

## Floury Food Training for Youth

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### Abstracts

The article presents the results from a project called Floury Food Training from Virtual to Reality for Youth with an emphasis on youth education. The goal of the project was a higher food safety on the area of floury food sector. The research part of the project was based on collecting the data through different workshops. The youths were a part of the workshops as they were the ones from who we wanted to get the information about the needs of the floury food sector. We realized that the youths need additional knowledge to be able to penetrate a market, especially the ones in the floury food sector. That is why we prepared the workshops to be able to gather new information from the youths and the employers. We used different methods including a face to face interviews, surveys and conversations. Once we gathered all of the data we prepared a digital module to educate the youths. The article has an emphasis on analyzing the needs of the youths and the employers to ensure a better competitiveness and healthier products on the area of the floury food sector. We also set the starting points for the educational module.

**Key Words:** Floury Food, Education, Youth, Health

### 1Introduction

Erasmus+ project Flourey Food Training from Virtual to Reality for Youth (<http://www.ffsproject.net>) is focused on the assurance of protection of public health through quality assurance and safety in the food production sector by means of developing the professional qualifications in media fit to technological developments of the youth working in the floury food production sector, however, who could not complete their education or unemployed youth.

Adaptation of the youth involved in the sector must be ensured towards increasing productivity by making them acquire new skills which would make it easier for them to get adapted to the developing technology base and the global transformations of manpower (<http://www.ffsproject.net>).

The need determining works will ensure specifying the actual needs of training of the youth, employers and sector, thus it will determine the map in preparing the training modules in line with the needs determined as the project's building block. Key challenges miller's and bakery industry represent improvements in the field of legislation, which allow chaining of businesses and more effective cooperation, solving the problem of the informal economy on the market, encouraging the production of better quality homemade bread wheat and systemic measures to encourage the consumption of domestic products made from domestic raw materials

([http://www.uvhvvr.gov.si/si/zakonodaja\\_in\\_dokumenti/rastlinski\\_semenski\\_material](http://www.uvhvvr.gov.si/si/zakonodaja_in_dokumenti/rastlinski_semenski_material))

. For the production of cereals, it is also necessary to have technological progress which is based on the integration of the sector with science, smart specialization and cooperation of all stakeholders with regard to new development projects, which would significantly contribute to the reduction of imports of cereals and an increase in exports of bakery products. In the future, it will be more effective to contribute to the vertical integration of the sector from the seller to the buyer and in the grain processing industry from farmer to processor. The final baker's products in the future must achieve a higher standard of quality, in line with the regulations on the quality and safety of foods in the EU (<http://www.uvhvvr.gov.si>).

Due to the small size of Slovenian market there is an opportunity for the further development of miller's industry and bakery in a quality boutique production and safe preparation of products from local raw materials with high added value, which follow the trends in the market in the direction of niche products, where products from organic, raw materials are classified along with gluten-free products, products with less fat, salt and sugar. The sector is also facing the challenge of tackling the public tenders and participation in the procurement guidelines for simplifying public ordering and the reduction of the food that is thrown away. Members of the section of miller's industry and bakery will in the future try to make connections with partners from abroad and learn about foreign good practices (<http://www.icp-mb.si/wp-content/uploads/2015/09/Pek-izobra%C5%BEEvalni-program.pdf>).

The job of baker or confectioner requires a professional level of education after the minimum qualifications, laid down by the rules on the minimum level of training of persons in food production, processing and marketing of food products.

Secondary school education program baker and confectioner lasts three years. It finishes up with a final exam, which includes written and oral exam from Slovene, a product or service and a defence of it. The education in the field can be continued with 2-year vocational-technical education program, gaining the title of agro-food technician. With the vocational final examination, the study can be continued in food science and nutrition program in order to obtain an education of a Food Engineer. With the fifth subject at the final examination in secondary school the study can be continued at the University in the food program. After internship and after three work experiences, students carry out a master's exam in order to obtain the master's title in the field.

In the course of education, the students are trained for an independent and high-quality manufacture of bread and baked goods. They acquire practical and theoretical knowledge of the various types of cereal, bakeries and grain mill products and learn about technological

processes. They learn about the importance of personal hygiene and hygiene in the workplace, and develop a number of skills and techniques necessary for the pursuit of the profession. Along with this they take into account the hygiene and safety rules, learn about the general legality of technological processes in food, they gain knowledge of biological, nutritional and energy value of foodstuffs. They learn to use information and communication technologies for business communication, planning, the organizing of an independent, secure, efficient work and working procedures in the professional field. In the higher grades, they learn about the importance of environmental protection with the basics of sustainable development, the basics of entrepreneurship and biotechnology for food safety assurance.

High school training centres also carry out training for the unemployed, professional meetings and thematic training courses for smaller audiences, an extra education for adults, the certified programme for the national professional qualification courses and workshops for adults and primary schools ([https://issuu.com/moisesorodriguezmateo/docs/education\\_system\\_in\\_slovenia](https://issuu.com/moisesorodriguezmateo/docs/education_system_in_slovenia)).

We worked by workshops 1 with Educational centre Pyramid Maribor. They have syllabus for the vocational programme baker at the secondary School for Food Processing and Nutrition shows that the module includes general mandatory educational subjects (Slovenian language, foreign language, Art, Natural Sciences, Social sciences), mandatory Professional modules (Protecting the environment with the basics of sustainable development, the basics of entrepreneurship and sales, basics of food, the basics of biotechnology with nutrition, basic types of bread and pastry, special types of bread and bakery, demanding bakery products). Their module includes also practical lessons at school, practical training at employers, extracurricular activities and open curriculum (Table 1). The student must reach a sufficient number of hours to complete the program in the field of lessons hours, practical training, education at school and pass the final exam (Pintrich, P. R. and Schunk, 2002).

**Table 1:** List of key professional competencies, skills and knowledges that students have to acquire during the training program (<http://www.icp-mb.si/wp-content/uploads/2015/09/Pek-izobra%C5%BEevalni-program.pdf>).

<b>KEY PROFESSIONAL COMPETENCES:</b>	<b>WORKING AREA – SKILLS AND KNOWLEDGES</b>
1. Plan, prepare, execute and control their own work	Administrative work: Work organization and preparation of technical documentation
2. Rational use of energy, material and time	Commercial work: Purchasing intermediate products and selling products
3. Protect health and the environment	Supervision of work: Supervision of work and management
4. Communicate with colleagues and clients	Quality Assurance: Quality assurance of products and services
5. To ensure the quality of products and the services provided	Maintenance and repairs: Operation
6. Keep proper documentation	

<p>7. Knead different types of dough for bakers from basic raw materials or prepared mixtures</p> <p>8. Defrost, form, coat, pour the dough and control its rise</p> <p>9. To produce cold and warm fast food products</p> <p>10. To serve and sell fast-cooked food</p> <p>11. Store intermediate products</p> <p>12. Purchase intermediate products and sell products</p>	<p>with mechanically adjustable and hand-operated machines and devices</p> <p>Communication: Communicating with colleagues and clients</p> <p>Protecting health and the environment: Care for safety and health at workplace</p>	
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## 2 Methodology

Data for the article was obtained through two. Workshops.

**Local workshop 1** was hosted by UM in Municipality of Poljčane, Learning polygon for self-sufficiency Dole, on 24<sup>th</sup> of April 2017.

THE PROGRAM OF THE LOCAL WORKSHOPS WITH YOUNG PEOPLE

(High School Students of nutrition and food science and technology in Maribor)

### The introductory part:

- The welcome given by the leaders of the workshop, presentation of the purpose of the meetings and the programme of the workshop

### The central part of:

- A tour of the Educational polygon for self-sufficiency
- Mini practical workshop to learn about the properties of the field soil to improve soil fertility
- Presentation of Erasmus + project Flouiry Food Safety
- Implementation of a questionnaire to obtain opinions on the needs of training and education

### The final part:

- Open discussion with students and teachers on the problems of education and implementation of work practices in the food sector

Before the workshop, we have prepared a script and program of the workshops for the presentation of sustainable approaches in the field of self-sufficiency, production and food processing in real circumstances on the Educational Polygon for Self-sufficiency Dole. The main purpose of the activity is the encouragement for young people to change lifestyle and working practices towards greater sustainability and responsibility to the profession and the presentation of the project and implementation of questionnaire for the purpose of obtaining feedback on the needs in the development of key competences and skills of young people to carry out the profession of a baker and confectioner. We invited the local high school for food science and nutrition from Maribor to cooperate.

In the context of the workshops students saw the permaculture arrangements at the Educational Polygon for Self-sufficiency Dole for sustainable farming and food processing. Students have, through their own experiences during the implementation of mini hands-on workshops and worksheets, got acquainted with simple methods of getting to know the properties of the soils, which are essential for high-quality food production. After the completion of the workshop the young people were invited to fill in the questionnaire.

The final part of the workshop was devoted to reflection on the activities carried out, the exchange of opinions, open discussion on the problems of the educational system in the field of food sector and opportunities for enhancing the development of competences.

The workshop was attended by 56 students of the programme baker and confectioner.

**Local workshop 2** was implemented by University of Maribor in Hotel Life Class Slovenia in Portorož, on 30<sup>th</sup> of May 2017, in the framework of 14<sup>th</sup> Slovenian Symposium of miller's industry and bakery (<http://robinson.hr/hr/2015/06/26/mlinarstvo-in-pekarstvo>).

In the context of cooperation at the symposium we conducted realization of interviews by the method "face to face" on the needs and problems of the existing educational system for the provision of high-quality and safe food with representatives of the food sector.

Before the implementation of the workshop worksheets were prepared for all participants for the implementation of mini workshops to learn about in the field the practical characteristics of the soil and the survey questionnaire for young people who intend to work in the food sector.

#### Focus group of local workshop 2 was representatives of Floury Food sector

The workshop was attended by more than 200 representatives from various areas of the food sector. Lectures on the topic of food safety in miller's industry, bakery and confectionery were performed by:

- the leading decision makers of the food sector (Minister for agriculture, forestry and food; Director of inspection for food safety, veterinary and care; representatives of the baking section of the Chamber of economy of Slovenia)
- representatives of the major bakery and food companies (Group Žito, Mercator, Spar etc.)
- representatives of educational companies in the field of ensuring the safety and quality of food products (SIQ Slovenia, Institute for nutrition)
- representatives of analysis companies for checking the quality of foods (Lebena Ltd.).
- the representatives of the food industry equipment production line for bakeries (Gostol-Gopan).

***We conducted individual interviews with various representatives of the food sector. We implemented the representatives of educational institutions, companies, suppliers of raw materials and bakery equipment for the food industry, providers of technology for quality control of foodstuffs.***

### 3 Results and Discussion

#### The Problems Addressed by the Workshop 1 with Students

Slovenia does not cover its own needs for agro-food products and the degree of self-sufficiency is very diminished. Because of the increase of global food and environmental uncertainties and doubts in the long-term environmental sustainability of the current way of solving the problem of food safety, production and fair food distribution, there is a growing number of experts that highlight the importance of food self-sufficiency at the local and regional level. In doing so, are very important the local traditional practices, arising from the geographical characteristics of the area that are adapted to the environmental capacities.

The new agricultural policy after year 2015, promote self-sufficiency mainly in the production of bread cereals and the revival of the traditional old species, which would subsequently contribute to an increase in domestic production of bakery and mill products.

To this end, we presented to the students of second year of secondary school for food a good example of practice-teaching course for self-sufficiency, where they can learn through their own experiences simple natural approaches of self-sufficiency in the field of production and processing of food and the sustainable use of renewable natural resources.

With interviews, we obtained data on educational needs from employers, young employees and educational institutions. In the following, we combined the theoretical part (Table 2) with the youth answers (Table 3).

**Table 2:** Theoretical background of Floury food knowledge (<http://www.ffsproject.net>).

MAIN EDUCATIONAL NEEDS	A DETAILED INFORMATION OF INDIVIDUAL NEEDS
Increase the duration of practical knowledge during education	<ul style="list-style-type: none"> <li>- The development of practical skills through training with experienced teachers with special practical knowledge using concrete examples from real situations.</li> <li>- To overcome the differences between school practice and practice industry.</li> <li>- Increase opportunities to work with large quantities of raw materials.</li> </ul>
The development of basic and highly qualified skills and knowledge of young people	<ul style="list-style-type: none"> <li>- Development of product knowledge for selling purposes</li> <li>- Developing skills for specific work area (miller, baker, confectioner).</li> <li>- Introduction of compulsory practical training.</li> </ul>
Developing personal competencies and	<ul style="list-style-type: none"> <li>- Improve organizational skills, flexibility, ingenuity at work.</li> <li>- Increase the sense of initiative and motivation for</li> </ul>

characteristics of young people	<p>work.</p> <ul style="list-style-type: none"> <li>- Encouraging teamwork.</li> <li>- Development of communication skills.</li> </ul>
Measurement skills development	<ul style="list-style-type: none"> <li>- Lack of knowledge of mathematics with an emphasis in the field of converting units of measure (gross, net, tare), summing, subtraction, percentages, ignorance measuring instruments work with scales - which is the basis for the work with the recipes.</li> </ul>
Knowledge of hygiene practice	<ul style="list-style-type: none"> <li>- Ensuring personal hygiene and general hygiene requirements.</li> <li>- Reducing errors in production due to inadequate hygiene.</li> </ul>
Knowing the risks for food safety	<ul style="list-style-type: none"> <li>- Identifying new risks, which are not yet known due to globalization.</li> <li>- Knowledge of standards and legislation to ensure the floury food safety.</li> <li>- Knowledge of basic aspects for mitigating the risk at work.</li> <li>- Knowledge of systems for improvement and risk reduction of such systems.</li> <li>- Monitoring traceability of raw materials.</li> </ul>
Ethical and moral values in order to ensure fairness and safe food	<ul style="list-style-type: none"> <li>- Develop the basic values and ethical principles for responsible work, personal hygiene, compliance with the law and comply with the rules / standards to ensure food safety, occupational safety.</li> </ul>
Understanding the importance of sustainability aspects throughout the food chain	<ul style="list-style-type: none"> <li>- Understanding the importance of the concept of sustainability for ensuring food safety.</li> <li>- Understanding the opportunities for transfer of sustainability aspects from theory to real situations and everyday life.</li> </ul>
Knowing the innovative modern technology and equipment	<ul style="list-style-type: none"> <li>- Knowledge of innovative equipment to facilitate the work and reduce the risk.</li> </ul>
The importance of a healthy lifestyle and a healthy diet	<ul style="list-style-type: none"> <li>- Knowledge of legislation, standards, criteria and principles in this area.</li> <li>- Risk analysis on a personal level.</li> <li>- Awareness of the importance of their own health</li> </ul>

In table 3 was collected the needs of youth from floury food sector.

**Table 3 :** Answers of young employees about the needs in floury food sector.

<b>TRAINING NEEDS OF YOUNG EMPLOYEES</b>	<b>A1 The actual content of the individual needs</b>	<b>A2 Way of educating content</b>	<b>A3 Design education</b>
<b>Need 1 Understanding and knowledge of the contents of measurement</b>	Lack of knowledge in mathematics with an emphasis in the field of converting units of measure (gross, net, tare) as well as summing, subtraction, percentages, ignorance measuring instruments work with scales - which is the basis for the work with the recipes	Participation in procedures where different measurements are carried out.  Integrating content of measurement knowledge into practice and teaching.  More practical tasks in the field of measurements (recalculations, conversions, etc.)	Understanding and knowledge of the contents of measurement
<b>Need 2 Knowledge of hygienic safety regulations</b>	The lack of sensitivity to all phases of the hygienic security situation	More contact with the contents of hygiene standards	e-materials workshops
<b>Need 3 Knowledge of the guidelines for improvement</b>	Fear the costs of production due to a variety of possible	Consistent compliance with all regulations, rules, even exceptional	Learning exercises that mimic real situations and events



<b>and risk reduction</b>	errors	events	
<b>Need 4 Implementation of risk control on a personal level</b>	Often it is the human factor responsible for unforeseen events	Personal responsibility at the highest level	Tests of personal responsibility as a real situation
<b>Need 5 Knowledge of the system of traceability of raw materials</b>	Lack of knowledge of the origin of raw materials, also because of the loose marking	Greater concern for the traceability of raw materials in the entire chain	Real situations of establishing traceability
<b>Need 6 Labelling declarations and allergens</b>	Despite the growing need for labelling of products it happens that the products are lacking a precise labelling	Precise labelling of products as a way of promoting them	Situational learning with the participation in the labelling of food
<b>Need 7 Waste separation</b>	Each place has its own rules on waste disposal, so the young need to do a background check of the system	It is often the lack of a consistent separation of waste	The practical forms of learning at work experiences, compliance with the regulations.

### **The Purpose and Objective of the Workshop 1**

The main purpose of experiential workshop was to present to the students the importance of natural approaches for self-sufficiency, and to encourage them to think that anyone of us can become at least partially self-sufficient in everyday life.

In the context of the implementation of different activities of students they also learned about the importance and opportunities for practical integration of sustainability into everyday life and future profession.

**The Main Objectives of the Workshop Were:**

- Presentation of the concept of self-sufficiency, natural approaches of quality production and food processing, sustainable use of renewable energy on the Educational Polygon for Self-sufficiency Dole, for the understanding of self-sufficient perspective on sustainable food production. Implementation of practical mini workshops identifying soil properties to improve food production.
- Presentation of the concept, the purpose and objectives of the international project Erasmus + Flourey Food Safety.
- The implementation of a survey among students of second year of baker and confectioners with the intention to obtain information about the needs and problems of the educational system with a view on the development of their own competences and skills for successful employment and opportunities for improvement.

We have included in the workshop students of second year of Secondary School for Food Processing and Nutrition from Maribor, who intend to work in Flourey Food sector. Students in the second year listen to the subject of environmental protection with the basics of sustainable development that is why we were interested in how they understand the aforementioned content and how they can place them in the daily work and life. At the same time, we wondered what was missing during the educational process, and which competences and skills are considered essential for effective work in the miller’s industry sector (Table 4).

**Table 4:** Essential skills for youth.

MAIN EDUCATIONAL NEEDS	DETAILED CONTENT DEFINITION OF INDIVIDUAL NEEDS
Basic working procedure	Knowing the organization of work.
Working with large quantities of raw materials	<ul style="list-style-type: none"> <li>- Weighing of raw materials after recipes.</li> <li>- Working with large quantities of raw materials.</li> <li>- Converting of metric units.</li> </ul>
Independent work	More opportunities for independent organization of integrated work process from planning to preparation of raw materials and manufacturing of the final product.
Tours of good practices at home and abroad	Tours of good practices relating to the educational program. For example, Čokoladnica (Chocolate shop).
Practical work in the classroom and by the employers	<ul style="list-style-type: none"> <li>- More practical work at the prospective employers.</li> <li>- More of practical work in the practical lessons.</li> </ul>

Knowledge of technological processes	Knowledge of the equipment and the modern technological processes.
Safety at work	Knowledge of regulations.
Hygienic safety regulations	Knowledge of regulations.
Aspects of sustainability and ecological consciousness	Knowledge of the aspects of sustainability.

At the end of the students of 2<sup>nd</sup> year of the programme baker and confectioner were invited to fill in the questionnaire. Before filling in the questionnaire, the crucial starting point of the project, the purpose, objectives and intellectual results were presented. Students were presented the key issues of the food sector in the field of education and the implementation of work practices. The main purpose of the implementation of the survey has been testing the working of the questionnaire and obtaining feedback on the current needs of the educational process and working practices.

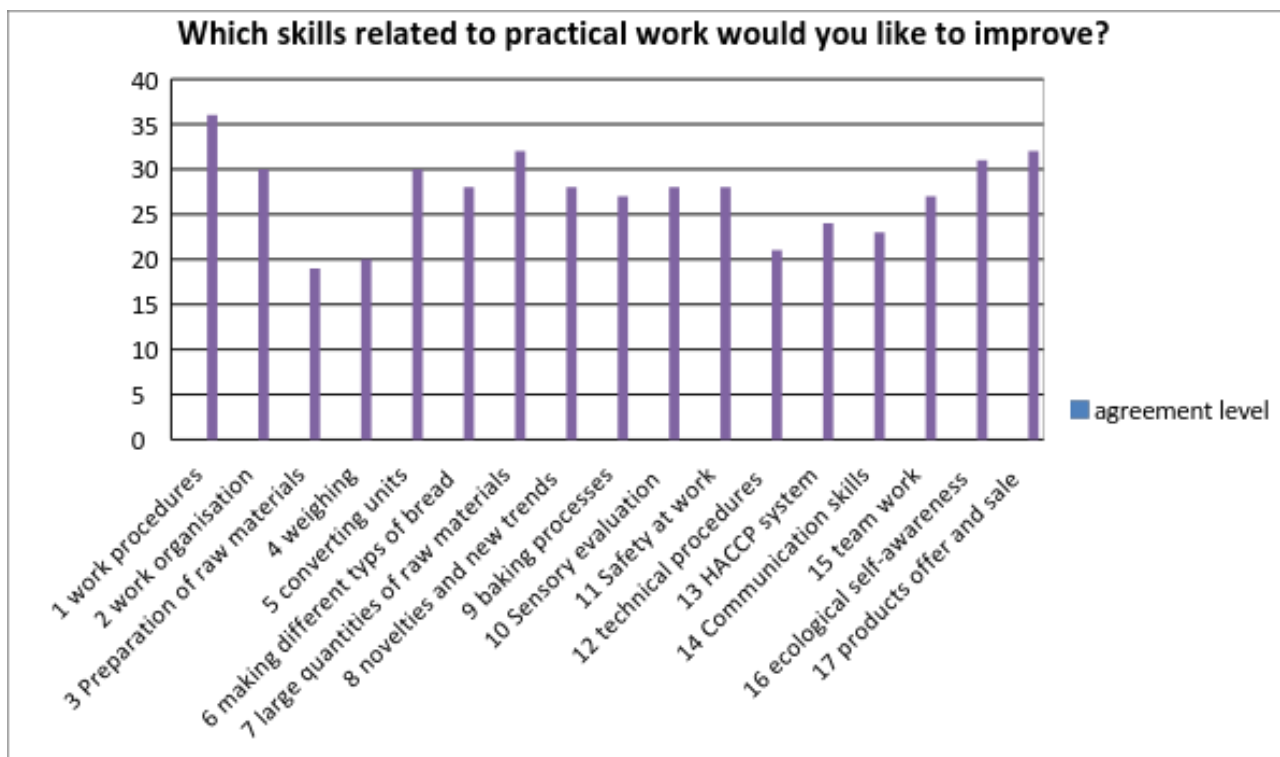
The analysis of the questionnaire showed that students want more of independent work, practical experiences in the course of practical work experience both in the school and in the case of prospective employers, more tours of good practice in a wide variety of companies both at home and abroad, they want the extra education to acquire new additional skills in order to strengthen and develop the key competences to do better work in the food sector (Figure 1).



**Figure 1:** Students want more independent work.

On the issue of what competences and skills you want to develop in the course of education it was pointed out in particular: knowledge of working process, working with large quantities of raw materials, strengthening of ecological awareness, skills, supply and food products, skills, organisation of work, converting metric units, and safety at work, teamwork.

On the question of what was missing in the practical education it was highlighted, in particular, the desire for more work with a teacher as well as teamwork. They miss more individual work, more innovations, more practical experiences relating to the educational program. Also, they want more professional subjects that are supported by practical exercises, to adapt learning content to a particular program (Figure 2).



**Figure 2:** Skills related to practical work

Main Educational and Training Needs Are:

- Knowledge of basic working procedures
- Working with large quantities of raw materials
- More independent work
- More Study tours at national and international level
- More practical work at school and at the employers
- Knowledge of technological processes
- Hygienic and safety regulations
- Ecological and sustainability consciousness
- Converting metric units
- Teamwork

## **The Problems Addressed by the Workshop 2 with Educational Sector.**

Aspects of sustainability are quite hidden in the educational system and not enough talked about. Students in the course of education meet with the basic contents of environmental protection and sustainable development, but especially through the practical work, it appears that the students hardly transmit theoretical knowledge into everyday practice and to their local environment. The purpose of the workshop is to raise awareness on the importance of self-sufficiency for the students and opportunities for the integration of elements of sustainability both in everyday work and life.

## **Results of the Workshop 2**

### Problems that the students expect in the integration into the work process

- Lack of knowledge in the field of working with equipment, machinery (solution: more practice and work in real situations).
- Unfamiliarity with the new working environment (solution: more practice and work in real situations).
- Due to the small number of hours of practical work in the primary grades students are of the opinion that they lack practical experience in order to integrate into the working environment (solution: more practice and work in real situations).
- They think that content from the conversion units are not problematic for them, since they learn them at the beginning of schooling (opinion does not comply with the opinion of the teachers of practical classes and they expose problems when students have to convert).
- In the context of educational process, they learn about content of sustainability and they are aware of the importance of quality of raw materials, origin and traceability of the raw materials. In their practical work as well as at home they use quality raw materials to achieve a higher quality of the final product.
- They want more practical knowledge for a more consistent transmission of sustainable content into practice and everyday life (solution: to put more emphasis on sustainability topics in the training programme and more work experiences so that students recognize how to transfer theory into practice and everyday life).
- Relations with superiors, colleagues (solution: to enhance students' communication skills, values, responsibility and respect for one's own work over the course of education).

### **Findings:**

Young people in the course of the study are not yet aware of the integrity of the relationships, their responsibilities, and do not express deep expectations, but they are too tied to the school system, which equips them with basic skills, but not with decision making, sustainability, or social competences, which are essential for responsible decision making about healthy and safe food in the field of miller's industry of the sector. Therefore, it will be necessary to include sustainable aspects on a more practical level and not through theory.

The analysis of the survey questionnaires showed that students miss more practical experience both in the classroom as well as among employers, where they would strengthen the knowledge mainly in the field of the organisation of working process, learn about the innovations and trends in the food sector and strengthen the ability to work in a team. The important thing for them is getting the skills in the field of measurement (convert units, measuring by recipes), working with large quantities of raw materials, knowing the rules of safety and hygiene regulations.

#### The experience of young employees

- In the school plant, they follow trends and consumer's demand, but at the same time consumers do not yet seek healthier products with less sugar, less salt, etc. in this regard, it is important that consumers derive from the awareness of the importance of one's own health and moderation in consummating sweets.
- In the plant, they adjusted the offer to the demand and supply trends, looking for niche products that meet consumer expectations.
- Employees are regularly educated and twice a year attend professional courses in order to keep track of current trends in food sector – smaller quality cakes in glasses, and healthy raw materials, decoration, modern dressing, etc.
- In the preparation of products, they use high-quality raw materials of higher price range, but must act in accordance with the rules of public procurement and stay competitive on the market.
- Young employees are of the opinion that in order to successfully work motivation and self-inactive is needed for more effective work, it is therefore necessary in to impress the young in the education process for the profession. Success of the work is in the high-quality raw materials, a good recipe, appropriate practical knowledge and love of work.

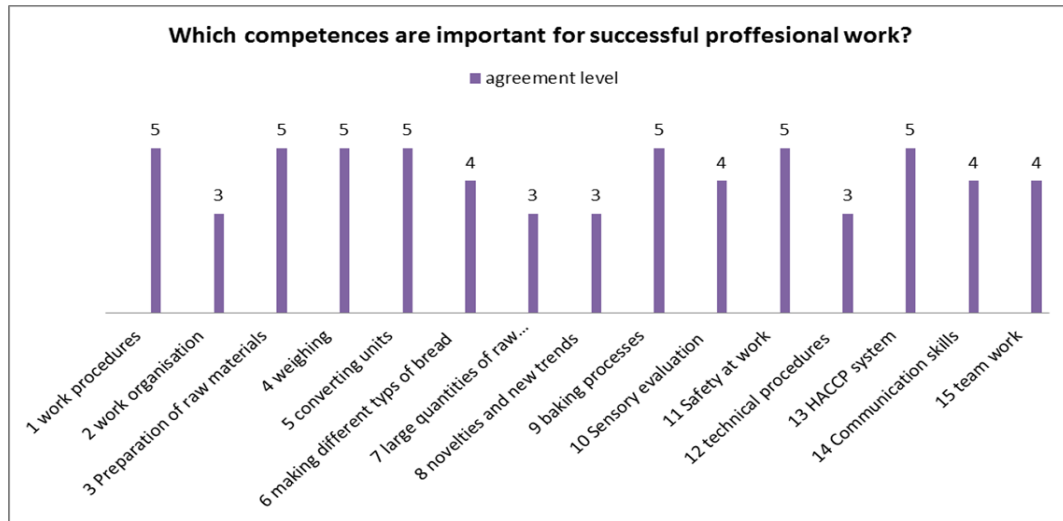
#### **Findings:**

There is a substantial difference between students and young employees, they last one understand their responsibility and feel obliged to act professionally. They have a great interest in new developments, changes and looking for new, different, sustainable skills. From the perspective of the young employees, we are optimistic as they are trying to do their job green, and they want this kind of green up-skilling.

#### Experience of the leaders of Practical Training and Professional Final Exams:

- In the EC Pyramid, there is a lot of young people from foreign countries, and the biggest problem is that they must learn the language and professional terms.
- There is a big difference between the quality of knowledge between two year lower vocational school and 3-year program that many continue in a 5-year program.
- Students of 2-year programmes handle just the basic approaches and are not concerned with backgrounds, in particular, they are interested in the technical part of the implementation of the work, while the students 3-5-year programmes later co-decide and can have a significant impact on the processes.
- Education for all must be kept in special logs, where their knowledge and skills and achieving them is described (photo of logs)

- Professional certification examination requires full readiness of the student, from writing the theoretical part to the practical part and they must prepare in advance for this
- Young people are given an access to new knowledge, that include aspects of sustainable raw materials, selection of products (Figure 3).

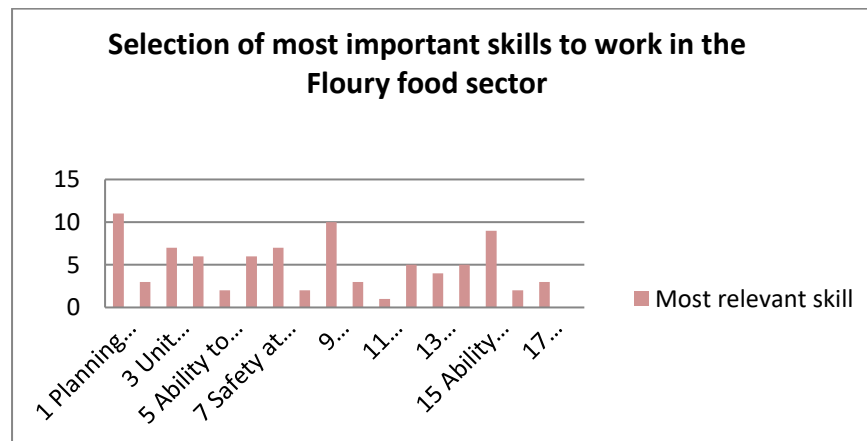


**Figure 3:** Important competences for successful professional work

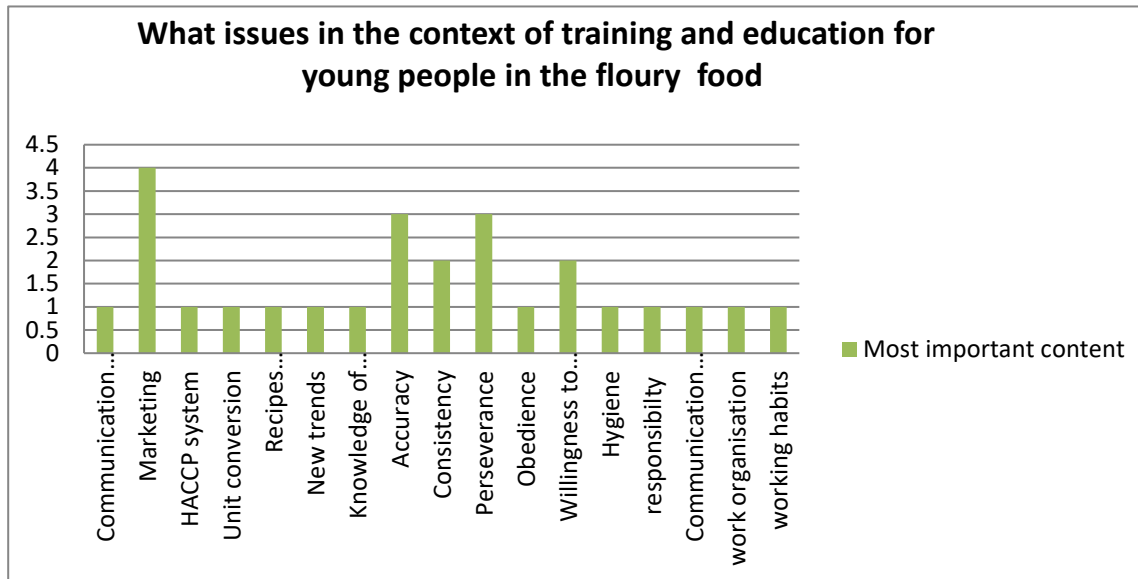
On the question of which competence students should develop for successful work in the profession the teachers of practical classes highlighted in particular the knowledge of work and technological processes, knowledge and preparation of raw materials, conversion of units and the weighing by the recipes, knowledge of baking processes, occupational safety and HACCP system. They agree that young people need to obtain as much practical experience as possible in the course of education in specialized classrooms.

**Findings:**

Teachers of practical classes are keen to learn young people skills and they also use sustainable approaches, because they perceive demand for them (Figure 4 and Figure 5).



**Figure 4:** The most important skills for youth



**Figure 5:** Most important content in the field of youth people

In the questionnaire, we asked participants about the most relevant skills to work in the FF sector. We have created a set of three most commonly exposed professional skills between individual member countries and 21 skills.

**Main Training Needs:**

- Individual planning and work organization
- Preparing a work place in accordance with regulations and rules
- Quality assurance of products and working processes
- Hygienic, health and safety regulations
- Processing of raw materials (with large quantities)
- Measurement skills (converting units)
- Innovative technology and equipment
- Sustainability aspects included in practical lessons
- More practical experiences at school and with employers in real life circumstances
- Communication skills

**Main Educational and Training Needs Are:**

- More practical instructions in specialized classrooms
- More work experiences with employers
- More individual creative work by designing products
- More individual teacher’s mentorship during practical lessons



- More skills in the field of measurements
- Working with large quantities of raw materials
- Knowing raw materials, technological equipment, technological procedures
- Knowing the rules of work safety and hygiene regulations
- Communication skills
- Teamwork

## **Conclusion**

As a result of interviews, we developed criteria for new educational modules. The introductory part of the content module, will include a short presentation of the project and the objectives of the learning module, which will also define learning objectives and expected learning outcomes.

We will choose the teaching methods that will allow learning about the theoretical bases of the individual as well as the implementation of practical training, since we have on the basis of the common Need Analysis found that the young as well as experts in the area of floury food sector in all member countries want many practical experience to enhance competence. The module also provides a set of learning tools for the implementation of the learning process.

At the same time, we will present options of how teachers may also include this kind of module in the existing module learning process and thus enrich the existing curriculum.

In the final part of the theoretical part of the module, recommendations will be included for the implementation of the evaluation and verification of new knowledge with the implementation of the quiz. We will choose the ways of self-evaluation that best fits the type of learning achievements.

The content of the modules will include short texts, to motivate and increase the learning willingness, as many studies shows that young people do not like to read long texts. The E Learning system will be prepared and its mobile optimization.

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