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WORK-INTEGRATED LEARNING: ANALYZING PARTICIPANT INTERACTION AND DEVELOPING PROFESSIONAL SKILLS OF STUDENTS

Abstract: Work-integrated learning is considered to be an effective tool to help student develop the necessary skills to function in a work environment. Work-integrated learning combines university training and on-the-job training in industry organizations. Work-integrated learning allows students to have real working methods and professional qualities in the context of the work environment even before completing academic studies. This enables students to build confidence in their abilities, improve understanding of the work process, the nature of the skills required in the profession being mastered, as well as the development of employability skills. This is recognized as an important factor in the effective professional activity of university graduates in the workplace. The growing interest in work-integrated learning requires research and clarification of the processes of joint interaction of participants.

The article examines the process of joint interaction of the participants of work-integrated learning. For this purpose, a survey was carried out of direct participants in the process of work-integrated learning at the university - stakeholders (students, academic and industry representatives). The survey allowed to collect primary data on the experience of work-integrated learning and improved the understanding of the process of integration of academic and industry cooperation.

The survey of students was aimed at revealing their experience of on-the-job training. They were also presented with a list of skills that they were able to learn or improve as part of on-the-job training.

Questions for academic and industry representatives covered the following topics: the role of the preparatory phase in the transition from academic learning to on-the-job learning; teaching methods and ways to get feedback; integration of on-the-job learning experience into further university education; Improvement of the work-integrated learning system.

Keywords: work-integrated learning, university, student, industry organizations, stakeholders

Introduction. Work-integrated learning has long been used in the strategy of university teaching, sometimes strengthening, sometimes weakening. Currently, there is an increase in the use of work-integrated learning in higher education. This growth is due to the fact that work-integrated learning programs give an advantage to students, employers and universities, i.e. stakeholders in this process.

Work-integrated learning promotes the establishment of partnerships between universities and industry organizations, which is necessary for the development of joint educational programs that meet the needs of the industry (Smith et al., 2010).

The involvement of employers in training has become the norm, since the main goal of higher education is to provide students with the skills necessary for employers, graduates must come to work ready to perform their professional duties in order to better withstand the increased competition in the labor market. Employers are looking for graduates with a range of skills (Hard and Soft skills) in order to minimize additional training in a new workplace (Patrick et al., 2008).

The work experience gained by students in work-integrated learning studies strengthens the academic learning gained at the university and ensures the development of the skills necessary for graduates. Studies indicate that it is problematic for universities to form soft skills in students, since compared to ordinary students, those who have completed work-integrated learning more easily, find a job, integrate in a new place of work and develop their careers faster (Coll&Zegwaard, 2006).

Atkinson et al. (2005) emphasize that work-integrated learning provides broader learning outcomes and allows students to gain advantages in the development of educational, personal, career, and professional skills.

Work-integrated learning has a positive effect on academic performance, as it increases the motivation and responsibility of students (Gamble et al., 2010).

In this way, it deepens the need for work-integrated learning. At the moment, however, it is more pragmatic and operational for all stakeholders, research on work-integrated learning mainly focuses on skill development and with less focus on the process of how students learn. In most cases, the work-integrated learning is carried out informally, but consciously through experience. Recent research is improving understanding of the interaction between academic and practical training experience in the design, structure and management of work-integrated learning (Smith, 2012). The researchers aim to develop a theoretical framework for work-integrated learning. The university environment is different from the work environment, but at the same time, learning is recognized in each of them, although it is different, but also complements each other.

The idea of work-integrated learning is based on the theory of active learning, in which students move from visualization and listening to actually doing what they have been taught, and situational learning, in which learning is enhanced by participating in a community of practice rather than in isolation from it (Billett, 2011). Students should be able to interact with real-world work environments and perform practical tasks as part of their university experience. This requires careful consideration of many factors when implementing work-integrated learning:

- host organizations should provide access to industry supervisors, set and formulate their expectations of students, and facilitate learning through induction processes. Industry supervisors should provide feedback to students to facilitate their professional development. Despite the importance of getting feedback, the literature pays little attention to how to get and document feedback from industry supervisor (Ha, 2021);

- university should develop work-integrated learning programmes that include learning activities that are appropriate to the learning outcomes and their effective evaluation. It is important to integrate academic learning with on-the-job learning so that students establish the relationship between these types of learning, critically evaluate learning concepts, and practice specific professional behaviors to effectively develop skills and knowledge. In order to integrate learning, it is necessary to create conditions in the university and in the workplace, often it is simply expected. The researchers highlight common principles for this, which include pre-apprenticeship training, support during apprenticeships, and opportunities for reflection to connect the two experiences of academic and on-the-job training (Jackson & Dean, 2022);

- reflection is important for the integration of learning and should be done before and after on-the-job training. Journals, portfolios, study circles can be a tool for this, which will contribute to a critical analysis of the actions performed and to the identification of strengths, weaknesses and future training needs. It also allows students to put theory into practice and their skills in a variety of practical tasks. As a result of the reflection on the expectations of the students, the acquired skills are clearly defined and taken into account. This helps to effectively assess the success of work-integrated learning (Khampirat et al., 2019);

- work-integrated learning experiences highlight the importance of supervisor for the successful transfer of skills from university to the workplace. Varghese et al. (2012) propose a mentoring model that contains four criteria: content – the types of knowledge needed to solve professional tasks in the workplace; methods – ways of teaching skills and knowledge in the context of work-integrated learning; sequencing – the way in which knowledge and skills are formed so that learning has structure and meaning; An environment is a learning environment that will allow students to integrate theory into practice (Varghese et al., 2012).

As one of the aspects of effective work-integrated learning practice, research emphasizes the integration of academic and sectoral collaborations, their interaction is crucial to ensure the assessment of learning outcomes. The challenge is how to redirect assessment from the academic setting to the industry context, focusing on genuine collaboration between industry supervisors, academic supervisors, and students. This will allow students to receive feedback from the industry, taking into account the jointly agreed learning outcomes.

Methods and organization of the study

The purpose of the study was to collect data from interviews and surveys of academic supervisors, industry supervisors and students to understand the process of their joint interaction in the process of work-integrated learning. The basis of the study was NJSC "Toraigyrov University".

The survey made it possible to collect primary data on the experience of work-integrated learning and improved the understanding of the process of integration of academic and industry cooperation, since information was collected from direct participants in the process of work-integrated learning at the university - stakeholders.

As a tool, questionnaires were used, which included questions to record the fact and an interview that revealed the opinion of stakeholders.

The interview data was analysed using a thematic analysis that allowed the data to be collected and organized into patterns that give meaning and answer the research questions.

The data obtained will be used to increase the efficiency of the work-integrated learning process, which will allow for better mastering of the content of a specific professional activity.

Results and discussion

Questions for academic and industry representatives were divided into topics, which are presented below.

The role of the preparatory stage in the transition from academic training to on-the-job training.

Academic and industry supervisor surveyed noted the need for collaborative participation in the planning of students' on-the-job training. In doing so, they highlighted the difference between academic learning and on-the-job training, as well as their relationship. The process of transition of the student from one environment to another is important here. On-the-job training is practice-oriented, the learner applies the acquired knowledge and skills in practice in a real professional situation. In the working environment, theoretical knowledge is integrated with professional skills through inclusion in professional activities. Respondents noted that on-the-job training requires students to be more self-reliant, as the work environment is more self-sufficient and does not require much support from a supervisor, as opposed to an academic environment. Support and collaboration between supervisors before students enter the work environment is important here. Students are required to participate in preparatory activities before joining the organization. Industry supervisors noted that the preparatory phase should include explanations of the role of students in the workplace, an understanding of what employers expect from them as employees of the organization, how they can apply theory in practice. The supervisors from the university emphasized the importance of the academic

component of the preparatory stage. In particular, when developing a working curriculum, a syllabus, the learning outcomes, the tasks that students must perform during the training at the workplace should be described. These should be agreed upon with industry supervisor and academic supervisor.

It can be concluded that industry supervisors in work-integrated learning see more of the students as a recipient of work experience, academic supervisors see work-integrated learning as a continuation of on-the-job learning. It was also not specified when the preparatory stage should begin and how long it should take.

Teaching methods and ways to get feedback.

In the implementation of academic and on-the-job training, the teaching methods used are important. Industry supervisors noted that they mainly encourage students to be independent, so that they would realize what it is like outside the university, what is required of them at a real place of work. They advise them on the best way, as the necessary knowledge is not explicit, treat students as colleagues, and this gives them support in developing their professional identity. Industry supervisors noted the importance of the feedback they give to students. They discuss with students the strengths and weaknesses of their work and determine further actions. Industry supervisors have not been able to directly identify the methods they use in training, as they mostly act on a hunch in the circumstances that arise. Learning occurs as a result of performing professional activities under the supervision. This is different from what teachers use at the university.

The academic supervisors indicated that the theory obtained at the university should be confirmed in practice. When teaching at the university, they try to use more practice-oriented methods: cases, problem-based learning, situational method, and others. By applying these methods, they try to encourage students to reflect. Students should plan their actions before committing to them, this gives them the opportunity to take responsibility for their own actions, which will be further expressed in the development of their independence not only in the performance of professional tasks, but also in the planning of their training. Students will see their gaps in knowledge and skills that they lack in their professional activities.

It can be concluded that academic supervisors need to work more closely with industry supervisors on the application of teaching methods. Students learn a lot in the workplace, but this learning is more random, depending on what professional situations they find themselves in. It is necessary to jointly develop and structure teaching methods. This will facilitate the transition of students from the academic environment to the working environment and make work-integrated learning more formal.

Integration of on-the-job learning experience into further university education.

It is expected that after returning from an industry organization, students should transfer the experience gained to an academic environment and apply it in the classroom. Academic supervisors believe that students can apply the practical skills they have acquired in the workplace when performing laboratory work, writing projects, term papers and graduation theses. They noted that the students are more aware of modern methods of work, they have more developed soft skills. However, the application of the practical experience gained is not mandatory and depends mainly on the initiative of the students themselves.

Improvement of the work-integrated learning system.

Respondents were asked to give recommendations on how to improve the work-integrated learning system: among the answers are the following:

- organization of internships for university professors to obtain more up-to-date information about the industry and requirements for professional competencies;
- improving feedback between industry supervisors and academic supervisors;
- professional development of industry supervisors in the field of pedagogy;
- clearer definition of the roles of academic supervisors and industry supervisors.

The survey of students was aimed at uncovering their experience of on-the-job learning.

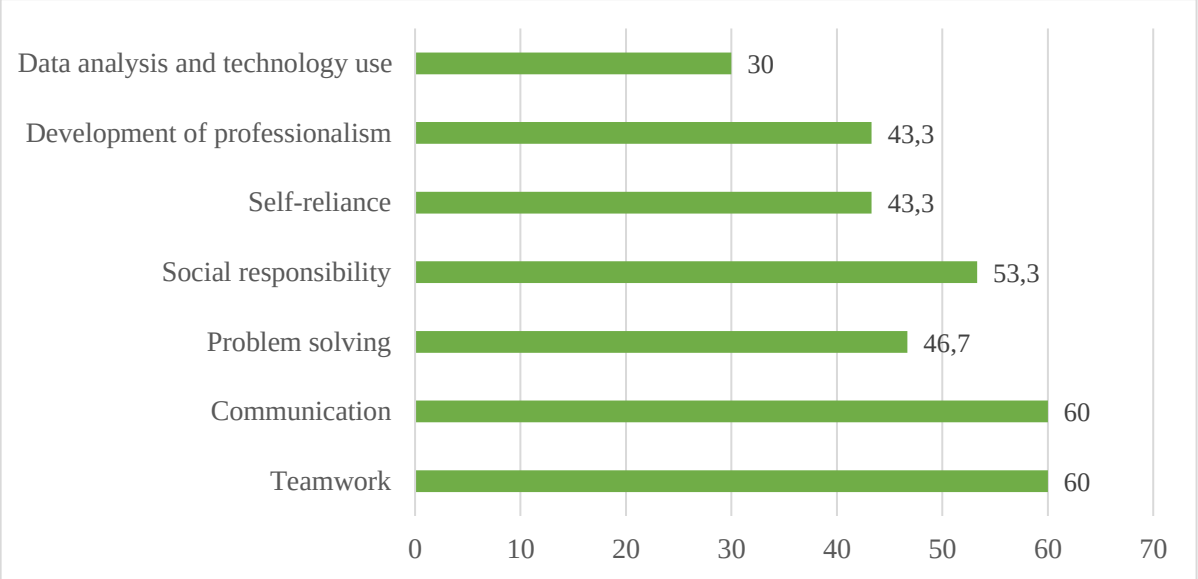
Students were presented with a list of skills that they were able to learn or improve as part of on-the-job training. Skills were grouped into the following categories:

- teamwork: collaborative work on professional tasks; conflict resolution;
- communication: verbal communication; giving and receiving feedback; public speaking;
- problem solving: reasoning analysis and diagnostics of the problem situation that has arisen; decide;
- social responsibility: personal and professional ethics; organizational awareness;
- self-reliance: self-efficacy; stress; work/life balance; self-regulation;
- development of professionalism: efficiency; multitasking; time management;
- data analysis and technology use: technology; information management.

The data of the students' answers are presented in Figure 1.

Figure 1

Diagram of students' responses to On-the-Job Skills, %



As the diagram shows, on-the-job training contributed to the development of skills in the categories "Teamwork" and "Communication" (60%), and "Social Responsibility" (53.3%). Student noted that these skills are better developed during on-the-job training due to the possibility of direct interaction with specialists, which allowed for a better understanding of ethical and professional behavior, what happens directly in the workplace.

Practical work experience served to improve such skills as "Problem solving" – 46.7%, "Self-reliance " – 43.3%, "Development of professionalism" – 43.3%. The students noted that due to the performance of professional tasks, they developed self-confidence and a sense of responsibility.

Being in the working environment, the students were able to understand how their actions affect the solution of real professional problems, they began to think more critically, engage in reflection, and saw what technologies are used in their field of work.

Students noted the advantages of integrating education at the university and in the workplace. They outlined the importance of developing the acquired skills at the university in the workplace, which will allow them to be applied before starting direct work after receiving a diploma. Being in a working environment allowed them to become more aware of their role

and responsibilities in the organization, and the industry's expectations of them as future specialists.

The students pointed out that the application of the acquired skills in the workplace was facilitated by training at the university, the classes themselves, which contained elements of practice-oriented teaching methods, group work, and the preparation of a presentation. It gave them an idea of situations or problems they might face in the workplace, developed teamwork skills, experience in public speaking.

Of the difficulties faced by students in on-the-job training, they noted the lack of experience with new technologies and the need to master them quickly and effectively in the workplace. There was also a downside, some students noted the lack of new technologies and methods of work in the workplace. Students also felt a lack of support in the workplace due to the fact that they were treated more like students than colleagues and professionals. This limited them and prevented them from expressing their opinions, showing initiative and greater independence.

Findings

A review of the results of the study shows the importance of work-integrated learning not as an alternative to traditional learning, but as a complement to it. work-integrated learning should be integrative in nature, i.e., how the learner uses what he or she has learned in the workplace and vice versa, how what students learn in the workplace becomes incorporated into the next phase of academic learning when they return to university after completing on-the-job training (Doolan et al., 2019).

On-the-job training should be based on the knowledge and skills acquired at the university. This requires close collaboration between academic supervisors and industry supervisors, which must take place before students are placed in the workplace, during on-the-job training and afterward, when they return to the university to continue their academic studies.

The preparatory stage is before the placement of students at the workplace.

The stage of preparing students for work-integrated learning should begin before they enter the working environment and include the development of documentation that clearly spells out the roles of students in the workplace, the tasks they are expected to perform during the training period and the learning outcomes they must achieve upon completion. The roles of academic and industry supervisors should also be clearly defined. Academic supervisor, industry supervisor and students need to plan together for the future professional activities of students in the workplace.

Training should be carried out during classroom training. Teachers, in consultation with industry supervisors, should introduce elements of upcoming professional activities into the lesson, while using practice-oriented teaching methods (Grantham, & Iachizzi, 2024).

On-the-job training phase.

At this stage, feedback is important to ensure the professional development of students. Feedback allows students to evaluate the applied professional knowledge and skills to the assigned tasks. Feedback from the industry supervisor will allow academic supervisors to track the learning process in the workplace and provide an opportunity to adjust the actions of students and the industry supervisor. During on-the-job training, the teaching methods used are important because they differ from what teachers use in a university.

The stage of continuing academic studies.

At this stage, the trainee, after completing on-the-job training, applies the acquired knowledge in the classroom. To do this, it is necessary to prescribe special tasks in the syllabuses.

At each of these stages, the interaction of all stakeholders in the process is important: students, academic supervisors and industry supervisors.

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Conflict of Interest Statement

The authors declare no potential conflicts of interest regarding the research, authorship, or publication of this article.

Ethical Statement

The empirical research conducted in this study was reviewed and approved by the Institutional Review Board, ensuring compliance with all relevant ethical guidelines for research involving human subjects

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