



**Deliverable 6.11**  
**E-learning course on**  
**"best practices on innovation" (ii)**

**Work Package No. 6**

**IFA**



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## Executive Summary

This report presents the summary conclusions of the e-learning course on "Best Practices in Short Food Supply Chain Innovations". The course objectives, course structure and outcomes of two rounds of the course are described. The e-course is located on the ISEKI-Food Association's Moodle platform, and may be accessed [here](#).

This e-course is designed for Short Food Supply Chain (SFSC) entrepreneurs and stakeholders in all SFSC-related fields. It aims to increase knowledge and collaboration by providing a wide range of materials and best practice examples. This self-guided course is structured in five sections called "Weeks" and is available free of charge following registration. The course begins and ends with a 10-question self assessment. Each week has an average contact time of 70 min and contains several "check your understanding" short-answer questions. A final quiz with 20 random questions from the "check your understanding" collection requires a score of 80% for receipt of a SMARTCHAIN certificate. Throughout the e-course, participants are asked for feedback including e.g., favourite sections and other comments.

The e-course was widely publicized on social media and via emails and it ran twice in summer 2021: in June/July and in July/August. A total of 276 registrations were received from participants of 62 nationalities, 106 started the course, and 44 individuals completed the course with 31 receiving a certificate. E-course dropouts were primarily registrants who did not begin the course (62%) - almost half of those who started went on to complete the final quiz, 42%. The 9% improvement in score of Self-Assessment After compared to Self-Assessment Before, along with the 70% passing grade ( $\geq 80\%$ ) give quantitative indications that participants found the course useful. Analysis of the open comments also suggest participant satisfaction as the words, "interesting", "new information" and "great" were among those most frequently used.

Data collected during the course are numerous and further analysis of these will contribute to a deeper understanding of how to improve this e-learning course.

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## 1. E-course objectives

The training course was designed for Short Food Supply Chain (SFSC) entrepreneurs and stakeholders in all SFSC-related fields (farmer, producer, regulator, marketer, distributor, financier, consumer organisation, etc.). The course is, however, available to anyone participating in or interested in SFSC anywhere in the world and at any educational level.

There are three main goals of the course:

- to provide a wide range of educational materials so participants better understand SFSC diversity and dynamics, at different interventional levels.
- to show innovative solutions, technological or socio-economic, to improve SFSC systems and businesses.
- to enlarge SFSC networking so innovators become part of a larger community of SFSC entrepreneurs by using varied online tools and resources.

With this course we expect that farmers and producers will learn from others, adapting to their own business what others successfully developed. Policy makers and regulators may learn about programs and initiatives that benefit local food chains, from producers to consumers. Consumers may understand the diversity of SFSC and decide the level of engagement they may have in their own community.

## 2. E-course structure

The e-course begins with a Course Guide and a 10-question self-assessment of basic SFSC knowledge. A forum for questions/interaction is available from the first day.

Then the e-course is structured in five sections called “Weeks”. Each week has an introductory presentation, then four to seven topics, some with sub-topics. Each topic uses a mix of learning materials: presentations, website visits, readings, videos, etc. After each topic, there is a self-assessment quiz called “check your understanding”, as training for the final quiz but not counting towards the final grade. At the end of each topic, participants choose their favourite and least favourite parts of the week and suggested activities and further reading materials are presented. Each week has an average learning time around 70 minutes minimum.

The e-course ends with a final quiz of 20 questions, randomly generated from all of the “check your understanding” questions presented during the course. Participants have three attempts to receive a grade of 80%, required for a certificate of completion. Before the final quiz, participants take the same 10-question self-assessment that they did at the course start.

The first round of the e-learning course started on Monday 24 May 2021 at 00:00 CEST and was active for the participants until 4 July 2021 at 23:59 CEST. Each “Week” of the course became available to the participants every Monday at 00:00 CEST and stayed active until the end of the course. Participants could complete the tasks at their own pace and at the latest by 4 July 2021.

The second round of the e-course started on Monday 12 July 2021. Based on comments from participants in the first round, the presentation of the course was slightly changed. Here, each week of the course became available as participants finished the final “check your understanding” questions of the week before. In this way, participants could finish the course in less than five weeks. The course ended on 22 August 2021 at 23:59 CEST.

### 3. E-course outcomes

#### 3.1 Registrants

Registration for the first round was open from mid April 2021 to mid May 2021. A total of 242 registrations were received, from 58 countries. Sixty-seven percent of the registrants were female and more than 95% were between 21 and 60 years old.

For the second round, registration was open during June/July 2021 and 34 registrations were received from 21 countries.

Overall, 276 people from 62 countries registered for the SMARTCHAIN e-learning course “Best Practices in Short Food Supply Chain Innovations” (Figure 1). Sixty-four percent of registrants were female and 97% were between 21 and 60 years old.

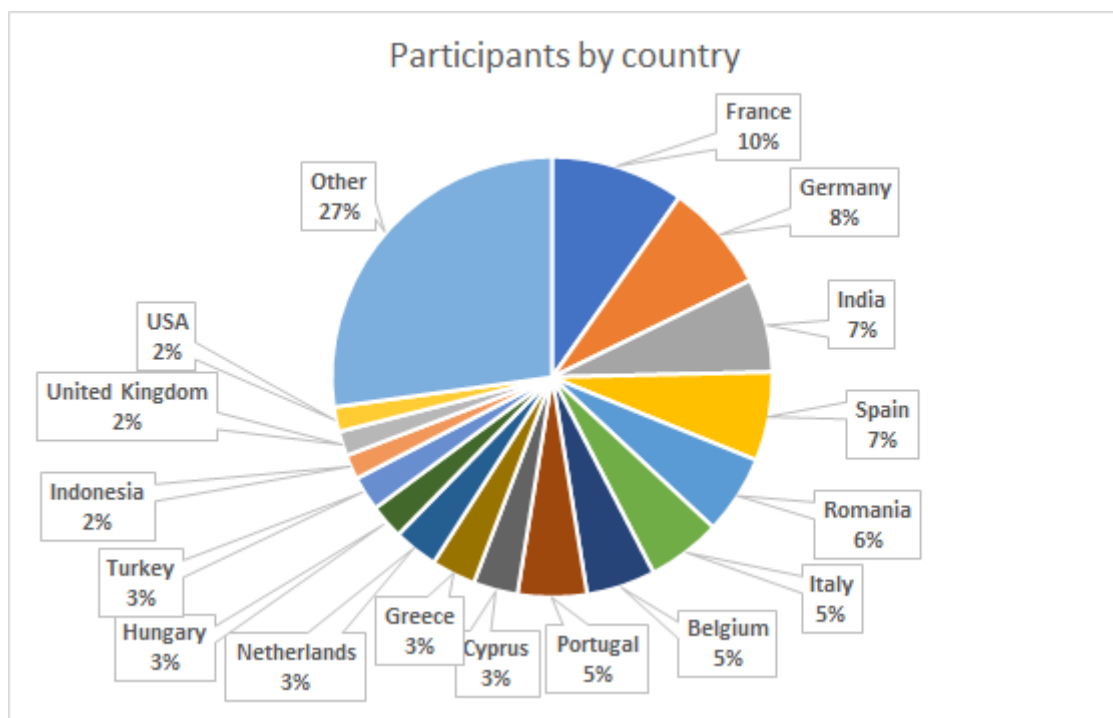


Figure 1: Total registrations by country (n=276)

Of the 276 registrants, 106 started the course by taking the initial assessment (38%) and 44 completed the course including finishing the final quiz (16%). The first round of the course had many more registrants than the second round - it was publicized for a longer time and more

intensively - yet the percentage who started the course out of those who registered, 38%, were the same in both rounds.

### 3.2 Completion rates by week

After the initial decrease in participants (those who registered vs. those who started the course), most participants continued until the end (Figure 2). The largest dropout after starting the course was between “Assessment Quiz Before” and the end of Week 1. Overall, 106 completed the “Assessment Quiz Before” and 58, or 21% of them, completed Week 1. After Week 1, dropouts decreased to almost zero, as 76% of those who completed Week 1 completed the Final Quiz.

In Round 1, participants received notifications from the course organizers at the start of the course. Then, course organizers checked the Forum on a weekly basis and responded to any queries. There were 9 posts during the 6 weeks that Round 1 was open, 6 to say hello, 2 questions about the final quiz and one question about the certificate.

In Round 2, course organizers attempted to increase retention by sending a motivational email to all registrants every week. As Figure 2 shows, this did not have much effect. In Round 1, 15% of registrants finished the course and in Round 2, 21%. In Round 2, there were no posts to the Forum.

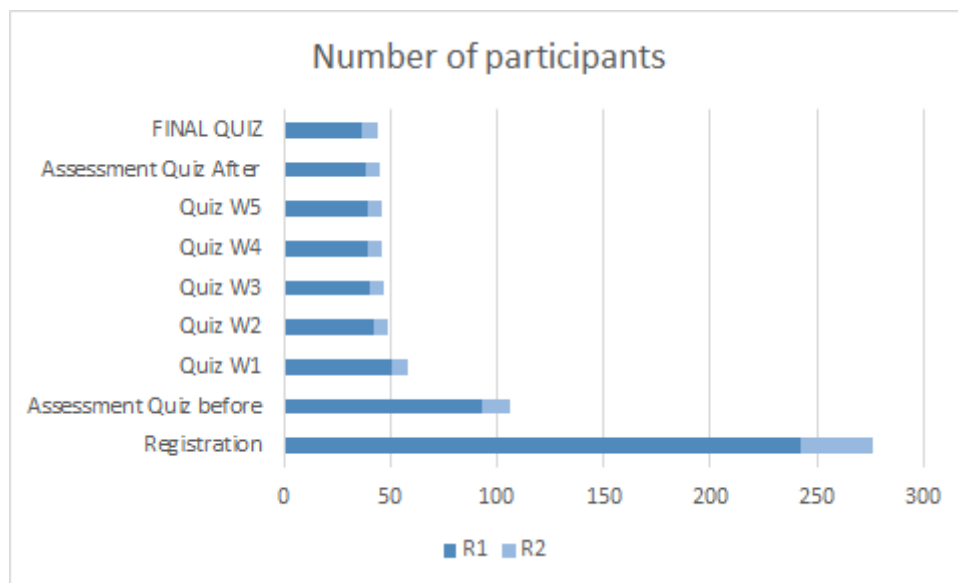
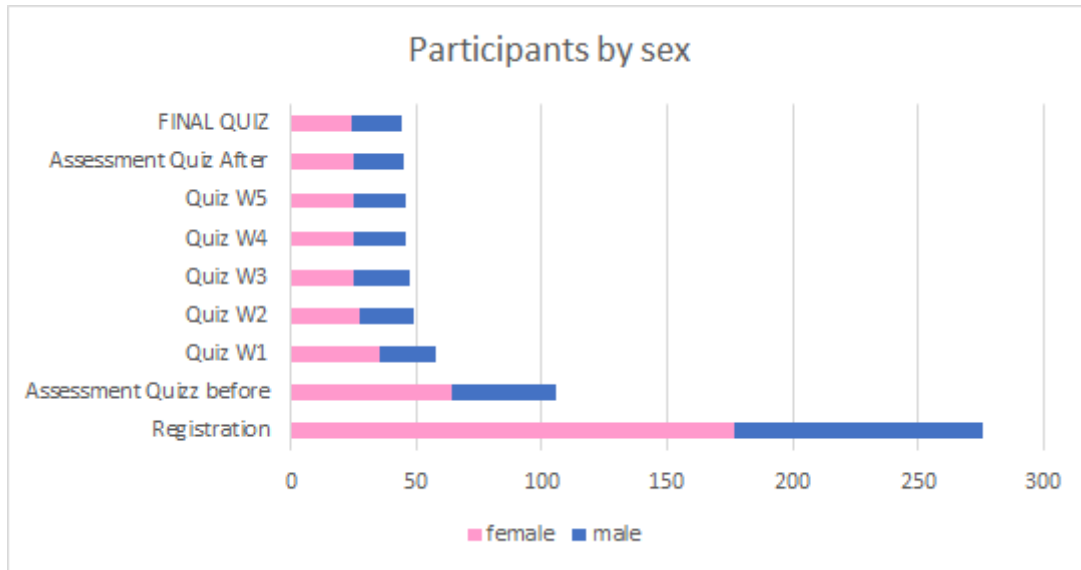


Figure 2: Number of participants completed each part of the course in Round 1 (R1) and Round 2 (R2)

Completion of the course was slightly higher among male registrants, 20% of males who registered completed the Final Quiz compared to 14% of females (Figure 3). Many more females however registered for the course, 177 and 99, respectively.

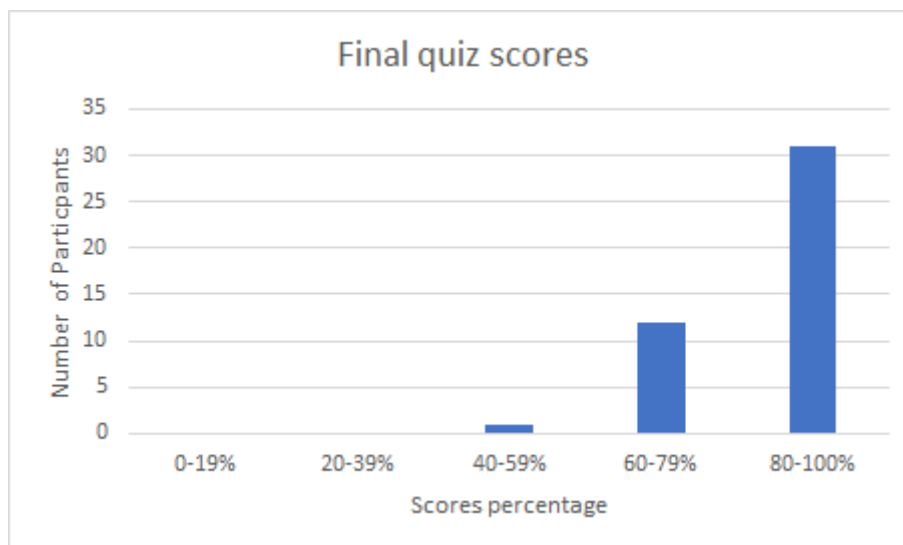


**Figure 3: Number of participants completed each part of the course by sex**

### 3.3 Final quiz

The 20-question final quiz was randomly generated from the “check your understanding” questions presented during the 5-week course. Thus each participant took a different quiz: it was a mix of multiple choice and true/false questions, it was untimed, and participants had 3 attempts to achieve a score of 80% greater which earned a SMARTCHAIN certificate.

Overall, 44 participants completed the final quiz and their average score (using the highest of all attempts) was 82% (Figure 4). Of the 44, 31 or 70% received a passing score and earned a certificate. The percentage of certificates of those who attempted the final quiz was much higher in Round 1 than in Round 2, 76% and 43%, respectively. These figures may however be misleading as the numbers of participants in Round 2 was very low: 7 took the final quiz and 3 passed.



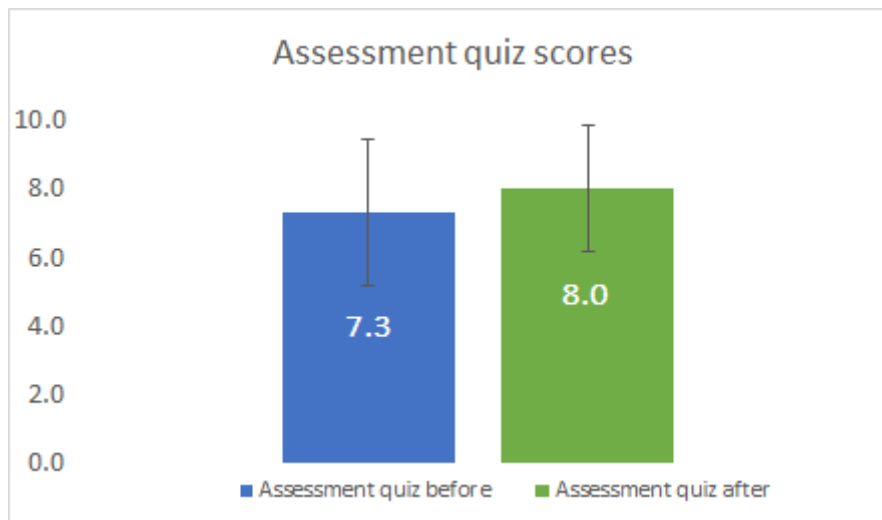
**Figure 4: Distribution of final quiz scores for Round 1 and Round 2 combined**



### 3.4 Quick assessments before and after

The quick assessment was a list of 10 statements, 2 relating to each week of the course, that were prepared by the course organizers. Participants were asked to indicate true or false for each statement. The same quick assessment was given at the beginning and at the end of the course to evaluate if participant knowledge increased with the course.

Overall, 106 participants completed the “quick assessment before” with an average score of 7.3/10 and 45 participants completed the “quick assessment after” with an average score of 8.0/10 (Figure 5).



**Figure 5: Average score of the assessment quiz performed before and after the course**

This overall improvement masks a variation based on the question, some questions had higher improvements than others, some had no change, and some even had a decrease in percent of correct answers. The basis of these differences will be further examined as the e-course continues to improve through its inclusion in new projects.

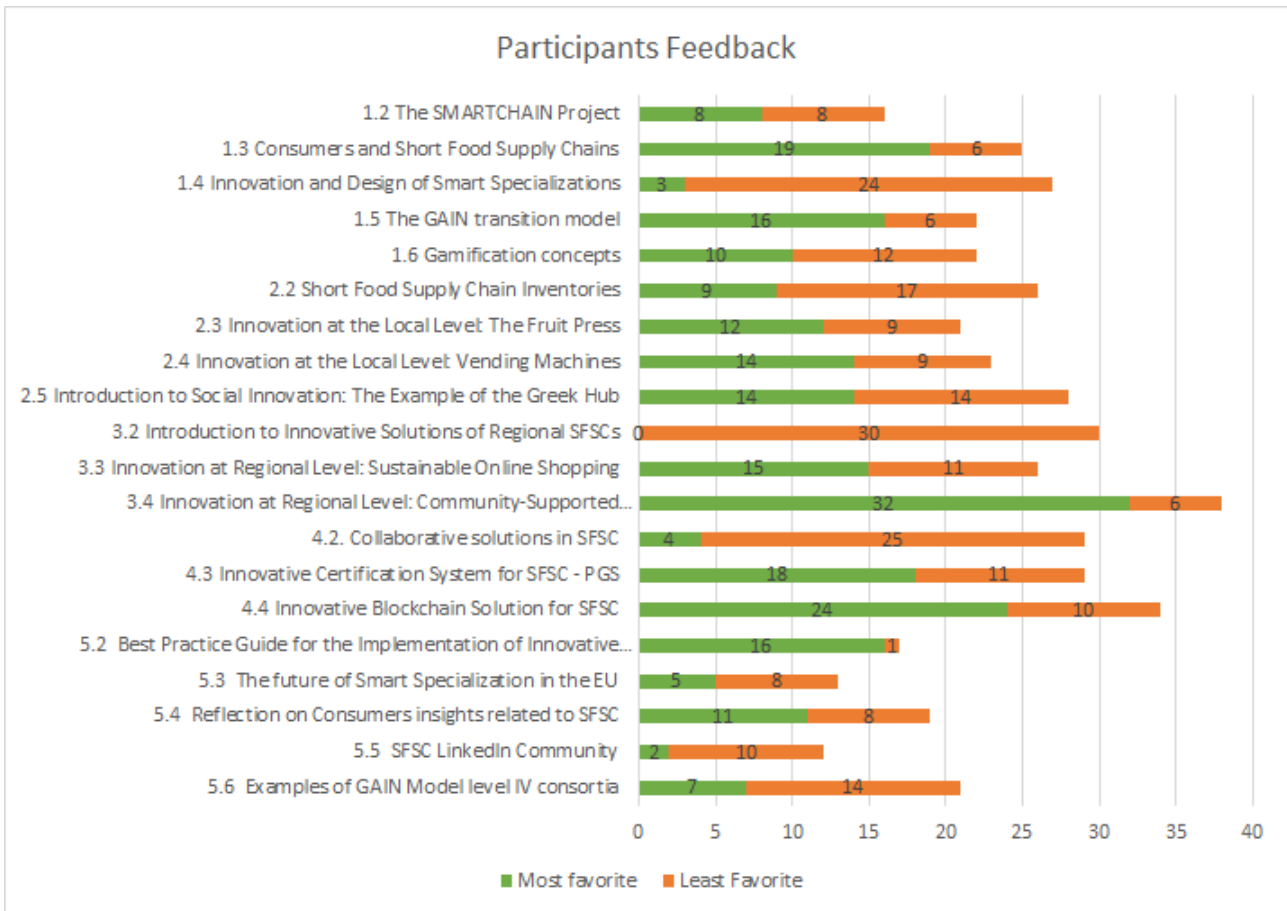
### 3.5 What learners liked and didn't like

The course participants selected their most and least favourite part of each week of the e-course (Figure 6). The favourite part of the e-learning course was “3.4 Innovation at Regional Level: Community-Supported Agriculture (CSA)” with 32 votes out of 47 for Week 3, followed by “4.4 Innovative Blockchain Solution for SFSC” with 24 votes out of 46 for Week 4.

The least favourite part of the e-learning course was “3.2 Introduction to Innovative Solutions of Regional SFSCs” with 30 votes out of 47 for Week 3, followed by the “4.2. Collaborative solutions in SFSC” with 25 votes out of 46 for Week 4.

The least voted part of the e-learning course, not most or least favourite but neutral, was the “5.5 SFSC LinkedIn Community” with only 12 votes in total out of 82 votes cast in Week 5.

This feedback gives direct information to the course organisers on what parts of the course either need improvement or to be removed and what parts could be expanded on.



**Figure 6: Favourite and least favourite parts of the e-learning course**

Feedback received from participants during the 5-week course shows that most described the course materials as interesting, great and useful, while indicating that most of the information was new and they learned a lot (Figure 7). There were also several comments pointing out that the course was difficult, the translation of some materials was poor, and the subtitles of some YouTube videos were missing. All in all, the feedback was constructive and will be taken into consideration for future updates of the e-learning course.



**Figure 7: Word cloud with keywords of the course participants feedback**

#### 4. E-course future

The e-course will stay available on the ISEKI-Food Association Moodle site. The course is in an area of the Moodle called “Innovative Food Supply Chains” where materials from the SMARTCHAIN Innovation and Solution-based Multi-actor Workshops are also available.

In the same Moodle location, the FAIRCHAIN project (grant no.: 101000723) will develop and offer several short e-learning courses about intermediate and other innovative food supply chains. The first FAIRCHAIN course, “Introduction to Intermediate Food Value Chains” is already in preparation and anticipated for winter 2022. The FAIRCHAIN organizers will likely also re-offer the “Best Practices” course, considering improvements based on the analysis presented here.

Finally, the data collected during the “Best Practices” course can be further analysed to e.g., understand what age groups and what countries were most or least likely to finish the course successfully. In this way, targeted efforts could be made to improve the course with the aim of successfully reaching as many stakeholders as possible. The course, and analyses of the data collected during it, could be of interest to the scientific community and a presentation of this is being considered despite the end of the SMARTCHAIN project.