworks showing the relationship between the student and the employer (training), the student – the educational institution (education), the employer – the educational institution (the generation of knowledge in accordance with the academic needs of the educational institution). According to this framework, work-integrated learning is defined as the acquisition of academic knowledge and skills in the context of purposeful activities involving the active participation of an individual student, an industry organization and an educational institution working according to an agreed educational program (Edmunds, 2007).

The only characteristic that unites the presented frameworks is the acquisition of practical work experience. Knowing the importance of gaining practical experience, employers and the government are calling for the mandatory introduction of work-integrated learning in university programs. With this in mind, it is necessary to identify the characteristics necessary for the experience gained in the process of work-integrated learning to have an effect. For this purpose, this article presents a framework of work-integrated learning at a university, showing the interactions and functions of the participants in this process.

Methods and organization of the study

To understand the patterns underlying the interaction and function of participants in work-integrated learning at a university, it is necessary to present a framework of work-integrated learning at a university.

Frameworking is a scientific method of studying objects, processes, etc. by building their frameworks that preserve the main features of the object of study (Taubaeva, 2015).

In pedagogy, frameworking is successfully used to solve important didactic tasks: optimizing the structure of educational material, improving the planning of the pedagogical process, managing cognitive activity, managing the educational and cognitive process, diagnostics, forecasting, and designing learning.

The framework of work-integrated learning at a university can be used as a way to assess the quality of educational and methodological documentation, means, methods of teaching, improving knowledge control as a means of coordinating various components of the work-integrated learning system at a university.

The framework will create a visual image of the essential components of work-integrated learning at the university, hidden from external observation, will reveal their internal structure and essence. It will reflect the connection of work-integrated learning with the means, methods of teaching and control and present a picture of the future state of the process and its results.

Results and discussion

Based on the study and theoretical analysis of the literature on the research problem, the study of practical experience, the results of the questionnaire and the survey of stakeholders, a framework of work-integrated learning at the university was developed, represented by target, content-procedural and evaluation blocks (Figure 1).

Figure 1
Work-integrated learning framework at university

Target block		
Purpose		***Tasks***
Planning and organization of work-integrated learning based on a combination of theoretical training at the university with practical training at the workplace		1) to develop the stages of work-integrated learning 2) to characterize the functions of the participants of work-integrated learning at each stage 3) conduct diagnostics of the qualitative assessment of learning outcomes
⬇		
Content-procedural block		
Functions of the academic mentor, industry mentor and student at each stage of work-integrated learning		
Stage I – preparatory	*Stage II – on-the-job training*	*Stage III – continuation of academic studies*
Functions of an academic and industry mentor		
Joint planning of the timelines for WIL, development of a joint educational program, syllabuses	Correction of students' actions	Development of syllabuses taking into account the knowledge gained in the workplace
Functions of the student		
Acquisition of passive theoretical knowledge	Application of knowledge and skills in the workplace: integration of theory with practice. Reflection on one's professional qualities, views, abilities	Application of practical skills learned in the workplace in the classroom
Learning outcomes		
Interprets facts through the prism of different theoretical points of view	Performs practical actions with the integration of theoretical connections	Justifies decisions on actions using the acquired practical skills
Methods of training and tools		
Methods of knowledge formation: conversation, lecture, work with a book. Practice-oriented methods: case method, brainstorming Teaching tools: material, visual, for laboratory research and experiments, IT technologies	Practical methods: Problem-based learning method, Project-based learning method	Methods of knowledge formation: conversation, lecture, work with a book. Practice-oriented methods: case method, brainstorming Teaching tools: material, visual, for laboratory research and experiments, IT technologies
Control methods		
Summative assessment: tests, essays, term papers	Summative and Formative Assessment: Portfolios, Projects	Summative assessment: tests, essays, term papers
⬇		
Evaluation Block		
Conducting a qualitative assessment of learning outcomes		
Control methods		
Levels of learning outcomes		
Low	Average	High

The target block includes the purposes and tasks of work-integrated learning at the university. In a general sense, the work-integrated learning framework aims to plan and organize work-integrated learning based on a combination of theoretical training and on-the-job training. This objective is detailed as the definition of the function of the academic and

industry mentor in the various stages of work-integrated learning, with a description of the methods of training and the results obtained.

The content-procedural block includes educational materials, methods of training and the organization of the pedagogical process. The content of training determines what theoretical knowledge and practical skills will be studied by the student. It is important that the content is up-to-date, meets the requirements of the modern educational program and the needs of the labor market. Methods of training determine the ways in which knowledge and skills will be transferred. Methods of training should combine a theoretical basis with practical tasks and exercises so that students can directly apply their knowledge and skills in practice. The organization of the pedagogical process determines how the training will be conducted. This includes lesson planning, the use of various forms of work (lectures, workshops, independent assignments, etc.) and the organization of interaction between teachers and students.

The content-process block of the framework helps to create effective teaching materials, choose appropriate methods of training and organize the pedagogical process in such a way as to ensure the maximum formation of knowledge and the development of students' skills.

This block shows the joint activities of the participants of work-integrated learning at the preparatory stage, the stage of on-the-job training and the stage of continuing academic training. Joint activity is determined by the interaction of an academic and industry mentor in the development of the content of the educational program, syllabuses, and adjustment of students' actions

The assessment block is based on the analysis of the results of control methods and thereby characterizes the level of achievement of students. It allows you to assess how successfully the student has mastered the educational material and achieved the set learning results.

Conclusion

Work-integrated learning is an approach to learning in which the workplace is used as a means of transferring knowledge. This article discussed the frameworks of work-integrated learning used in universities. Students are trained at the university and in industry organizations. It is important that all parties to the process initially understand the mission of work-integrated learning as a two-way relationship between the university and the industry organization, through which they work together, providing resources that will help students find and realize their potential. Work-integrated learning can take place on the territory of the university or directly in the industry organization. This requires consistent actions that prepare students for professional activity at the highest level.

The presented framework of work-integrated learning shows the participation of students, the university and the industry organization. It provides additional opportunities as the learner achieves significant progress in academic knowledge and skills and in practical work. Students with these qualities will be in high demand in the labor market, as the economy needs comprehensively competent workers who will be a valuable asset of human capital.

Students, industry and academic mentors are closely linked to learning outcomes. Students contribute to the host organisation by performing tasks that improve work or contribute to the development of specific projects within the organisation. The university, additionally informed by the current situation in the industry and the training of students in organizations, better prepares qualified graduates and can contribute to joint research work. Based on the core functions of work-integrated learning participants, the framework embeds learning outcomes and helps ensure that graduates are socially responsible, innovative, flexible, communicative and informed. Feedback is essential for monitoring the effectiveness of learning. The way students assimilate into a new work environment can affect the effectiveness of their learning. A carefully designed transition from academic learning to on-the-job learning

can help in creating an effective learning environment. This is facilitated by academic and industry mentors, who provide support through regular contact with students. The teaching methods used contribute to the understanding of the importance of studying outside the university. In on-the-job learning, students are expected to become active participants in the learning process, develop work-related skills, including effective communication, teamwork and problem-solving through practice and reflection.

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