

Skills for Baltic Wood Industry – European Quality in Vocational Education and Training

CASE STUDY LITHUANIA

Introduction

Development tendencies of Lithuanian wood processing and furniture industry

The greatest production potential and experience in the wood products industry is accumulated in the production of furniture, sawn wood, wood panels and cardboard. This production has been constantly modernized and the production has sufficient and non-decreasing demand. The pace of development of industrial production of wooden prefabricated houses (buildings), glued constructions, parquet and other engineering products is also rapid. The production of furniture is growing rapidly, its production accounts for the largest share of sold and exported products. The furniture and its parts are manufactured by over 800 joint-stock companies and private companies of various sizes. Large companies, whose investments and development have ensured rapid growth in production and export volumes, mainly sell their products to the retail chain IKEA. Smaller companies work mainly for the local market. The largest recent investment in the sector was directed to the construction of a new particle board plant in Akmenė, UAB Vakarų medienos grupė, which will provide an impetus for the development of the furniture industry. The added value created by the Lithuanian wood industry is clearly growing.

The use of domestic renewable energy resources is the most important way in which Lithuania can achieve the goals of energy independence and sustainable development. The production and use of biofuels is the most promising type of renewable energy in Lithuania and EU countries. The most important part of Lithuania's biomass resources is wood for fuel (in the EU countries wood accounts for 80–90 of all biomass used for energy production, in Lithuania - more than 90).

Forestry and wood industry in Lithuania are not subsidized. With the accession to the European Union, the free movement of capital and labor takes place, and economic activity is influenced by the factors of the global economy. An in-depth analysis of the sector has highlighted the following competitive advantages:

- Stable work of the wood industry is ensured by sourcing local raw material resources. Without experiencing a shortage of raw materials, much of the industry has gradually restructured and become competitive. There are still unused wood reserves in Lithuanian forestry - 58 total annual wood gains are felled, i. 7.6 million m³ / year (13.1 million m³ / year of stems with bark are added annually), and the annual supply of all types of round wood to the Lithuanian economy and exports reaches about 6.2–6.5

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

million. m³ / year. Insufficient use of wood resources creates preconditions for further industrial development.

- Wood panel manufacturers are able to stably supply the growing needs of the Lithuanian furniture industry. This allows to further increase the volume of high value-added products and to compete successfully with them in international markets. The production of wood panels and the furniture industry, which has received considerable investment, are completely modernized. The further development of the Lithuanian wood-based panels and furniture industry will be primarily based on local wood resources and related to the introduction of new technologies and products.

- The vertically integrated model successfully implemented in Lithuania will unite the manufacturers of wood panels and furniture components. Such a model has substantially increased the competitiveness of furniture, as the vertical integration of wood panel production and investment in the most efficient modern furniture production methods has significantly reduced logistics, sales and management costs, ensuring maximum operational efficiency.

- The Lithuanian furniture industry has become a competitive part of the global furniture value chain. The strong cooperation relations of the Lithuanian wood-based panels and furniture industry in the most important retail chain (Lithuania has already established itself as a regional leader in the production of particle board and cabinet furniture) create favorable conditions for further development of the sector in the next 10–15 years. The free movement of goods means that large retail chains have a dominant position in the value chain of the forest sector. The tendency of dominance of retail chains unfavorable to the old European Community created favorable conditions for the development of Lithuanian furniture industry - active cooperation with IKEA not only promotes further rapid development of furniture industry, but also ensures new investments in modern technologies and high production culture.

- Qualified human resources, experience and knowledge gained working with world-class companies, strong financial capacity and the ability to attract significant financial resources for development will give this industry even greater international competitiveness.

The analysis of the economic activity of the Lithuanian economic sectors showed that the production of wood and wooden products and the production of furniture are among the most important economic sectors in the Lithuanian economy, creating the highest added value and showing obvious tendencies of increasing competitive advantage. One of the key challenges for the forest sector is to further increase the competitiveness of all sectors of the sector.

Learning opportunities for industry

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Currently, according to the approved study programs of the Ministry of Education of the Republic of Lithuania, vocational training schools (centers) train specialists at level 2-4, colleges at level 6, universities at level 6-7. Specialists who have acquired a level 4 qualification through formal and non-formal training and have gained practical experience do not have the opportunity to formally raise their qualification level, as this is not provided for in the current study procedure.

The „Skills for Baltic Wood Industry“ project is an attempt to create a Level 5 study program with all the required study subjects, after which the specialist, who has passed the exams, would acquire the competencies required by the professional standard or other normative documents.

Political context (EQF level 5, adult education)

Level 5 (or short-cycle, SCS) studies are the missing link between secondary and higher education that promotes lifelong learning and equal opportunities in the knowledge society. Given the need for highly qualified professionals in the labor market, short-cycle higher education can be useful in combining labor market needs with the supply of well-trained professionals. Short-cycle studies would enable students to climb the higher education ladder step by step and pursue a bachelor's degree.

The main goal of Level 5 studies is a professional specialization focused on employment in the labor market.

In the countries of the European Union, short-cycle studies is a thriving education sector that responds quickly to the needs of industry. It is therefore not surprising that the employment rate of students is good in most countries, so short-cycle studies could contribute to reducing youth unemployment. It should also be emphasized that short-cycle studies is a unique opportunity to attract more disadvantaged and older students and to expand access to higher education. Experience in other countries shows that men participate more in short programs than in other higher education programs. Thus, SCS could help reduce growing gender inequalities in higher education.

SCS develops strong partnerships between governments, higher education institutions, students, employers and employees, trade unions, and chambers of commerce. SCS places great emphasis on cooperation with industry and other economic and social partners. In some cases, cooperation with companies is mandatory. The main argument for doing so is the need to have more educated and qualified professionals required by the industry and who meet the clear needs of the industry.

Opinion of wood industry employees about the training

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

According to the Association of Wood Producers and Exporters of West Lithuania (AWPEWL), prior to the SKILLED UP project, there was a wide-ranging discussion among Lithuanian wood industry production organizations about training specialists for companies. Larger companies have developed their own autonomous professional development systems. Short-term training and retraining courses for employees in the wood industry, regardless of their size or productivity, are relevant. Companies are reluctant to invest in a prospective employee who wants to stay in the sector. The SKILLED UP project gives employees the opportunity to improve their qualifications, even with a busy work schedule.

When working in the wood industry sector, employees only over time identify what knowledge or skills are needed to work with wood processing technologies, what knowledge and skills will be needed to pursue a career in the company or to do work faster, better and more efficiently. Many of these trainings were motivated by the opportunity to pursue the necessary knowledge and higher qualifications in balance with work-live. For participants with a higher education in non-wood industry technology and working in manufacturing, this is also a great opportunity to improve their knowledge and acquire the necessary competencies.

At the beginning of the project and several years before, in the part-time study program of furniture and wood products production implemented by Kaunas College, Faculty of Technology, more than 1/3 of the students were working in furniture manufacturing or wood processing industry companies. Taking into account this situation, which has been recurring for several years, it has been possible to conclude that the need to improve the qualifications of workers in the furniture manufacturing and woodworking industries is necessary.

The duration of part-time studies at Kaunas College is 4.5 years. For employees, this is too long a period of time and it often becomes a reason not to obtain higher education. Full-time studies of the same study program last for 3 years, but they are carried out on a busy schedule. Short-cycle studies last 1.5 to 2 years and are much more acceptable for the worker. An oral survey found that most workers in the industry were more likely to opt for a shorter, Level 5 training than college part-time studies, which last 4.5 years.

1. Description of module development

1.1. Identification of the needs of the working group

Competences identified by industry that will be unavoidable in the future:

- Implementation of flexible production systems,
- Integrated information systems,
- Digital design,

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- Rapid prototyping using 3D printing technologies
- Robotics solutions.,
- Virtual and augmented reality,
- Application of bio and nanotechnologies.

These competences were taken into account in module implementation. During the implementation of SKILLED – UP project activities in Lithuania, three new modules were developed: “Industrial design”, “Operational costs” and “Planning, control & communication systems”, which are universal and successfully taught in the training process of Lithuanian, Latvian and Estonian project participants.

1.2. Identification of learning objectives, outcomes and quality assurance

The development of the module teaching material and modules was based on the description of the Engineering study fields group¹ specified by the Ministry of Education and Science of Lithuania and the description of the Technology study fields group², according to which the Study Quality Assessment Center evaluates the quality of studies.

To ensure the quality of project training, advanced methods of training and evaluation of project participants' achievements are applied:

- Classical lectures, debates, discussions and problem-solving session methods are used in conducting theoretical training sessions of the project. Teaching methods of individual, group work and creative workshops are used in conducting practical classes.
- Methods of oral examination, written questionnaire, exam and independent work are used to assess the achievements of project participants.

2. Preparation for project implementation

In order to ensure the successful results of the project, great attention was paid to the selection of qualified teachers. Given that the majority of participants are professionals with practical skills and applied

¹https://www.skvc.lt/uploads/documents/files/Kokyb%C4%97s%20u%C5%Betikrinimas/krypciu_aprasai/Technologij%C5%B3_apra%C5%A1as_su_priedais.pdf

²https://www.skvc.lt/uploads/documents/files/Kokyb%C4%97s%20u%C5%betikrinimas/krypciu_aprasai/Inzinerijos_studiju_krypciu_aprasas-Su_priedais.pdf

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

in the workplace, the selection of project teachers focused on not only the theoretical level of theoretical and specialist knowledge, but also practical skills and experience. The main criteria applied were:

- At least 3 years of pedagogical experience;
- At least 3 years of practical experience.

Most of the selected lecturers are practitioners with 3 or more years of work experience in the subject being taught. This makes it possible to ensure the quality of teaching and to achieve the set learning outcomes.

Project participants were attracted by communicating with the heads of Lithuanian furniture design and production and wood processing companies, disseminating the project in companies and in the public space. The most motivated and skilled employees were invited to the formed group of participants. Employers' recommendations were also taken into account.

3. Implementation of the training program

3.1. Organization of training groups

2019 a group of 15 participants was formed at the start of the training in October. The group consisted of 9 participants from Kaunas district, 2 participants from Šakiai, one each from Rumšiškės, Vilkija, Gargždai and Šilalė.

The second project group was convened in 2020. In January. It was attended by almost 60 participants from various regions of Lithuania: Kaunas, Vilnius, Jonava, Klaipėda, Plungė, Kėdainiai, Šakiai, Šiauliai, Alytus, Karmėlava, Šilutė.

By November 2020 the number of participants in both groups fell to 38. More than 50 participants gathered for the training in March. Distance learning, which began during the quarantine period, has deterred some students.

Project participants range from CNC woodworking machine operators, upholstered furniture tailors, shift foremen or quality controllers to designers, constructors, furniture designers, project managers, production managers, process analysts and even the company's deputy director.

Most of the project participants are from furniture design and production companies, such as: Svenheim, Theca Furniture, Albero furniture, Baltic Furniture components, Lauksva, FitsOut, Saloža, Duration,

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Megè, Verosta, Gforma, Šilutė furniture, FPI furniture, Owl furniture, Šiauliai Guild, Cabinet Gallery, Lon. Comfort masters, LHM Interios, Lazertech, Kame, Ruksa, Nordic Idea, Comfortable furniture and others.

3.2. Quality assurance / improvement aspects (improvement of the quality of modules / subjects, methods, teaching materials)

Theoretical lectures were given to ensure the quality of the module teaching, teaching methods were used: discussion; brainstorm. Practical tasks and situations based on the examples of the furniture industry have been prepared to substantiate the theory. The final practical task of the module includes the evaluation of all the taught topics.

The greatest challenge in ensuring the quality of training was during teleworking. In order to improve telework, work tools should be considered that allow for the involvement of each participant. Because participants were not connected to the college system via their e-mails, teachers were unable to take advantage of some of the teleworking tools (remote whiteboard, software for drawing). In order to improve the quality of the work, it is very important to have a teaching (learning) class (Moodle equivalent), where teachers could place material, assignments, lecture dates, other deadlines and receive participants' work, which would make the material accessible to all, freely changeable regardless of the need. This would improve both project communication and save time for teachers and participants.

3.3. Communication aspects

All information is sent to project training participants by e-mail. A closed group “Skilled UP Kaunas 2020” has been created on the social network Facebook, where both training participants and lecturers working on the project share all information related to training and learning achievements. Communication with companies is conducted directly or through training participants. Virtual meetings are organized with project partners.

3.4. Application of EQAVET blocks “respond to learners’ needs ”and“ assess learners ”

The main goal of the „Industrial Design“ module was to provide participants with knowledge of technical design, the fundamentals of new product development, the design process and the production of test samples. To develop the ability to apply the principles of technical creation and knowledge of technological processes in the development of new wood products.

Results expected to be achieved by the project participants:

- Ability to think creatively, knowledge of the principles of technical design, ability to create new products, knowledge of the application of technological processes.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- Understanding of the principles of development and presentation of new products, ability to prepare and submit technical design documentation.
- Knowledge of mechanical processes, ability to select tools and equipment to carry out the production process, ability to develop and manufacture new products.
- Ability to present a new product to the public, analyze the advantages and disadvantages of new products, think analytically and achieve the set goals.

Module “Operational costs”

The aim of the module:

To acquire knowledge of the structure of company expenses (expenditures), costing principles, pricing, earning opportunities. To develop practical skills of calculating the cost of wood products, pricing and performance calculation, applying the principles and knowledge acquired while studying theory.

Learning outcomes:

- calculate pricing and perform scope analysis;
- apply the gained knowledge to the example of wood production;
- classify different sorts of income and expenditures

Assessment form:

- Self-assessment.
- Active participation in the module.
- Assessment of individual tasks.
- Project and its presentation.

Module “Planning, control and communication systems”

The aim of the module:

To acquire knowledge about quality planning methods applied in organizations, quality management systems applied in production, and quality assurance methods applied in production. To develop practical skills in intermediate and final product control, applying control methods in technological process.

Learning outcomes:

- analyse and evaluate specific stages of control;
- analyse stability and discrepancy of technological processes / evaluate relevant data;

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- form a quality plan / select control methods and measuring instruments.

Assessment form:

- Peer assessment;
- Self-assessment;
- Active activity in the module;
- Oral presentation;
- Product design and presentation.

4. Evaluation

4.1. Participant survey

The project evaluation questionnaire was sent to 50 respondents. Responses were received from 33. The main purpose of the questionnaire was to find out participants' satisfaction with the quality of teaching, to identify aspects for improvement. The results obtained will be used to improve and refine further training. The survey was anonymous using the Google Questionnaire form.

https://docs.google.com/forms/d/1T2YS10Ooy4TJkbK1EyYrrH7XmYO6mapG_hwpOVFhiVs/edit

The full analysis of the survey is presented in Appendix no. 1.

After the respondents evaluated the course content and the lecturers, we can conclude that the training content met the expectations of the majority of participants, the work of the lecturers included. Also, many either fully agree or agree that the training content is relevant to their work, the training material provided was informative and relevant. The duration of the training was sufficient.

The results of the course are evaluated by the participants in different ways. Most of the respondents have gained more knowledge of the subject being taught, most of them plan to apply the acquired knowledge and experience or are already applying it in the workplace. Although in general the participants are satisfied with the course, there are aspects that can be improved. Based on the results of the survey, we can conclude that the teachers did not always or insufficiently evaluate the previous knowledge of the participants, and there was no opportunity to share the experience with other participants of the course during the quarantine.

Most of the respondents apply or plan to apply the acquired knowledge at work. The participants liked the practical work the most, the systematic and clearly presented learning material, the work of the teachers and communication with colleagues from other cities. As aspects to be improved, respondents point to a clearer schedule of lectures, better communication of teachers during quarantine. All

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

respondents would recommend courses to others.

4.2. Employer survey

An anonymous survey was sent to find out employers' views on training and participants' progress in the workplace. The survey was sent to 26 employers, responses were received from 11. The full analysis of the survey is provided in Annex no. 2.

Employers note that while there has been no significant improvement in an employee's skills after the course, most still agree that the course has had a positive impact on the employee's performance. 8 out of 11 respondents say that employees were able to present their innovations, problem-solving methods and ideas. While most employers do not consider employees to be promoted or pay increases, all agree that the courses were beneficial to the employee and would send other employees of the company to the course.

The courses met the expectations of many employers. The most frequently mentioned advantages are the introduction of new technologies and trends in the furniture industry, the improvement of economic knowledge, and the improvement of skills with design programs. A noticeable drawback is the distance learning courses. According to employers, the most necessary is more practical sessions, sharing of experience, focus on the most advanced companies and the latest technologies. All respondents agree that training for employees will have a positive impact on their work: some plan to increase their salary or promotion. Also, some believe that the knowledge acquired by the employee will allow for more confidence in the employee and assign more responsible tasks.

4.3. Teacher survey

The questionnaire was sent to 8 teachers. Answers were received from 6 because two had just started teaching the course. The main purpose of the questionnaire is to find out the teachers' opinion about the work in the project. The results obtained will be used to improve and refine further training.

The survey was anonymous using the Google Questionnaire form.

https://docs.google.com/forms/u/5/d/13ZgEwd7SV1K9N5ngAq5k2ZrBoYtBhiitKREuiT7fjE8/edit?usp=drive_web

The full analysis of the survey is presented in Appendix no. 3

The aims and results of the project were clear to the teachers, the schedule of lectures was satisfactory, and there was enough time for most of them. Regarding the descriptions of the modules, one of the respondents emphasizes that working with 3D modeling programs was difficult because the

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

participants 'computer literacy was different: "Older students' skills are clearly weaker, and students may feel insecure. "Teachers were not short of material resources, the only problem was the availability of e-books for participants. Learning materials were sent to students via their e-mails. Prior to quarantine, arrangements were made live, at the start of remote quarantine, or students performed the work independently. One of the respondents explains: "The practical work done during the lectures was assessed with a cumulative grade. Students drew independent assignments at home / at work and sent the completed assignments to the teacher by e-mail, which were assessed with a cumulative grade. The individual project was completed one month after the industrial design training, providing students with additional in-depth consultations, and the completed project was graded. The final cumulative grade of the module consisted of 20% of the practical work cumulative grade, 30% of the independent work cumulative grade and 50% of the individual project grade in the ten-point grading system. "

The largest problems faced by the teachers were working remotely, unclear lecture schedule, lack of communication: "I did not have information about the participant, I did not have lists, e-mails. The participants themselves sent their own e-mails. It should be thought about creating some class or a separate group mail so one can quickly contact participants, submit tasks and material. Now there have been angry e-mails from participants why am I sending them e-mails (material, assignments) if they are not participating in the courses anymore. I didn't know and I can't control the mailing list. Also, not everyone joined the created Facebook group, not everyone was invited and some participants did not know the times of the lectures. "

The experience gained by the teachers during the project was diverse. Some were pleased that participants are much more interested and motivated to learn than Level 6 students. Others had the opportunity to work and gain experience from students of different profiles.

Reviewing the results of the questionnaires of the three most important groups of the project, we can state that the training is successful. The majority of participants and employers are satisfied with the quality of training, the content taught, the teachers. Teachers are pleased that the participants are motivated and interested in learning new things, improving the existing knowledge.

Advantages highlighted by the respondents:

- Relevant and practically applicable training content; emphasis is placed on the latest technologies.
- Inclusive work of teachers; teachers are professionals who know their job;
- Training schedule adapted to employees;

Disadvantages:

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- Insufficiently clear communication during the project: teachers with students, project manager with teachers, employers; It is difficult for teachers to connect with students without a common training platform;
- Not all participants already have the knowledge necessary for the training start;
- Unclear presentation of lecture schedule / plan;
- There was a problem with telecommuting with software that students could not use at home.

Recommendations for planning further training:

- Assess participants' existing knowledge, allow participants to share and take into account their experience.
- Provide a clear course schedule / plan. Make it accessible to everyone.
- Improve communication between individual project groups. To provide teachers with tools or platforms to reach students more effectively, to provide them with teaching materials, assessments, especially during teleworking. To more actively inform employers about students' achievements and training content.

Conclusions

- The implementation of the international project “Skills for Baltic Wood Industry” (Skilled-Up) has led to closer cooperation between industry and educational institutions. The Association of Wood Producers and Exporters of West Lithuania (AWPEWL) together with Kaunas College consistently implements all project activities that promote professional development of industrial workers, dissemination of science and innovation in industry, creativity and new product development skills.
- During the implementation of Skilled-Up project activities in Lithuania, three new modules were developed: “Industrial design”, “Operational costs” and “Planning, control & communication systems”, which are universal and successfully taught in the training process of Lithuanian, Latvian and Estonian project participants.
- The relevance of the Skilled-Up project has been demonstrated by the active growth in the number of participants. There were 15 participants in the first group and 40 in the second group.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- Recommendations to other industries or educational institutions on the development of the program based on this model (based on the stages of program development + acquisition of participants + implementation)
- Recommendations for policy makers (national, European) (what and how could be improved to develop and implement more such transnational lifelong learning proposals (eg at EQF level 5))
- Recommendations will be made available to other industries and policy makers after the end of the project and the full implementation of the activities.

Annex 1

Project evaluation. Participants' answers

The questionnaire was sent to 50 respondents. Replies were received from 33.

The main purpose of the questionnaire was to find out students' satisfaction with the quality of teaching.

The results obtained will be used to improve and refine further training.

The survey was anonymous using the Google Questionnaire form.

https://docs.google.com/forms/d/1T2YS10Ooy4TJkbK1EyYrrH7XmYO6mapG_hwpOVFhiVs/edit

RESULTS

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

1. Course content and lecturers. Scale used for evaluation: 1- Strongly disagree, 2- Strongly disagree, 3- Neither agree nor disagree, 4- Agree, 5- Strongly agree

1.1 Did the course content met your expectations?

17 respondents indicated that they strongly agreed (5), 9 that they agreed (4), 2 respondents that neither agreed nor disagreed (3), and 3 indicated that they disagreed (2) with the question. One respondent, R28, reported all scores, so his answer was not included.

The average score for this question is 4.22.

1.2. Was the work of the teachers motivating to learn?

12 respondents indicated that they strongly agree (5), 11 agree (4), 6 respondents indicated that they neither agree nor disagree (3), 4 disagree (2). None of the respondents indicated that they completely disagreed. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average rating of this question is 4.03.

1.3. Did the course material and assignments relate to your work environment?

16 respondents indicated that they strongly agreed (5), 9 that they agreed (4), 6 respondents indicated that they neither agreed nor disagreed (3), 1 disagreed (2). Respondents R28 and R31 indicated several assessment options, so their answers were not included. The average assessment of this question is 4.23.

1.4. Was the course long enough for you?

13 respondents answered that they completely agree (5), 9 agree (4), 5 answered that they neither agree nor disagree (3), 5 disagree (2). Respondent R28 reported all evaluation scores, so his evaluation was not included. The average score for this question is 3.94.

1.5. Was the course material relevant and informative?

16 respondents fully agree, 11 agree, 5 neither agree nor disagree. None of the respondents indicated that they disagreed or strongly disagreed. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average score for this question is 4.34.

Course results

2.1. Did the teachers evaluate your previous knowledge?

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

5 respondents indicated strongly agree (5), 9 - agree (4), 11 respondents indicated neither agree nor disagree (3), 4 disagree (2), and 3 strongly disagree. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average score for this question is 3.28.

2.2. Did you gain more knowledge of the subject taught during the course?

16 respondents indicated that they strongly agree, 10 respondents agree, 3 neither agree nor disagree, 3 respondents indicate disagree. None of the respondents indicated that they disagreed or strongly disagreed. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average score for this question is 4.22.

2.3. Will the course experience be useful in your work?

15 respondents indicated that they completely agree, 9 agree, 4 respondents neither agree nor disagree. R4, R5, and R28 indicated multiple responses, respectively, and were therefore not included. The average score for this question is 4.2.

2.4. Have you been able to apply the new knowledge in your workplace?

10 respondents indicated strongly agree, 11 agree, 7 neither agree nor disagree, 1 respondent disagree and 1 strongly disagree. R4, R5, and R28 indicated multiple responses, respectively, and were therefore not included. The average rating for this question is 3.93.

2.5. Did the course strengthen your motivation and interest in the subject taught?

8 respondents indicate strongly agree, 16 agree, 4 respondents neither agree nor disagree, 3 disagree, and 1 respondent strongly disagree. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average rating for this question is 3.84.

2.6. Did you have the opportunity to share your experience with other course participants?

5 respondents answered strongly agree, 4 agree, 11 neither agree nor disagree, 7 respondents disagree and 5 strongly disagree. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average assessment of this question is 2.9.

2.7. In general, how satisfied are you with the course?

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

14 respondents fully agree, 10 agree, 7 respondents neither agree nor disagree, 1 disagree. There are no completely disagreeing. Respondent R28 reported all evaluation scores, so his evaluation was not included. The average assessment of this issue is 4.16.

General opinion

3.1. Will the course change any aspect of your work?

23 respondents indicated that they will change or plan to change some aspects of the work and apply the acquired knowledge in the near future. It was noted that the course changes attitudes towards working with staff and colleagues, job safety, more attention to quality work, improved legal knowledge: "Yes, because I look at communication with others differently, I learned to evaluate their behavior. Maybe it's not always successful, but I try. "

7 respondents answered that they do not plan to change anything. The main reasons for this are the lack of opportunities to apply the acquired knowledge in the current workplace.

2 respondents indicated that it is too early to assess and give their opinion at the end of all courses.

3.2. What did you like the most about this course and what you did not like?

Respondents mostly emphasized that they enjoyed live lectures, practical work, interesting course topics, and examples from real life. There was also a positive response to the teachers' work, systematised and clear presentation of teaching materials and communication with teachers and colleagues from other cities.

The most unlikable things, according to the respondents, are teleworking during quarantine, homework, which does not always leave time, as well as many theoretical lectures.

3.3. Do you have any recommendations for further improvement of the course?

16 respondents indicated that they have no recommendations for further improvement of the course.

Other respondents emphasized the lack of freely available information on further course subjects, the lack of a clear timetable and training plan, and the lack of an opportunity to review what was done at home without attending a lecture. Respondents also lack communication with teachers, especially during quarantine and teleworking. Some respondents indicated that they wanted more practical tasks than theoretical ones, as well as "Drawing programs remotely. For example, IMOS (not necessarily free). Most respondents indicated that working in college is much more interesting than working remotely.

3.4. Would you recommend this course to others?

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

All 33 respondents would recommend this course to others.

CONCLUSIONS

After the respondents evaluated the course content and the lecturers, we can conclude that the training content met the expectations of the majority of participants, the work of the lecturers included. Also, many either fully agree or agree that the training content is relevant to their work, the training material was informative and relevant. The duration of the training was sufficient.

Participants evaluate the results of the course in different ways. Most of the respondents have acquired more knowledge of the taught subject, the acquired knowledge and experience will be applied in the workplace. Although in general the participants are satisfied with the course, there are aspects that can be improved. Based on the results of the survey, we can conclude that the teachers did not always or insufficiently evaluate the previous knowledge of the participants, and there was no opportunity to share the experience with other participants of the course.

Most of the respondents apply or plan to apply the acquired knowledge at work. The participants liked the practical work the most, the systematic and clearly presented learning material, the work of the teachers and communication with colleagues from other cities. As aspects to be improved, respondents point to a clearer schedule of lectures, better communication of teachers during quarantine. All respondents would recommend courses to others.

RECOMMENDATIONS

Before the studies:

- Evaluate the existing knowledge of the participants
- Allow participants to share and take into account their experience.
- Provide a clear course schedule / plan. Make it available to all participants.

During the course:

- Teachers to communicate more with students, especially through telework.
- Include more practical assignments in lectures.
- Adapt the curriculum and tools to telework.

Annex 2

Project evaluation. Employers' answers

The questionnaire was sent to x respondents. Replies received from 11.

The main purpose of the questionnaire is to find out the opinion of employers about the quality of training. The results obtained will be used to improve and refine further training.

The survey was anonymous using the Google Questionnaire form.

https://docs.google.com/forms/u/5/d/1DCqBy85RiNerfRIsJusLXTqb8YWeJ9G-MMBEKP6cC1E/edit?usp=drive_web

RESULTS

1. Course results. Scale used for evaluation: 1- Strongly disagree, 2- Disagree, 3- Neither agree nor disagree, 4- Agree, 5- Strongly agree

1.1 Did the courses help your employee work more independently (without or almost without supervision)?

2 respondents indicated that they strongly agreed (5), 6 that they agreed (4), 3 respondents that neither agreed nor disagreed (3). The average score for this question is 3.90.

1.2. Do you notice a clear improvement in the employee's knowledge?

1 respondent indicated strongly agree (5), 6 agree (4), 2 respondents indicated neither agree nor disagree (3), 2 disagree (2). None of the respondents indicated that they completely disagreed. The average score for this question is 3.54.

1.3. Was the employee's knowledge good before the course?

3 respondents indicated that they strongly agreed (5), 5 that they agreed (4), 2 respondents indicated that they neither agreed nor disagreed (3), 1 disagreed (2). The average rating of this question is 3.9.

1.4. Has the employee who participated in the training program made any obvious progress?

1 respondent answered that they fully agree (5), 6 agree (4), 4 answered that they neither agree nor disagree (3). The average rating for this question is 3.73.

1.5. Has the employee been able to present their innovations, solutions or ideas?

2 respondents strongly agree, 6 agree, 1 neither agree nor disagree, 1 disagree and 1 strongly disagree. The average score for this question is 3.63.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

1.6. Have there been any problems / tasks in your company that your employee could solve in the work environment?

4 respondents fully agree, 6 agree, 1 neither agree nor disagree. None of the respondents indicated disagree or strongly disagree. The average score for this question is 4.27.

1.7. Did the course have a positive impact on the employee's work in your company?

4 respondents fully agree, 5 agree, 2 neither agree nor disagree. None of the respondents indicated disagree or strongly disagree. The average assessment of this question is 4.18.

1.8. Do you think that the course will have an impact on the future of the Baltic timber industry and business?

3 respondents fully agree, 3 agree, 4 neither agree nor disagree, 1 disagree. None of the respondents indicated their complete disagreement. The average score for this question is 3.72.

1.9. Are you planning to promote an employee who has completed the course?

1 respondent fully agrees, 4 agree, 4 neither agree nor disagree, 2 disagree. None of the respondents indicated their complete disagreement. The average score for this question is 3.36.

1.10. Are you planning to raise the salary of an employee who has completed the course?

1 respondent fully agrees, 5 agree, 4 neither agree nor disagree, 1 disagree. None of the respondents indicated their complete disagreement. The average score for this question is 3.54.

1.11. Do you think the course was valuable to your employee?

5 respondents fully agree, 6 agree. The average score for this question is 4.45.

1.12. Would you send other employees of your company to this course?

4 respondents fully agree, 7 agree. The average score for this question is 4.36.

1.13. Have you, as an employer, been informed about the content of the individual modules?

4 respondents strongly agree, 1 agree, 2 neither agree nor disagree, 1 disagree, 3 strongly disagree. The average score for this question is 3.18.

2. General opinion

2.1. Did the courses meet your expectations as an employer?

7 respondents answered that the courses met their expectations. One stated that not at all, another that there were no expectations. R3 stated that "The employee attended the courses on his own initiative and this, in my opinion, shows the employee's interest and motivation, desire to grow."

2.2 What do you think were the advantages and disadvantages of this course?

The most frequently mentioned advantages are the introduction of new technologies and trends in the furniture industry, the improvement of economic knowledge, and the improvement of skills with design programs such as Autodesk Inventor. R5 notes that knowledge has helped bring innovation to the company. The disadvantage is that the training is conducted remotely. Two respondents (R7 and R1) did not have much knowledge about the courses. R3 states that "this question could be better answered by the employee who attended the courses".

2.3. Will you support this form of study in the future?

10 respondents indicated that they would support the form of such studies in Lithuania. R7 states that all forms of study are useful.

2.4. What needs to be changed or improved in the next course?

R6 and R7 indicated the need for more practical work, sharing experiences. R9 believes that more computer literacy courses are needed, R11 - to emphasize the most advanced companies, the latest equipment. R2 considered what the situation would be if the training were still conducted remotely, perhaps in which case nothing would need to be changed. R10 would like more information on the content of the training and the progress of the employee during the course. Others have no opinion.

2.5. Will the employee's career in your company change in any way after the training? If so, how?

R3, R5 and R11 indicated that promotion of an employee is envisaged if the employee continues to show good results. R7 and R8 state that improved knowledge will allow to increase the employee's salary: "The employee's career will not change due to the course, but if he shows the acquired knowledge, the salary will increase", "The employee's independence will therefore increase." R9 and R10 say that the knowledge the employee has acquired will allow them to have more confidence in the employee and to assign tasks that require more responsibility. R1 and R8 do not think the employee's career will change.

CONCLUSIONS

Employers note that although there has been no significant improvement in an employee's skills after the course, most agree that the course has had a positive impact on the employee's performance. 8 out of 11 respondents say that employees were able to present their innovations, problem-solving methods and ideas. While most employers do not consider employees to be promoted or pay increases, all agree that the courses were beneficial to the employee and would send other employees of the company to the course.

The courses met the expectations of many employers. The most frequently mentioned advantages are the introduction of new technologies and trends in the furniture industry, the improvement of economic knowledge, and the improvement of skills with design programs. A noticeable drawback is the distance learning courses. According to employers, the most necessary is more practical sessions, sharing of experience, focus on the most advanced companies and the latest technologies. All respondents agree that training for employees will have a positive impact on their work: some plan to increase their salary or promotion. Also, some believe that the knowledge acquired by the employee will allow for more confidence in the employee and assign more responsible tasks.

RECOMMENDATIONS

- To more actively inform employers about the content of training;
- To monitor the progress of employees during training, if possible inform employers;
- To emphasize the latest technologies, the most advanced companies, practical work in the training content.

Annex 3

Project evaluation. Teachers' answers

The questionnaire was sent to 8 teachers. Answers were received from 6 because the two had just started teaching the course.

The main purpose of the questionnaire is to find out the teachers' opinion about the work in the project.

The results obtained will be used to improve and refine further training.

The survey was anonymous using the Google Questionnaire form.

https://docs.google.com/forms/u/5/d/13ZgEwd7SV1K9N5ngAq5k2ZrBoYtBhiitKREuiT7fjE8/edit?usp=drive_web

RESULTS

1. Are the objectives and results of the project training clear?

For 5 respondents the goals of the project are clear, R5 answered that not very much.

2. Are you satisfied with the established lecture schedule?

5 respondents answered that the schedule was satisfactory. R1 notes that trainings that take place on Saturdays could take place every other Saturday.

3. Do you have any comments on the description of the module being taught? If so, which ones?

5 respondents have no comments. R1 notes that "The description of the Industrial Design module emphasizes computer 3D modeling and drawing of wood products, but students' computer literacy and 3D modeling skills are very different. The skills mentioned by older students are obviously weaker, so the segregation of computer literacy skills becomes apparent during the training, which makes it difficult for the teacher to work smoothly and students may feel insecure. I would suggest choosing a wider range of lecture topics for design teaching, which can be taught in theory, with more examples from practice."

4. Was there enough time to present all the lecture topics in the module description?

5 respondents indicated that there was enough time, one respondent that there was not enough time.

5. Did you lack any material resources (teaching aids, literature, software, etc.) during the lectures? If so, which ones?

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

5 respondents did not lack any material resources. R1 points out that there were problems with the availability of e-books and the fact that participants could not use the Moodle class, which would facilitate teleworking.

6. How did you share teaching / learning materials with students?

4 respondents sent the training material to the participants' personal e-mails, other training materials printed in sections.

7. How did you organize the interim and final assignments of the module for the students?

All respondents indicated that participants completed the assignments independently during the lectures or after receiving the assignments via email.

R1 - "The practical work done during the lectures was evaluated with a cumulative mark. Students drew independent assignments at home / at work and sent the completed assignments to the teacher by e-mail, which were assessed with a cumulative grade. The individual project was completed one month after the industrial design training, providing students with additional in-depth consultations, and the completed project was graded. The final cumulative grade of the module consisted of 20% of the practical work cumulative grade, 30% of the independent work cumulative grade and 50% of the individual project grade in the ten-point grading system.

8. What organizational problems did you face in the training?

3 respondents answered that there was a lack of live contact, teleworking was a challenge at the beginning of the pandemic. R4 had technical problems, R1 notes that there was no clear schedule of lectures. R4 notes that there was a lack of communication from the organizers: "I had no information about the participants, no lists, no emails. The participants themselves sent their own e-mail, everyone had to send the material. You should think about creating some class or creating a separate group mail so you can quickly contact, submit tasks and material. Now there have been angry emails from participants who are not already participating, why am I sending them emails (material, assignments) if they are not already participating, and I don't know that and I can't control the e-mails already given by participants. Also, not everyone joined the Facebook group, not everyone was invited and they did not know the lecture times. "

9. Which way of training would you prefer and which one would you choose?

2 respondents are more in favor of live teaching, all others in favor of both teaching methods.

10. Briefly share what experiences you have gained during this project?

The experience of the teachers was varied. R1 and R2 are pleased that participants are much more interested and motivated to learn than Level 6 students. Others had the opportunity to work and gain experience from students of different profiles.

CONCLUSIONS

The aims and results of the project were clear to the teachers, the schedule of lectures was satisfactory, and there was enough time for most of them. Regarding the descriptions of the modules, one of the respondents emphasizes that working with 3D modeling programs was difficult due to the different levels of computer literacy of the participants. Teachers were not short of material resources, the only problem was with the availability of e-books for participants. Learning materials were sent to students via their e-mails. Prior to quarantine, arrangements were made live, at the start of remote quarantine, or students performed the work independently.

The greatest problems faced by teachers are working remotely, unclear lecture schedule, lack of communication. The experience gained by the teachers during the project was diverse. Some were pleased that participants are much more interested and motivated to learn than Level 6 students. Others had the opportunity to work and gain experience from students of different profiles.

RECOMMENDATIONS

- Assess participants' competencies and apply and adjust training materials accordingly.
- Improve communication, provide teachers with tools or platforms to reach students more effectively, provide them with teaching materials, assessments, especially during teleworking.

Author Giedrius Gecevičius

Date 2021