

ALIGNING INTERPROFESSIONAL EDUCATION AND COLLABORATION IN PRACTICE

using promising regional experiences for international exchange

ICF EDUCATION CONTINUUM

from basic knowledge to practical ICF implementation material

It is recognized by the WHO that the use of the International Classification of Functioning, Disability and Health (ICF) requires knowledge of the ICF framework, its philosophy and principles and practical tools. This report provides an overview of the iterative development processes of the "INPRO ICF Basic Course" materials and the "ICF in person-centred rehabilitation" advanced learning materials to support the interprofessional implementation of ICF.

The added value of [the INPRO ICF Basic course](#) is the additional material developed to support the WHO ICF eLearning Tool, e.g., introduction and motivational lecture, slides and videos, and reflection seminar, where the participants discuss the most important aspects of ICF in small groups and the discussions is shared together in a big group.

The [Advanced ICF material](#) is a pdf book supported by [Power Point slides](#). It provides examples of how to use the ICF during the rehabilitation cycle, following the MAGPIED model (Meet, Assess, Goal set, Plan, Implement, Evaluate and Document). The teacher and/or student can select from the in-depth material those materials and tasks that are important to learn.

The developed ICF education continuum offers a learner friendly, understandable basic knowledge of ICF framework and additional ICF material for person centred, interprofessional implementation. Even though the material follows the rehabilitation model, it can be used by any professionals who uses the ICF.

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The authors wish to acknowledge the INPRO project consortium who have contributed to the development of these education materials. In alphabetical order:

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- Coronaria Healthcare and Rehabilitation Services, Finland
- Hanze University of Applied Sciences, Groningen, The Netherlands
- Jamk University of Applied Sciences, Jyväskylä, Finland
- Moorheilbad Harbach Gesundheits- & Rehabilitationszentrum, Austria
- Rehabilitation Centre Revalidatie Friesland, The Netherlands
- St. Poelten University of Applied Sciences, Austria

Project number: 621428-EPP-1-2020-1-NL-EPPKA2-KA

Start date: Jan 1, 2021

End date: Dec 31, 2023

Co-funded by the
Erasmus+ Programme
of the European Union



Date: December 20, 2023



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1. Introduction

The use of a common language in interprofessional collaboration is very important. The World Health Organization (WHO) International Classification of Functioning, Disability and Health, known more commonly as ICF (World Health Organization, 2001), has been chosen by the INPRO consortium as the linking model for interprofessional collaboration and structuring the wishes and needs of a client.

Practical synergies between ICF and Interprofessional Education and Collaborative Practice (IPECP) will enable ICF to enhance the implementation of IPECP. They allow us to activate a biopsychosocial, socioecological, person-centred, and evidence-based practice, including the ICF agreed shared language and ICF-informed clinical tools, assessments and evaluations that can support interprofessional education and team-based care. (Moran et al., 2020.)

Functioning is the starting point of a client and goal oriented iterative rehabilitation problem-solving process (Cieza & Stucki, 2005; Rauch et al., 2008). It has been recognised that the implementation of the ICF requires sufficient and correct basic knowledge of the ICF. It is recognized that the use of the ICF in clinical practice requires a basic knowledge of the ICF framework, its philosophy and principles (World Health Organization, 2013). At the same time, implementing the ICF in clinical practice requires applications and tools (Doornebosch et al., 2022; Nguyen et al., 2021; Rauch et al., 2008).

This report provides an overview of the iterative development processes of the "INPRO ICF Basic Course" and the "ICF in person-centred rehabilitation" advanced learning materials to support ICF competence and multidisciplinary implementation of rehabilitation. This will ultimately contribute to improve functioning and health outcomes and quality of life of patients in rehabilitation centres and beyond. The materials are published as two separate outputs

2. The aim of ICF Basic and Advanced education development

Between 2021 and 2023, an iterative development process was carried out to develop materials and videos for the "INPRO ICF Basic Course" and further educational materials for "ICF in person-centred rehabilitation" to support ICF competence and multidisciplinary implementation of rehabilitation. ICF education promotes the use of ICF as a person-centred and multidisciplinary framework.

3. Data collection

Jamk UAS, as WP5 leader, was responsible for the design of the INPRO ICF Basic and ICF Advanced education materials. The ICF working group members from each participating partner were

responsible for planning the education delivery within their respective organisations. The feedback was collected from INPRO partners, students, lecturers and professionals.

The evaluation and development of the INPRO ICF Basic course was supported by feedback surveys for teachers/facilitators and participants on Webropol, the ICF eTest for participants and ICF Working Group discussions. The Advanced material was evaluated through teachers/facilitators and participants Webropol feedback surveys, participants ICF competency questions from the INPRO CF and a focus group discussion of the project experts who evaluated the material. The data were collected as follows:

- The feedback questionnaires were tailored for each group (teachers/facilitators or participants) and for each stage separately. There are quotes from open-ended responses, edited so that the respondent is not identified.
- The ICF eTest was used in the end of the INPRO ICF Basic Course to assess the participant's understanding of the ICF framework. It contained 24 ICF-related statements presented by the ICF Research Branch (2014), to which the participant had to answer "yes (correct)", "no (incorrect)" or "don't know". The maximum score (highest understanding) was 24 points. After finishing the eTest, the participant received the test results (how many correct answers she/he has got).
- ICF competency questions are based on the INPRO Competence Framework (INPRO CF) (Aerts & De Weerd, 2023).

Data are processed in accordance with established data management rules in a way that ensures that individual participants cannot be identified in research publications. The information you provide will remain strictly confidential. The EU's General Data Protection Regulation (GDPR) was complied. Before the evaluation, the need for an ethics opinion was discussed with the Ethics Committee at Jamk. Neither legislation nor Finnish National Board on Research Integrity (TENK) guidelines require ethical review by an ethics committee for research based purely on public and published data, registry and documentary data or archive data.

4. INPRO ICF Basic course development

4.1. The aim and process

The ICF framework has been educated since its publication in 2001. The ICF framework can be studied using various WHO materials such as the original ICF book (World Health Organization, 2001), the ICF Practical Manual (World Health Organization, 2013) or the ICF eLearning Tool (World Health Organization, 2022). In addition, the higher education institutes (HEI) participating in the INPRO have incorporated the ICF framework in their curricula and rehabilitation centres train their professionals.

The target groups of the ICF Basic course were HEI lecturers and students as well as professionals from the work field. It was targeted to persons from any social or health professional background who are in the novice level in ICF knowledge. The overall aim was to give the target groups both from

HEIs and rehabilitation centres similar basic information of the ICF framework and the same understanding how it could be used in interprofessional collaboration.

In the first pilot May–June 2021 the WHO ICF e-learning material was used (<https://www.icf-elearning.com/>), whose feedback showed that it is not enough to learn by eLearning, but that the students and professionals need more supportive and motivating ICF information. The gathered feedback from the ICF e-learning material was that more explanations are needed and especially chapter explaining codes & qualifiers was difficult to understand without additional explanations. Also, more practical examples were asked for clarifying the usage of ICF.

Pilot 2 was carried out for the new material followed by an evaluation phase. After these the final INPRO ICF Basic Course materials and videos were finalised. The process was planned by Jamk UAS ICF specialist and discussed with INPRO ICF Working group members, i.e., ICF specialist from each partner (Figure 1) and explained in more detail in the following chapters.



Figure 1. The process of INPRO ICF Basic course development in 2021 – 2023.

4.2. INPRO ICF Basic Course pilot #1 April – May 2021

4.2.1. Course description

In the first pilot April – May 2021 it was decided to use [the WHO ICF e-learning material](#) and evaluate its feasibility to give similar basic information of the ICF framework and the same understanding how it could be used in interprofessional collaboration. The ICF eLearning Tool material could be studied in two languages, English and Finnish, as in spring 2021 the Dutch and German translation was still missing. Partners from Austria, Belgium and the Netherlands used English version and partners from Finland Finnish version.

The INPRO ICF basic Course pilot #1 included (Figure 2)

- Short introduction (nationally held by ICF Working Group members)
- Independent online studies using the ICF eLearning Tools (<https://www.icf-elearning.com/>)
- ICF online test
- Feedback survey on the e-learning material for facilitators and participants.
 - How the e-learning material improves the knowledge of the multidisciplinary collaboration
 - How the e-learning material improves the knowledge of client centred rehabilitation
 - What are the main weaknesses / limitations of the ICF e-learning material

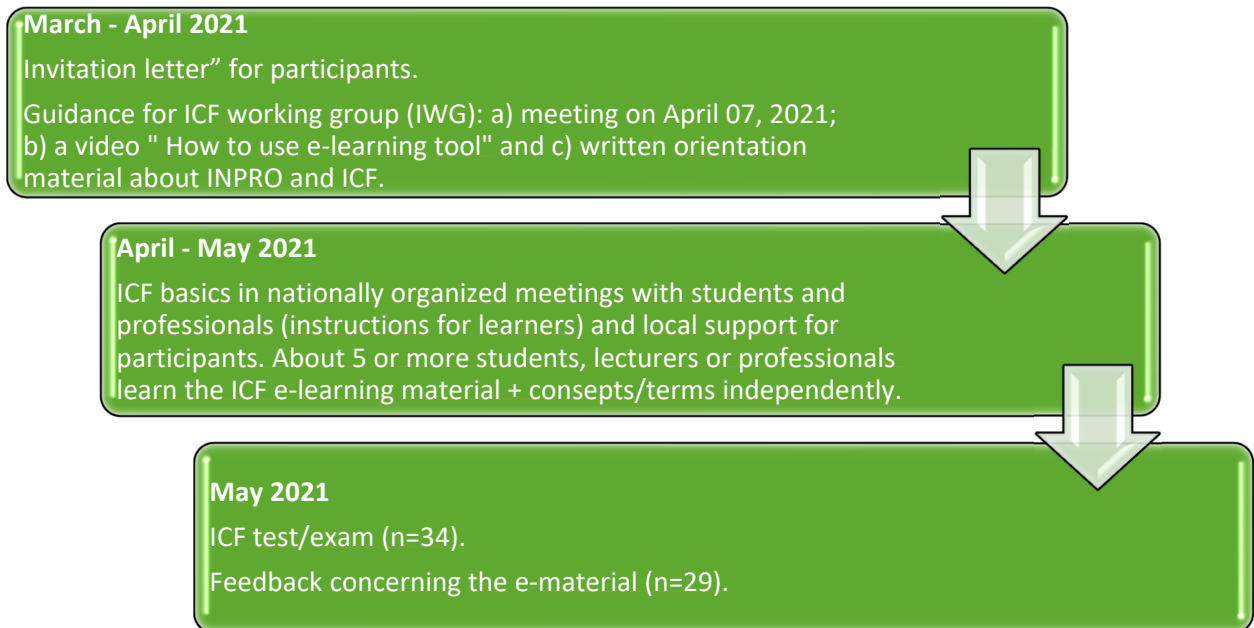


Figure 2. The process of the INPRO ICF Basic Course pilot #1 May –June 2021.

The aim was to have as interprofessional group as possible of about 5 - 10 participants from each partner and an ICF expert as a course facilitator. The exact number of participants is not known. Results are based on ICF eTest (n=34) and Webropol feedback (n=29) surveys.

4.2.2. Feedback from participants

ICF eTest

In total, 34 participants took the ICF eTest, of which 6 were from Austria, 17 from Belgium, 7 from Finland and 4 from the Netherlands. The average score was 16 points (out of maximum 24 point) ranging from 11 to 23 points (Figure 3).

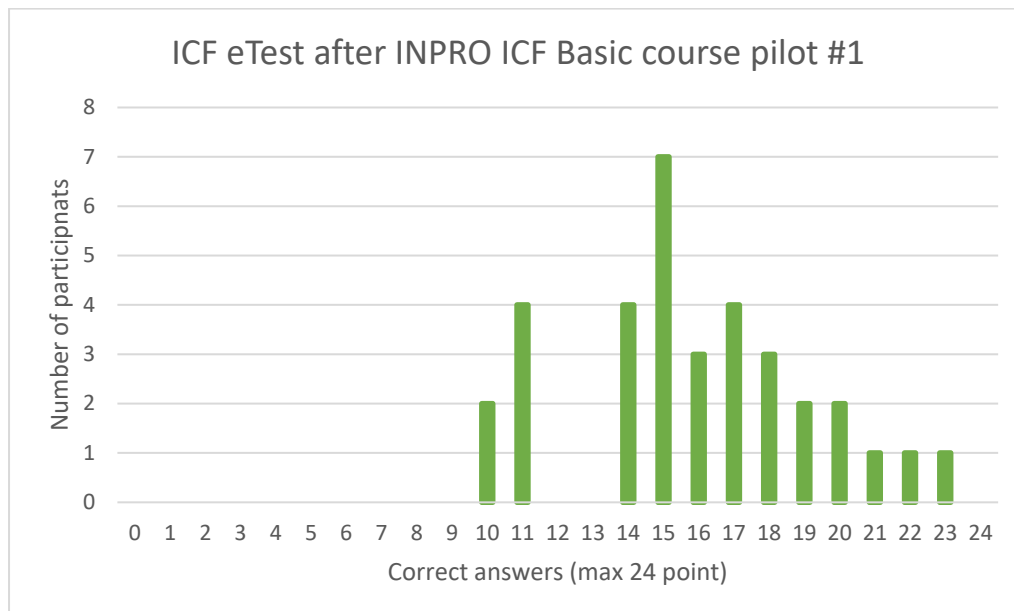


Figure 3. The ICF eTest results from the INPRO ICF Basic Course pilot #1 in May 2021 (n=32).

Webropol feedback

The Webropol feedback was gathered from 29 participants, of which 24 % were lecturers, 45 % students, 28 % professionals from the rehabilitation centres and 3 % not known (Table 1). Each of them indicated that they had no previous knowledge of ICF before it. The self-assessed average level of ICF knowledge after pilot #1 was 5,8 (min 1 – max 9) on a scale 0 (no ICF knowledge) - 10 (excellent ICF knowledge).

They felt that the ICF e-material was easy to use (97 % agreed) and understood what the needs (86 % agree) and aims (86 % agree) of the ICF are. Most of them also understood the ICF model (82 % agree) and how the ICF can be used (76 % agreed). However, only around 40 % felt that the structure and codes as well as qualifiers were easy to understand. Yet the majority thought that ICF e-learning material improved their knowledge that the ICF is a client centred approach and that the ICF increases the interprofessional collaboration. (Figure 4.)

Table 1. Description of the participants who answered the pilot #1 feedback questionnaire (n=29).

Background	Number (n)	Profession (n)
Lecturers	7	Social sciences (n=2) Nutrition/Dietetics (n=1) Nurse (n=1) Occupational therapy (n=1) not known (n=2)
Students	13	Nutrition (n=9) Multidisciplinary rehabilitation (n=1) not known (n=3)
Professionals	8	Nurse (n=3) Audiologist (n=1) Dietitian (n=1) Physiotherapist (n=1) Vocational rehabilitation professional (n=1) not known (n=1)
Not known	1	not known (n=1)

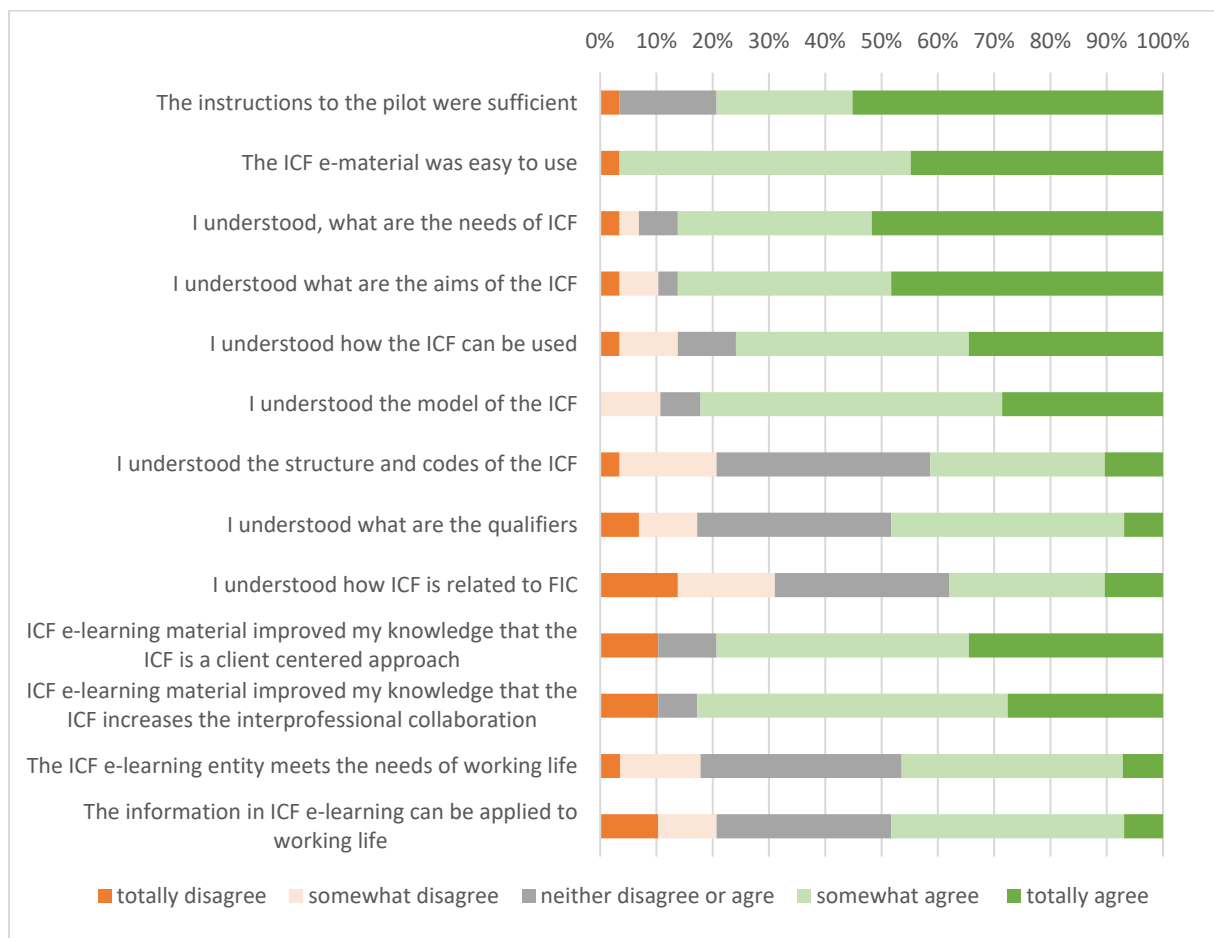


Figure 4. Evaluation of the WHO ICF eLearning Tool in Pilot #1 (n=29) on a scale 1–5 (1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

An open-ended question asked participants for ideas for improvement, to indicate what was unclear or if there was any area of the material they would have liked to know more about. Responses were grouped according to content:

- ICF Structure and codes difficult / unclear (chapter 5) (n=6)
- ICF Qualifiers difficult / unclear (chapter 6) (n=6)
- Clear examples are missing (e.g., video) (n=4)
- English language (n=4)
- How to apply ICF (n=3)
- Quizzes didn't work well (n=2)
- Learning ICF needs more explanation and practice (n=1)
- Examples were mostly for physio- and occupational therapy (n=1)

4.2.3. Summary of the INPRO ICF Basic course pilot #1

During the INPRO ICF Basic course pilot #1 in spring 2021), it became clear that the number of students participating was lower than expected. It was important for the project team that the INPRO ICF Basic course fit well into existing learning programmes in all participating countries. It was therefore decided to adapt it further.

Although the ICF eLearning Tool was found to work in many ways, there were so many uncertainties. Firstly, how to motivate participants to learn ICF and how to further describe that ICF is a person-centred and multi-professional framework. It was also noted that there was a need for more clarification and explanation of the content of the ICF. These led to the decision to develop supporting material and to carry out a second pilot at the end of 2021.

4.3. INPRO ICF Basic course pilot #2 November 2021

4.3.1. Course description

It was decided to develop supplementary material to the ICF eLearning Tool and to add a second INPRO ICF basic course pilot in November 2021. The aim was to evaluate the revised material before the evaluation phase of the INPRO project to be completed in 2022. Jamk ICF experts were responsible for the process and the development of the tool in collaboration with experts from different countries in the ICF working group. The process of updating the material and implementing the second pilot course is described in Figure 5.

Target group was a person from any social or health care profession or degree program who do not have any or a little ICF knowledge yet. Two kind of feedback from the INPRO ICF Basic course #2 was gathered, one from participants including bot ICF eTest answers (n=210) and Webropol feedback (n=167) and one from course facilitators (n=4).

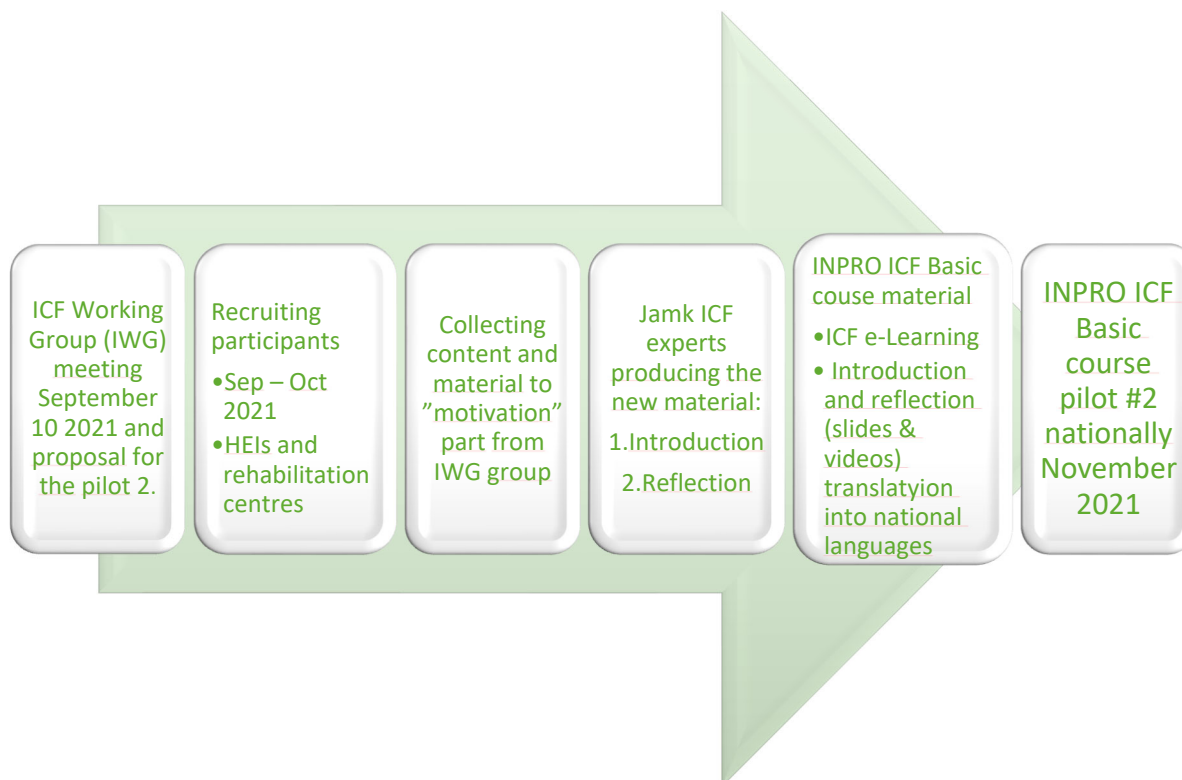


Figure 5. Updating the INPRO ICF Basic course material and running a second pilot course in November 2021.

The ICF eLearning self-learning material was supplemented with material developed by the INPRO team. The structure for INPRO ICF Basic course pilot #2 blended learning (1 ECTS) was as follows:

- Introduction part (face to face in the classroom or virtually) (1,5 - 2 hours)
 - Introduction of the content of the 2nd INPRO ICF Basic course pilot 2 (objectives, tasks, timetable)
 - Motivational part
 - Background
 - National inputs (e.g., how the ICF is implemented into the practise in the future and examples of ICF use/applications in the country concerned)
- Some basic information about ICF (slides and videos) (1,5 hours)
 - Terminology
 - ICF codes
 - ICF qualifiers
- ICF e-learning material (excluding WHO-FIC) for self-learning
- ICF reflection seminar / webinar at national level (1,5 - 2 hours)
 - Objective: to ensure that everyone has understood the basics
- Filling the ICF e-test and feedback form

4.3.2. Feedback from the participants

The exact number of INPRO ICF Basic course pilot #2 participants is not known. Results are based on ICF eTest (n=210) and Webropol feedback (n=167) surveys. Most of the pilot #2 participants were from the Netherlands (74 %). The rest were evenly spread between the other countries (10 % from Finland, 9 % from Belgium and 7 % from Austria).

ICF eTest

In total, 210 participants took the ICF eTest, of which 14 were from Austria, 17 from Belgium, 21 from Finland and 146 from the Netherlands. The average score was 15 points (out of maximum 24 point) ranging from 2 to 24 points (Figure 3). The learning outcome of the large data set (n=210) of pilot 2 is at the same level compared to the first smaller pilot (n=32).

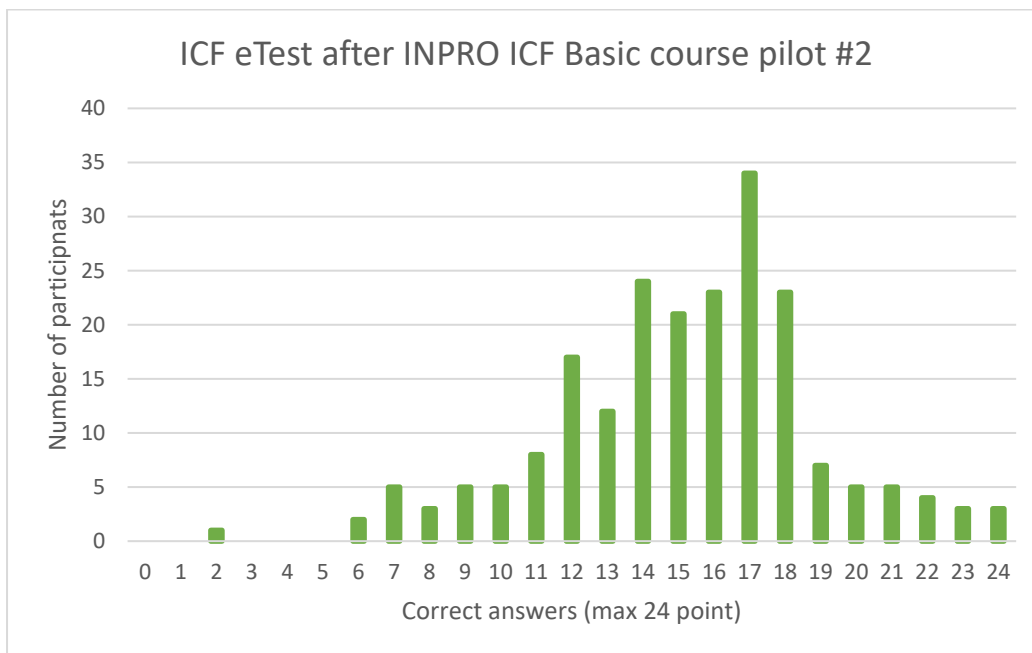


Figure 6. The ICF eTest results from the INPRO ICF Basic Course pilot #2 in November 2021 (n=210).

Webropol feedback

The Webropol feedback was gathered from 167 participants, of which 95 % students, 5 % professionals from the rehabilitation centres and 1 % not known (Table 2). The self-assessed average level of ICF knowledge after pilot #2 was 5,6 (min 1 – max 9) on a scale 0 (no ICF knowledge) - 10 (excellent ICF knowledge).

Table 2. Description of the participants who answered the pilot #2 feedback questionnaire (n=167).

Background	Number (n)	Profession (n)
Students	157	Dietetics and nutrition (n=15) Multidisciplinary rehabilitation (n=1) Occupational therapy (n=1) Physiotherapy (n=106) Rehabilitation counselling (n=5) Social services (n=2) not known (n=28)
Professionals	9	Physiotherapist (n=5) Occupational therapist (n=2) not known (n=2)
Not known	1	not known (n=1)

The addition of materials, i.e., introduction and motivation seminar, some basic information about ICF (slides and videos), and reflection seminar/webinar, did not seem to increase the participants' perceived learning of ICF basics such as the ICF model, structure, and codes compared to the pilot #1 ICF eLearning (Figure 7).

Examples of the key message/s or idea/s the participants got from the INPRO ICF Basic course #2:

“I am going to need ICF in my future career. It explains customers situation in a language that different rehabilitation professionals can mutually understand.” [student]

“It's verry interesting to use between different health professionals. it's a universal language.” [student]

“I think what I mainly got out of it was that the ICF model is really beneficial in real life, and it's not just something people use to teach at unit's but don't necessarily apply it later on in their own practices..” [student]

“You have to practice much more.” [student]

“Having a shared language is important to facilitate the flow of information.” [student]

“Motivation is really important.” [student]

“The ICF model is used for much more than I first thought.” [student]

“How environmental factors have a big influence on someone disability” [student]

“I learned the qualifiers and codes of classification of functioning, which I find it very useful for the profession of physiotherapist worldwide.” [student]

“It helped me to think even more about person-centred approach!” [rehabilitation professional]

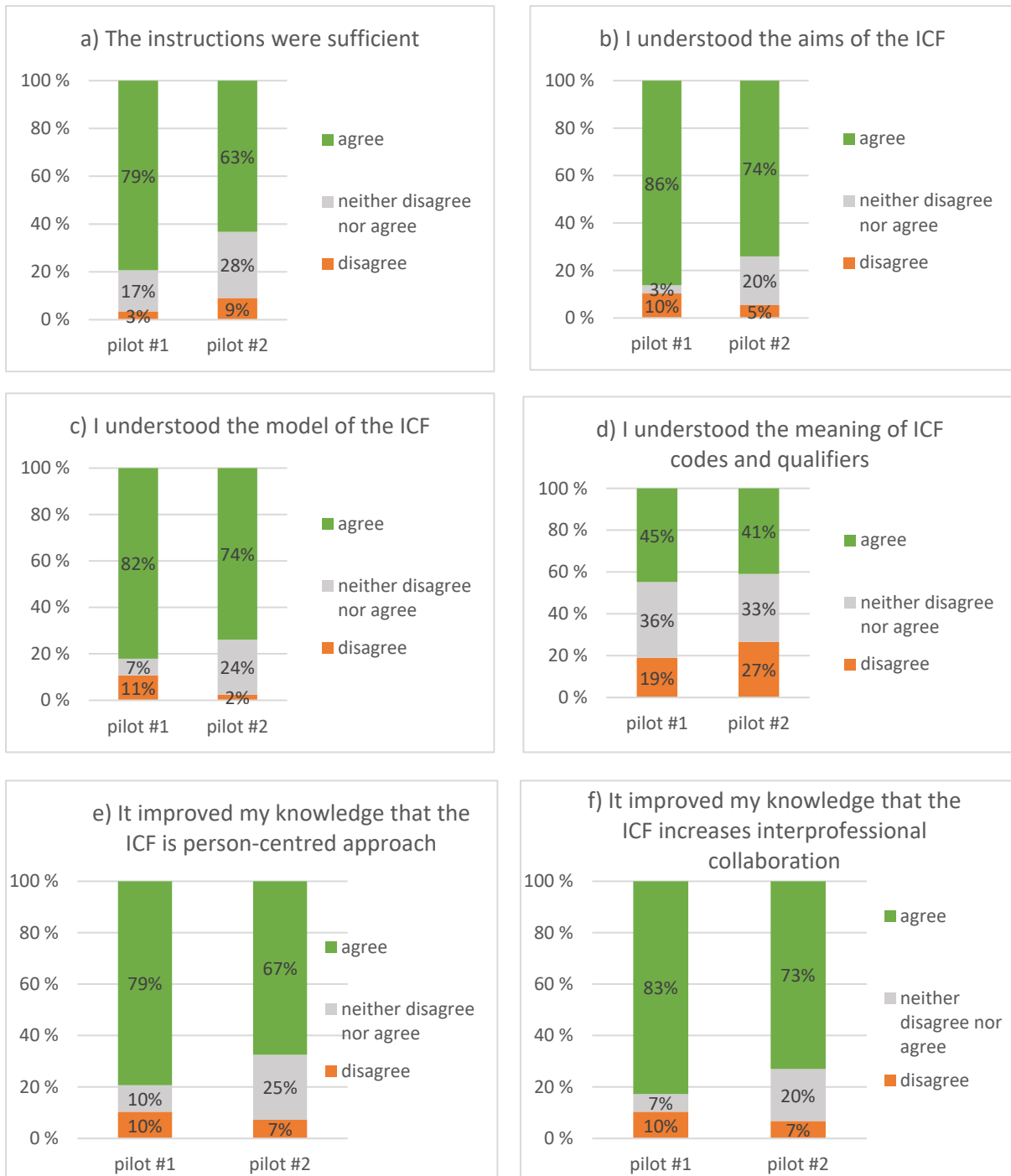


Figure 7. Feedback from ICF pilot course #1 (n=29) and #2 (n=166) participants. a) The instructions to the pilot were sufficient; b) I understood the aims of the ICF; c) I understood the aims of the ICF; d) I understood the meaning of ICF codes and qualifiers; e) It improved my knowledge that the ICF is person-centred approach; f) It improved my knowledge that the ICF increases interprofessional collaboration. Options for the statements: agree (totally or somewhat), neither disagree nor agree, disagree (totally or somewhat).

Around 60 % of the participants felt that the INPRO ICF Basic course #2 was useful, and the material was clear and easy to use (Figure 8). It seems that in implementation, the role of the teacher / facilitator is important in supporting self-learning (ICF eLearning), inspiring and explaining things clearly enough.

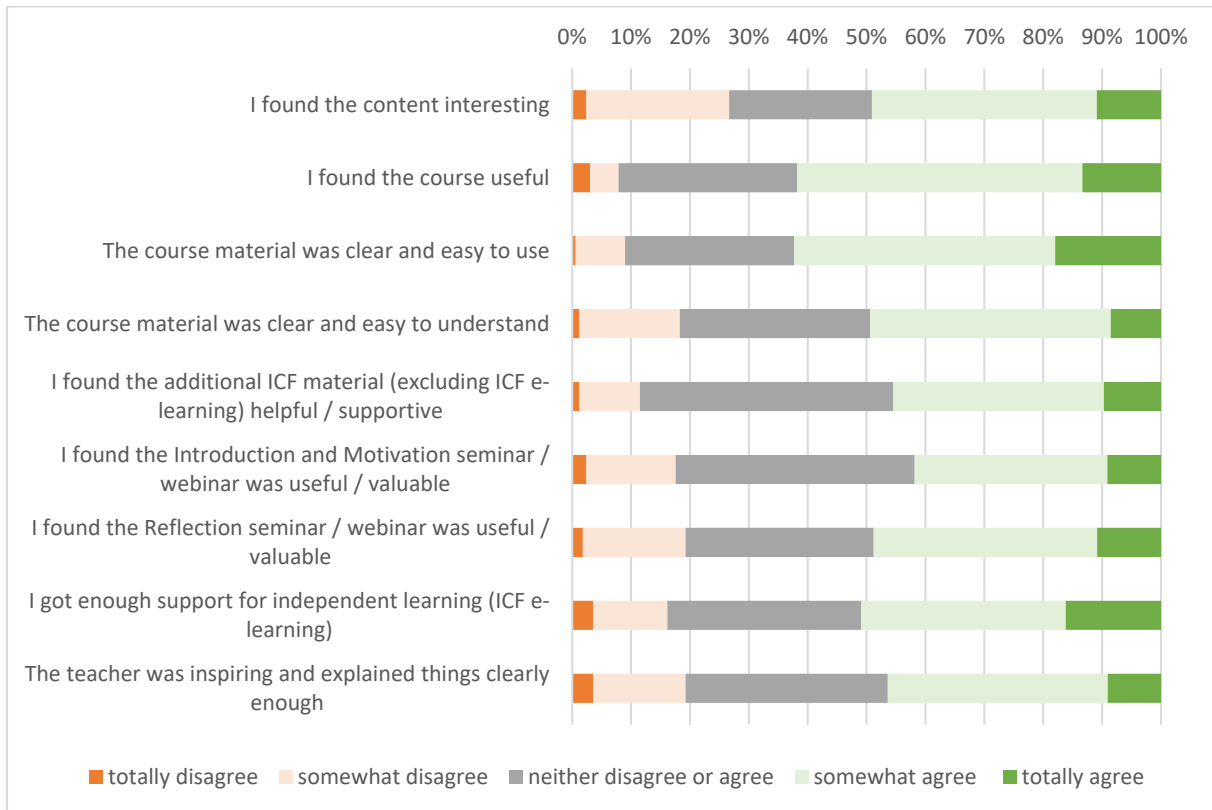


Figure 8. Feedback from the INPRO ICF Basic course pilot #2 content (n=166) on a scale 1-5 (1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

4.3.3. Feedback from the teachers / facilitators

Questions to the teachers / facilitators was

- If you modified (added or removed) the ICF pilot #2 material, please describe what did you do and why.
- There were some extra material (everything else but ICF e-learning) made for the ICF pilot #2. What do you think about the material - what was good, what would you have changed?
- How would you evaluate the reflection seminar (content and implementation) - describe.
- How would you evaluate the structure (introduction, independent learning, reflection, e-test and feedback) of the ICF pilot 2.
- How long time (weeks) the participants had time for independent learning (from introduction webinar to reflection webinar)?
- What else would you like to comment about ICF pilot 2

Feedback was received from four course facilitators, two in Austria, one in Finland and one in the Netherlands. The materials and feedback were discussed at the ICF Working Group meetings.

The feedback was positive and well supported the introduction of the INPRO ICF Basic course in the evaluation phase in 2022.

The facilitators evaluated that the extra material made for the INPRO ICF Basic course pilot #2 was good. Quotes from their feedback:

***“I used all the material. Thanks a lot. That saved time to prepare my workshop.** The material was very informative. Because sometimes for me personally there was too much information on the slides, I shortened the text passages.”*

*“We had an additional reflection meeting after the Learning intervention was finished, with all students. One week later I had the regular reflection meeting (as planned in the Pilot #2) with only [one professional group of] students. **The interprofessional reflection on the use of ICF was useful for the students.**”*

***“I would have put even more concrete examples how ICF is, or could be usable in the practice at workplaces.** However, the own videos from [a workplace] filled that lack to some extension. The different examples from [practice] were good! “*

“I also found the slides where the coding was explained as good.”

“This was good. The examples were good! In the [country] students get activated by answering questions: therefore, I would add some easy questions. For example: Search in the web browser the word xx (for example mobility of swallowing). How is the tree structure constructed? (what are the names above and below?)”

They evaluated the structure (introduction, self-learning, reflection, e-Test, and feedback) of the INPRO ICF Basic pilot #2 as follows:

“I really liked the spoken presentations. I think it would make sense to have a common lecture with an ICF expert and a lecturer from the profession and to have clear learning outcomes of what should be achieved. For the students it is not difficult to understand the structure of ICF etc. but it is hard to make a connection between what they learn about their therapeutic process and ICF.”

“I think the structure is well thought through and should be kept like this.”

“Structure is fine. I did not see which reflection students filled in online.”

“Feedback could be more extensive (or deleted and could perhaps be voluntary for students who have questions.”

“Overall, I think it is a good idea to have this kind of structure of the introduction and education into ICF. However, how it can be implemented in the [workplace] is under discussion. I am afraid that the time to be used is too long. I think we need to adjust, and the question is where to adjustments will be made.”

The facilitators made some changes to the course structure, which had been given the opportunity, especially by adding national examples. One coach / facilitator did add two videos with a client and therapist to give an example how ICF is used in practice and did not show the videos about coding and definitions. At the same time the RPS-form was showed and filled in together. Another coach also added clinical reasoning by means of the ICF (RPS formula with arrows). The PRS-form was not in the Basic course material since it is presented in the Advanced material. The use of the RPS form in the basic material could be considered. In addition, qualifiers/codes were left out because the coach / facilitator does not see their value as they are not used on the practice field.

The time spent on self-study (from the introductory webinar to the reflection webinar) varied, ranging from 4 weeks or less in three implementations to 10 weeks in one. It is worth noting that the time spent on self-study, or the adjustments made by facilitators may affect the participants' evaluations, but to what extent cannot be assessed.

The facilitators were asked to rate their own competence to teach ICF from 0 (no competence) to 10 (maximum competence). Their average rating was 5 (min 2 – max 8). The teachers / facilitators have achieved their own ICF competence by different means usually years ago. They did not show a particular need for further training on ICF themselves. Two of them wanted to find a way how the ICF can be used in a good way for professionals. It was also wondered how to make ICF so interesting and easily approachable as possible?

4.3.4. Summary of the INPRO ICF Basic course pilot #2

The participants' ICF knowledge after pilot #1 and pilot #2 was similar based on both the ICF eTest (pilot #1 mean 16/24 and pilot #2 mean 15/24) and self-assessed level of ICF knowledge (pilot #1 mean 5,8 and pilot #2 mean 5,6 on a scale 0–10). Both reflect good learning outcomes. It is worth noting that pilot #2 had many more participants and they were mainly students, i.e., fewer rehabilitation professionals from practice and no lecturers (24% in pilot 1) compared to the pilot 1.

Differences were found between countries in their understanding of what to teach about the ICF. This may have led to differences in the content of the courses delivered, despite the common material.

The material added to INPRO ICF Basic course #2 did not add to the understanding of ICF codes and qualifiers. Teaching them in the context of the ICF framework education should be done in an applied way, linking them to practical examples. The role of the teacher/facilitator is important and requires a high level of ICF knowledge and a positive attitude from the teacher/facilitator.

It was clearly felt, that the ICF is a client-centred approach and that the ICF increases the interprofessional collaboration. Therefore, the INPRO ICF Basic course provides a good basis for further education in the use of ICF in clinical practice and for experimenting with its application in practice.

4.4. Evaluation phase of the INPRO ICF Basic course in 2022

4.4.1. Course description

The evaluation focused on the quality of the developed INPRO ICF Basic course from the participants' perspective, using questionnaires developed in the previous phases. The aim of the INPRO ICF Basic course was to increase the knowledge of the ICF Framework. It was evaluated in 2022 (Table 3).

Table 3. Description of the INPRO ICF Basic course for evaluation in 2022.

Area	Description
Learning objectives	To offer the participant the common understanding <ul style="list-style-type: none"> • What is the ICF framework • What are the needs and aims of the ICF • What are the structure and codes of the ICF
Target group	This ICF basic course is developed for the participant who have not previous knowledge or just a little knowledge about the ICF. The participants can be from HEIs' (teachers or students) or from any social or health care sector (professionals).
Course content	Introduction material (power point) Study material for participants <ul style="list-style-type: none"> ○ Additional power points and videos <ul style="list-style-type: none"> ○ ICF terminology ○ ICF codes and qualifiers ○ ICF e-learning material (Chapters 1-6) Reflection seminar material (power point) Feedback survey for participants and teachers
Optional course content	Assignments for the participants can be decided case by case ICF e-test (test is not obligatory)
Learning & teaching methods	It takes 2-6 weeks. The timetable can be decided nationally. It is good to allocate for participants 2-4 weeks' time for self-study Face to face learning in introduction and in reflection phases <ul style="list-style-type: none"> • Implemented as a seminar or a webinar Self-studying (independent learning) <ul style="list-style-type: none"> • ICF e-Learning material (Chapters 1-6) • Additional materials (power point & videos)
Workload	INPRO ICF Basic course 1 ECT <ul style="list-style-type: none"> • Introduction 2 hours • Independent learning 20 hours • Reflection 2 hours • Feedback survey 1 hour

Specific instructions were given to teachers/instructors.

- there were a few slides in the introductory material where the teacher/instructor had to add the timetable of the implementation, the contact information (who is the teacher / facilitator) and "national" information.
- It was advised to add the ICF material of the national language. It is important that the terminology is understood also in the national language. The ICF e-learning had been published in Finnish and was published in Dutch just before the evaluation phase, but a German version was still missing. They were advised to use the official German language ICF book.
- To motivate the participants, it was asked to add the practical examples, for example how the ICF is used in that country. This was very important part of the introduction, because the participants can see already in the beginning of the course, how the ICF is used in the clinical practice.

The implementation was guided and discussed at an ICF working group meetings. The ICF working group member had to plan the implementation of the INPRO ICF Basic Course in his/her organisation so that each partner would have at least one course in spring 2022 and one course in autumn 2022. The planned number of participants was just over 300 (Table 4).

Table 4. Planned INPRO ICF Basic course evaluation times and estimated number of the participants.

Partner	Spring semester 2022						Autumn semester 2022					n
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Hanze UAS (NL)		x			x							120
AP UAS (B)		x			x							17
STP UAS (A)		x		x					x	x		122
Jamk UAS (F)									x	x		20
MoHa (A)										x		3
RF (NL)										x	x	15
CORO (F)	x	x					x	x				27
											SUM	324

NL = The Netherlands; B = Belgium; A = Austria; F=Finland

MoHa = Moorheilbad Harbach Gesundheits- & Rehabilitationszentrum; RF = Rehabilitation Centre Revalidatie Friesland, CORO = Coronaria Healthcare and Rehabilitation Services

4.4.2. Feedback from the participants

The exact number of INPRO ICF Basic course participants in the evaluation phase is not known. Results are based on the ICF eTest (n=45) and Webropol feedback (n=65) surveys. Most of the pilot #2 participants were from the Netherlands (74 %). The rest were evenly spread between the other countries (10 % from Finland, 9 % from Belgium and 7 % from Austria).

ICF eTest

In the evaluation phase the ICF eTest was voluntary. Overall, 45 participants took the ICF eTest of which 9 were from Austria, 30 from Belgium, 4 from Finland and 1 from the Netherlands. The average score was 16 points (out of maximum 24 point) ranging from 10 to 22 points (Figure 9).

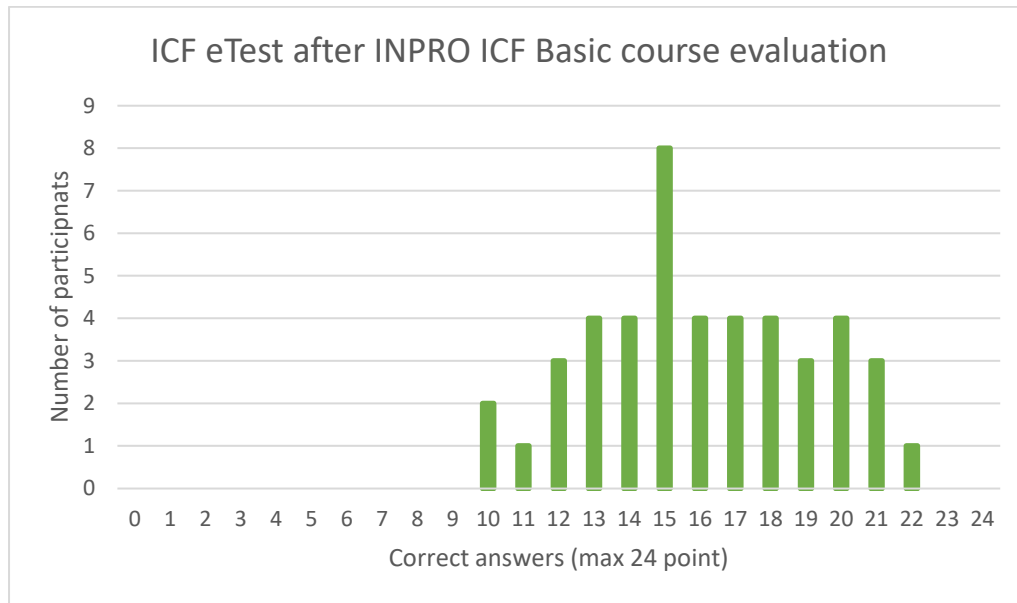


Figure 9. The ICF eTest results from the INPRO ICF Basic Course in evaluation phase in 2022 (n=45).

Webropol feedback

The Webropol feedback was gathered from 65 participants, of which 94 % students, 5 % professionals from the rehabilitation centres and 2 % not known. (Table 5). The self-assessed average level of ICF knowledge after evaluation phase was 5,6 (min 1 – max 8) on a scale 0 (no ICF knowledge) - 10 (excellent ICF knowledge).

Table 5. Description of the participants who answered the evaluation phase feedback questionnaire (n=65).

Background	Number (n)	Profession (n)
Students	61	Dietetics and nutrition (n=37) Nurse (n=3) Social services (n=3) not known (n=18)
Professionals	3	Physiotherapist (n=1) Social worker (n=1) not known (n=1)
Not known	1	not known (n=1)

About two thirds of the participants in the evaluation phase agree (somewhat or totally) that the content was interesting. In addition, around 60 % of the participants felt that the INPRO ICF Basic course was useful, and the instructions were sufficient. (Figure 10)

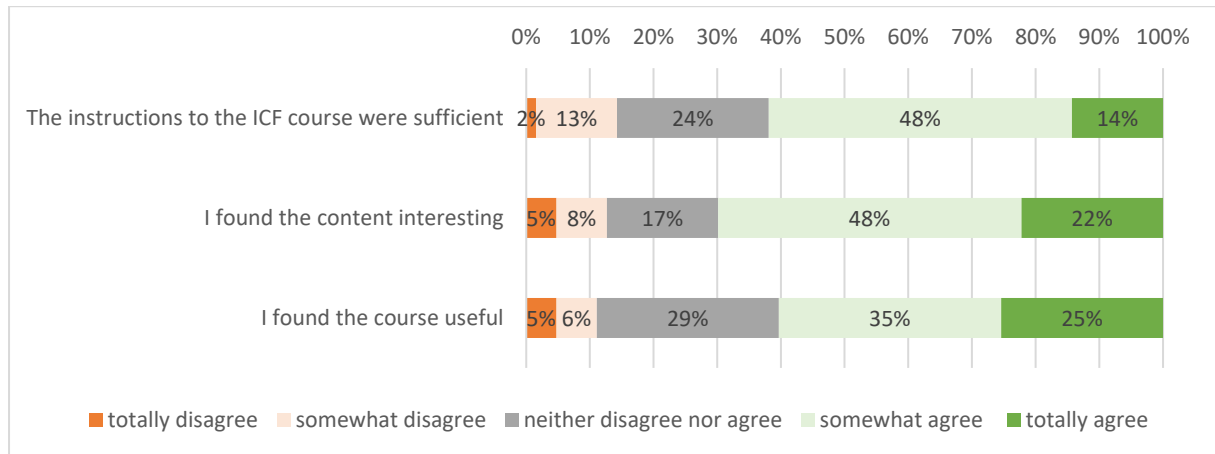


Figure 10. Feedback from the INPRO ICF Basic course concerning Introduction on a scale 1–5 ((1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

In terms of content, the aims of the ICF and the ICF framework were perceived to be best understood (Figure 11). As in the pilot courses, the codes and definitions were a little less clear. The use of the ICF in different settings was not a focus of the common material, as national examples were desired. The Pilot 2 course showed variation in their inclusion between countries, which may also be reflected in the evaluation phase.

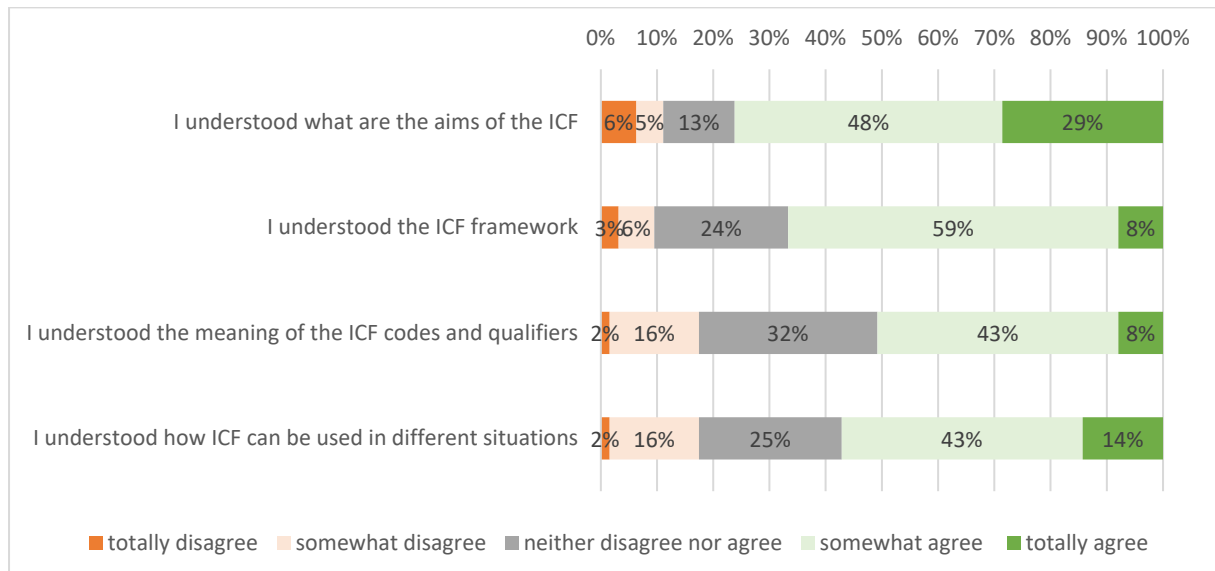


Figure 11. Participants' evaluation of their learning during the INPRO ICF Basic course on a scale 1–5 (1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

About two thirds of the participants felt behavioural change after the INPRO ICF Basic course (Figure 12). This means understanding the ICF as a person-centred and interprofessional approach.

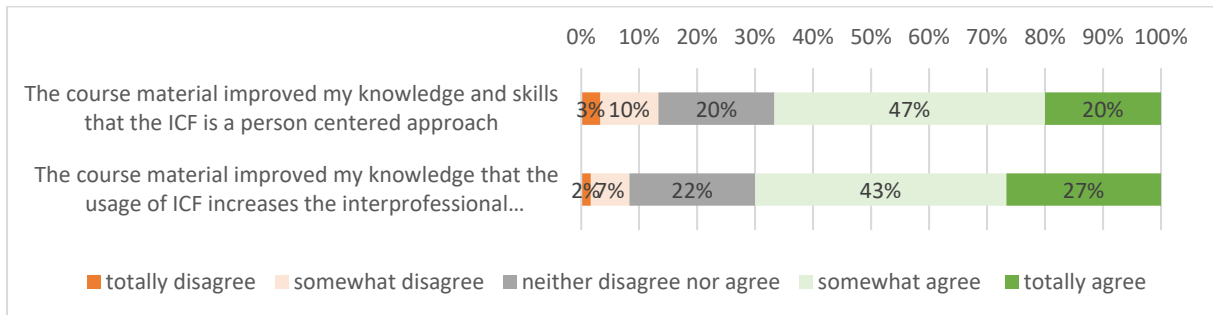


Figure 12. Behavioural change after the INPRO ICF Basic course on a scale 1–5 (1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

Overall, the material and delivery of the INPRO ICF Basic course was considered good, with only a minority (around 15%) disagreeing (Figure 13). A small difference is with the reflection seminar, which one in five did not find useful or valuable.

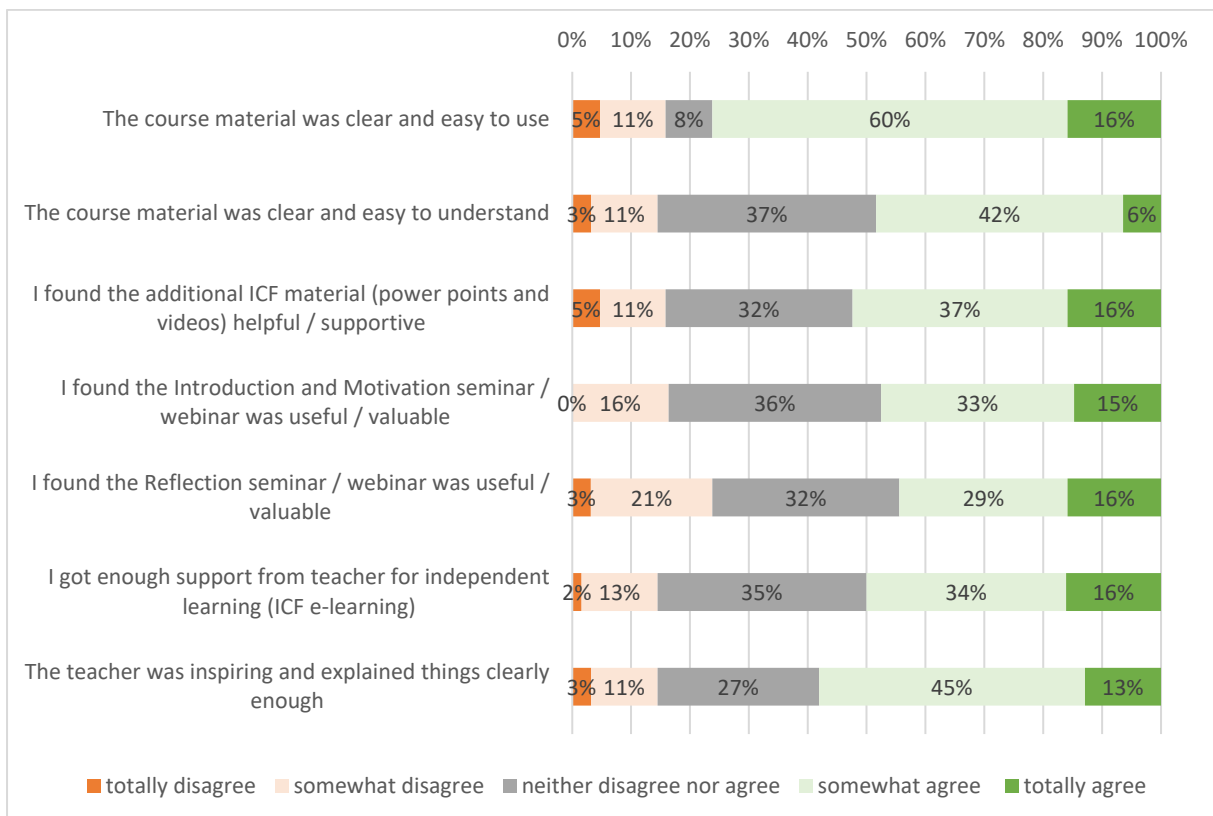


Figure 13. Feedback from the INPRO ICF Basic course material and implementation on a scale 1–5 (1=totally disagree; 2=somewhat disagree; 3=neither disagree nor agree; 4=somewhat agree; 5=totally agree).

It seems that the important message of the ICF “*The emphasis is very much on interprofessional collaboration in order to help the patient as personally as possible*” was clearly understood. Five participant (8 %) did add a comment that the ICF was difficult / hard to understand. Participants were quite satisfied with the course, with 18 out of 47 respondents (72%) not wanting anything more.

The English language was one issues that was mentioned “*I sometimes found it difficult that it was not in my native language. I think if it had been, I would have mastered it faster.*” Six participants wished for a Dutch version and two for a German version. More national and practical examples were desired (n=6). Other notable hopes included a step-by step summary in the end (n=4), a summary / handbook of the overall material (n=4) and more videos (n=2).

4.4.3. Summary of the INPRO ICF Basic course evaluation phase

The target of one Basic ICF course in each organisation at least once in the spring semester and once in the autumn semester was not met. However, enough feedback was received from both HEI students and working life to enable the evaluators to finalise the course content. Feedback was received from only 20% of the planned participants, but there is no certainty that the planned number of participants was achieved. However, these result together with the data from pilot #2 supports the INPRO ICF basic course.

The English language was mentioned as a barrier to learning in the ICF eLearning Tool. During development, ICF experts from different countries (e.g., ICF working group members) mentioned that English is well understood and used. This may be the case, but using the ICF clinically requires an understanding of the terms in one's own language and therefore it was stressed to the facilitators that the ICF translation and terms in one's own language should be included. Whether this was done was unclear. The Dutch translation of the WHO ICF e-Learning tool was available online in the end November 2022. Therefore, it could not be used in the evaluation phase of the INPRO ICF Basic course. A German translation is still missing, but a total of ten languages of [the ICF eLearning Tool](#) are available.

It was also requested that teachers/facilitators include national and practical examples in the material before the course, but it is unclear how well this was done. However, these both – national language terms and national/practical examples should be considered when teaching ICF framework.

There were a few participants who found the ICF and the material difficult to understand. The teacher/facilitator should pay attention to these individuals and provide individual support. It seems that in implementation, the role of the teacher / facilitator is important in supporting self-learning (ICF eLearning), inspiring and explaining things clearly enough.

The teacher / facilitator should also invest in the implementation of the reflection seminar and bring out his/her own professional skills. This was be supported by the production of reflection seminar support material for the teacher / facilitator.

4.5. Final INPRO ICF Basic course

It was decided that the final INPRO ICF Basic course will be the one that has been evaluated during the pilot #2 and the evaluation phase. That means, including introduction and motivational seminar as well as reflection seminar in addition to the WHO ICF eLearning tool. The evaluation was carried out by around 250 participants who were students or professionals in the social and health care sector.

The ICF eTest taken after the INPRO ICF Basic course pilot #2 and evaluation phase shows a good level of competence. The level of ICF knowledge seems to have been similar at different stages of the process with an average of 15,6 / 24 points and a mode of 17 / 24 points. It is difficult to evaluate the score, because the composition of the groups (e.g., students or professionals, the stage of studies) varied and could not be standardised from one phase to another. Partly this was due to the challenge of recruiting participants, for example because of students' semesters.

The content of the INPRO ICF Basic course was found to be working well. Minor challenges were encountered in terms of comprehensibility. The ICF framework, in particular the codes and attributes, was found to be challenging in the way that English is. It is therefore important that teachers themselves are familiar with the basics of the ICF and use the terminology both in their own language and in English.

The added value of the INPRO ICF Basic course is the additional material developed to support the WHO ICF eLearning Tool.

- Introduction and motivation lecture is explaining the needs of the ICF and importance of ICF framework as a person-centred interprofessional framework well as describing the national examples of ICF usage.
- Two short videos: one about the ICF terminology and the other about the ICF codes and qualifiers.
- The reflection lecture: Six questions and answers for lecture or coach was created. The idea is the participants discuss the most important aspects of ICF in small groups and the discussions is shared together in a big group.

Teaching ICF is a challenge for teachers / facilitators. The ICF is a broad concept, which means that the teacher must first have a good knowledge of it and be an enthusiastic and motivating teacher. This had already been considered after the pilots (#1 and #2) by adding a motivational speech and a reflection seminar to the material. But that's something we need to pay attention to.

The material for [the INPRO ICF Basic course](#) blended learning (1 ECTS) includes:

- INPRO ICF Basic course – Orientation and motivation.pptx
 - Seminar 1,5 – 2 hours (face to face in the classroom or virtually)
 - Introduction of the content (objectives, tasks, timetable)
 - Motivational part
 - Background
 - National inputs (e.g., how the ICF is implemented into the practise in the future and examples of ICF use/applications in the country concerned)

- Some basic information about ICF 1,5 hour (slides and videos)
 - Terminology
 - INPRO ICF Basic course – Terminology.pptx
 - INPRO ICF Basic course – Video ICF terminology
 - ICF codes and qualifiers
 - INPRO ICF Basic course – Codes and qualifiers.pptx
 - INPRO ICF Basic course – Video ICF codes and qualifiers
 - INPRO ICF Basic course – Manuscript for video ICF codes and qualifiers
- ICF e-learning material (excluding WHO-FIC) for self-learning
- ICF reflection seminar / webinar 1,5 – 2 hours
 - INPRO ICF Basic course – Reflection seminar or webinar: Instructions for the ICF coach. pptx
 - INPRO ICF Basic course – Reflection seminar or webinar – Teachers material.pptx

In addition, the following material can be found:

- INPRO ICF Basic course – Certificate of Attendance.pptx
- INPRO ICF Basic course – Instructions for the ICF coach.pdf

5. ICF Advanced material development

5.1. The aim and description

[The ICF focus groups](#) held in the early phase of the INPRO project identified the need for practical examples and applications of ICF in clinical practice, which can also be used in teaching ICF in higher education. The challenges and needs related to learning and using ICF in person-centred interprofessional practice was identified from the perspective of both lecturers and professionals in clinical practice. It is noteworthy that in the evaluations of the INPRO ICF Basic course, participants (students and professionals) consistently expressed the wish for practical examples to clarify the use of the ICF. (Paltamaa et al., 2023a)

Jamk's ICF experts in collaboration with INPRO partners have developed an "advanced" ICF material as a continuum to INPRO ICF Basic course to show tools and ways how to use the ICF framework. The material also drew on the national examples developed in the second work package "[ICF-bases tools and practices](#)". (Paltamaa et al., 2023b)

The objective of Advanced material is to support the implementation of the ICF in practice and to provide examples for using the ICF. The material is based on Wade (2005) and Health Queensland (2017) MAGPIE rehabilitation cycle modified by adding one phase, Document (D) (Figure 14).

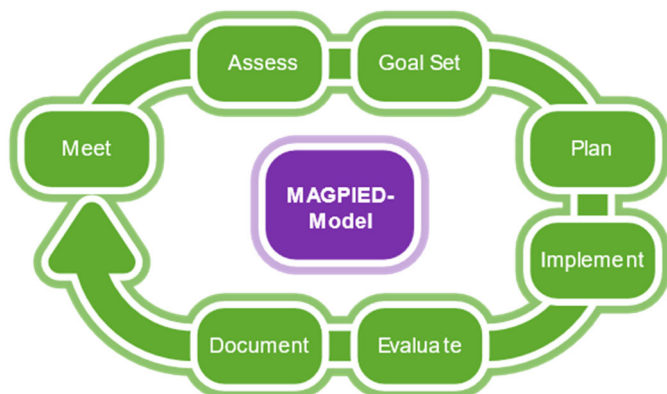


Figure 14. MAGPIED rehabilitation process (modified from Wade (2005) and the Health Queensland (2017) models).

Even though the material follows the rehabilitation model, it can be used by any professionals who uses ICF. The idea of the material is to offer a short theoretical background, examples, tools and examples of assignments for the reader. It can be used by any professionals as an inspiring package of ICF tools or supporting material when educating the usage of ICF in HEIs. For the lectures the material includes supplement power point presentation for Assess and Plan phases.

The evaluation focused on the quality of the developed ICF education material. It was carried out using the questionnaires developed during the INPRO ICF Basic course evaluation. The aim was to conduct the ICF Advanced material evaluation once in each organisation in the evaluation phase (October 2022-January 2023) with persons from any social or health care profession or degree program students or lecturers who know the basics of the ICF framework.

5.2. Evaluation phase (2022)

5.2.1. Material description

The Advanced material was evaluated during the INPRO evaluation phase in 2022:

- The feedback questionnaires were tailored for each group (teachers/facilitators or participants) separately.
- ICF competency questions are based on the INPRO Competence Framework (INPRO CF).
- a focus group discussion of the project experts who evaluated the material

The aim was to use the ICF advanced material in the courses to assess the comprehensibility and functionality of the content in HEIs and rehabilitation centres. It was intended to conduct the ICF Advanced material evaluation once in each organisation in the evaluation phase (October 2022-January 2023) by professionals, students or lecturers from any social or health profession who know the basics of the ICF. The planned number of participants was 70 (Table 6).

Table 6. Planned INPRO Advanced material evaluation times and estimated number of the participants.

Partner	2022			2023	n
	Oct	Nov	Dec	Jan	
Hanze UAS (NL)					0
AP UAS (B)	x	x			21
STP UAS (A)			x	x	5
Jamk UAS (F)		x	x		12
MoHa (A)		x	x		1
RF (NL)	x	x	x		23
CORO (F)	x	x	x	x	7
	SUM				69

NL = The Netherlands; B = Belgium; A = Austria; F=Finland

MoHa = Moorheilbad Harbach Gesundheits- & Rehabilitationszentrum; RF = Rehabilitation Centre Revalidatie Friesland, CORO = Coronaria Healthcare and Rehabilitation Services

5.2.2. Feedback from the participants

Webropol feedback

Overall, 21 participants, four students and 17 professionals from clinical practice, answered the Webropol feedback survey (Table 7). Most of them were from the Netherlands (62 %) and Finland (29%). As expected, they estimated that their knowledge of the ICF was at a fairly good level before the assessment. An average rating was 6 on a scale of 0–10.

Table 7. Description of the participants who answered the ICF Advanced material evaluation (n=21).

Background	Number (n)	Degree / Profession (n)	Country
Students	4	Nutrition and Dietetics (n=1)	Austria (n=1)
		Physiotherapy (n=1)	Belgium (n=1)
		Occupational therapy (n=2)	Finland (n=2)
Professionals	17	Occupational therapist (n=3)	Finland (n=4)
		Physiotherapist (n=10)	the Netherlands (n=13)
		Psychologist (n=1)	
		Social work (n=1)	
		Speech therapist (n=1)	
		not known (n=1)	

The structure and the content of the material was estimated to be clear and understandable, but participants wished for more in-depth content (Figure 15). The need for more in-depth knowledge should be seen in the light of the fact that the participants had a fairly good knowledge of the ICF beforehand. As one professional commented that “For persons who were already working with ICF

and had knowledge of it, it wasn't much 'new'. Many asked for a clearer and more concise style rather than leaving something out of the material.

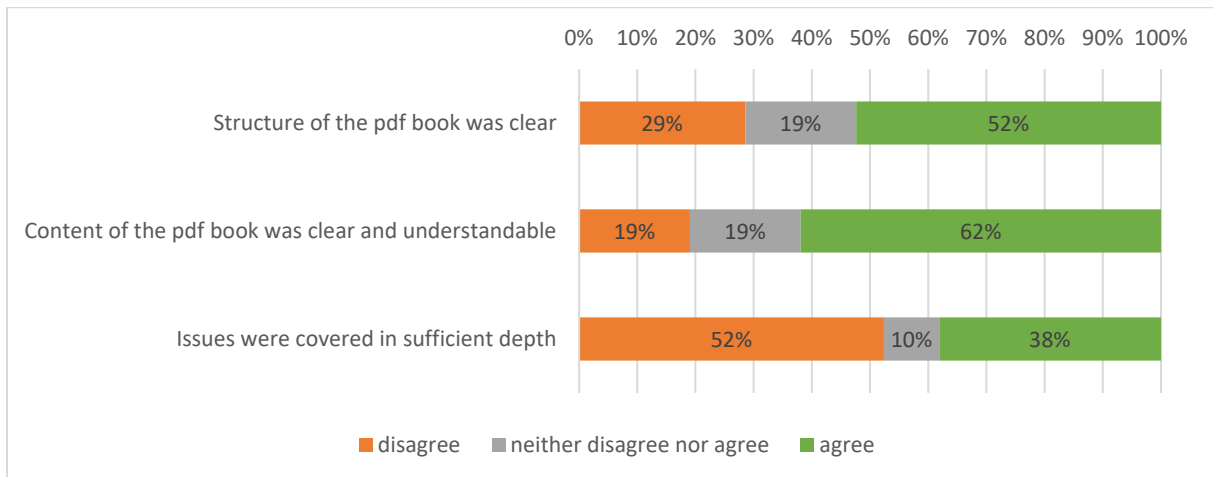


Figure 15. Feedback from ICF Advanced material (n=21). Options for the statements: disagree (totally or somewhat), neither disagree nor agree, agree (totally or somewhat).

Participants spent on average 17 hours (median 15 hours) studying the Advanced material. Most of the participants had done assignments even the material was not intended to be a course. The exercises were found to be good, relevant and stimulating discussions. The participants felt that they got support from the teacher / facilitator and also discussed with the group but to a lesser extent (Figure 16). The open-ended responses indicate that the discussions with the group was the most meaningful. The guidance and support of the group was useful for the full course and literature for consensus about the way how they use ICF in their organisation.

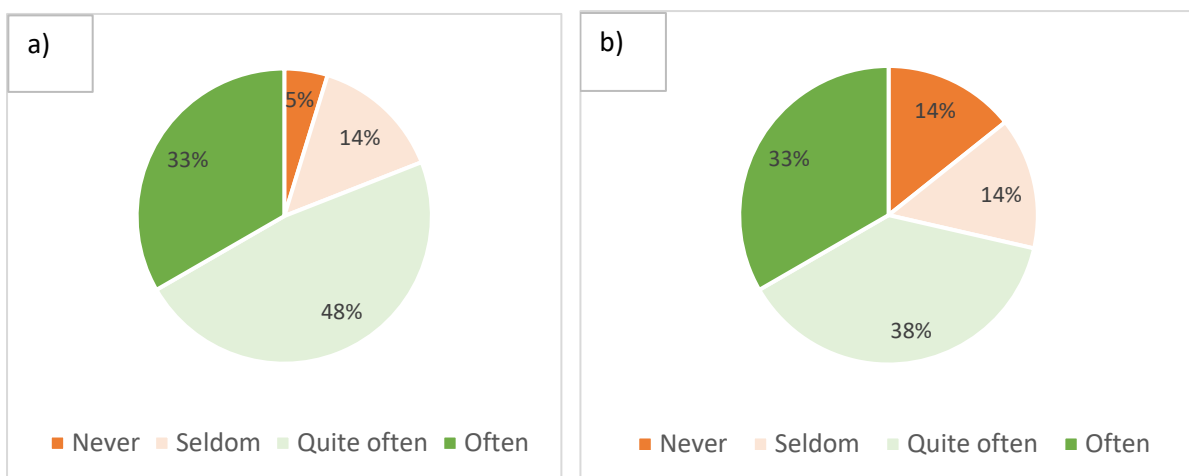


Figure 16. ICF Advanced material implementation: a) to receive support from your lecturer while learning the material in the ICF Advanced pdf book; b) to have discussions with your group (never, seldom, quite often and often).

INPRO Competence Framework

ICF competencies was evaluated using the INPRO CF (Aerts & De Weerd, 2023) by 27 participants of which 56 % were professionals and 44 % students. Ten of them were from Belgium (39 %), 11 from the Netherlands (42 %) and 5 from Finland (19 %). They evaluated five ICF competencies: Interprofessional Practise - IPC1 (Figure 17), Interprofessional practise - IPC4 (Figure 18), Learning and Development - LDC1 (Figure 19), Management and Leadership - MLC3 (Figure 20) and Research - RC2 (Figure 21).

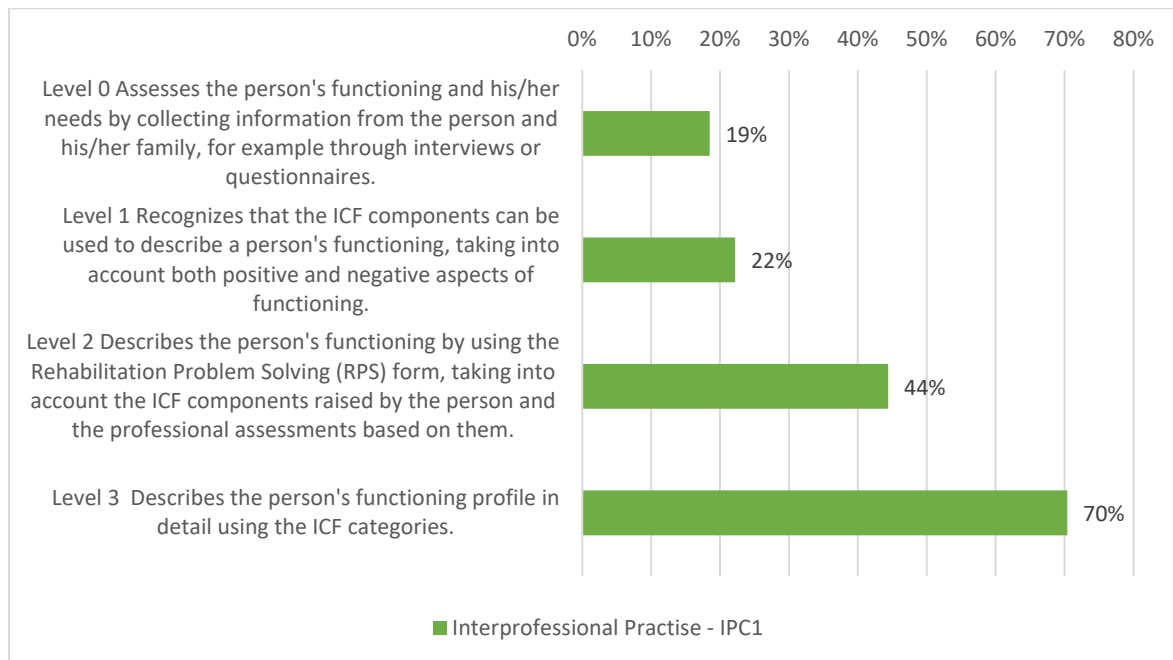


Figure 17. Interprofessional Practise - IPC1: Places the person and their family at the centre of the interprofessional practice. Participants self-rate on a level of 0–3 (n=27).

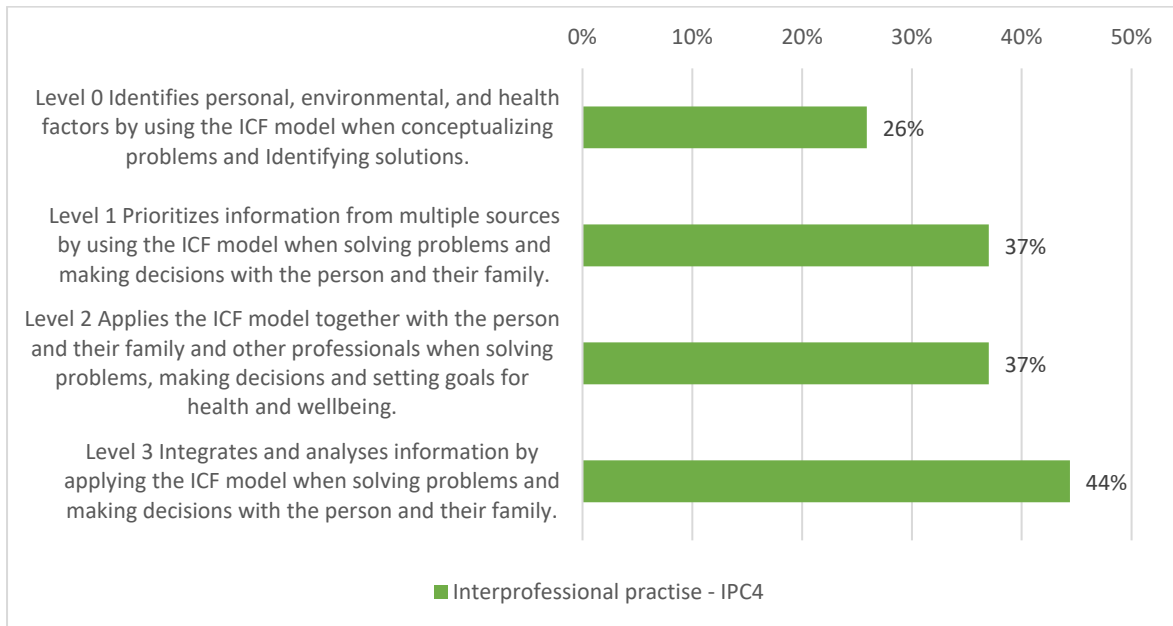


Figure 18. Interprofessional practise - IPC4. Adopts a sustainable interprofessional approach to problem-solving and decision-making. Participants self-rate on a level of 0–3 (n=25).

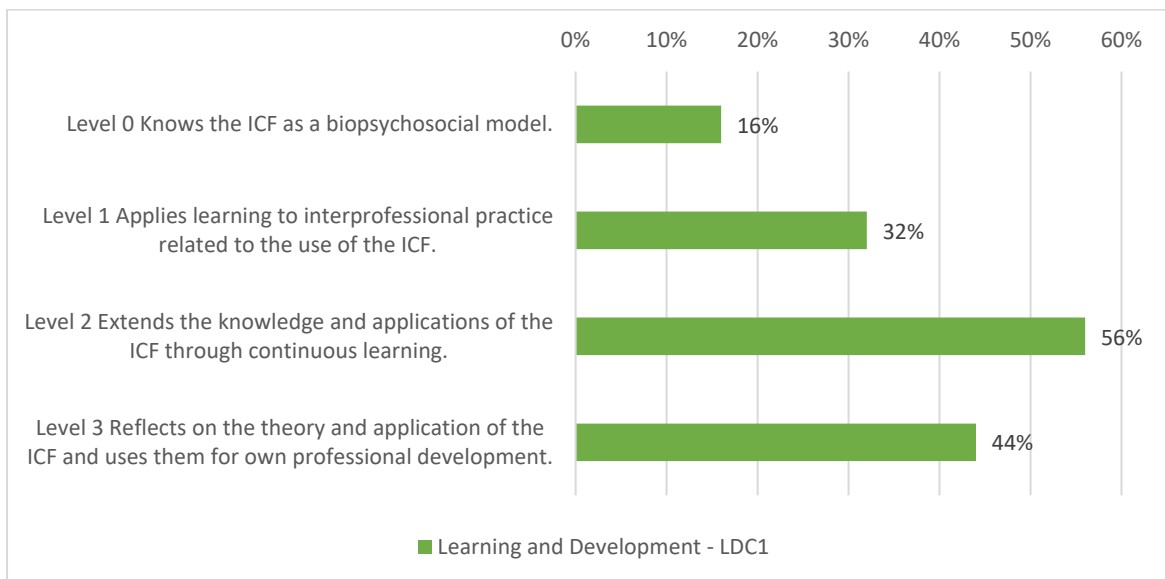


Figure 19. Learning and Development - LDC1. Continues to learn and develop in interprofessionalism. Participants (n=37) self-rate on a level of 0–3.

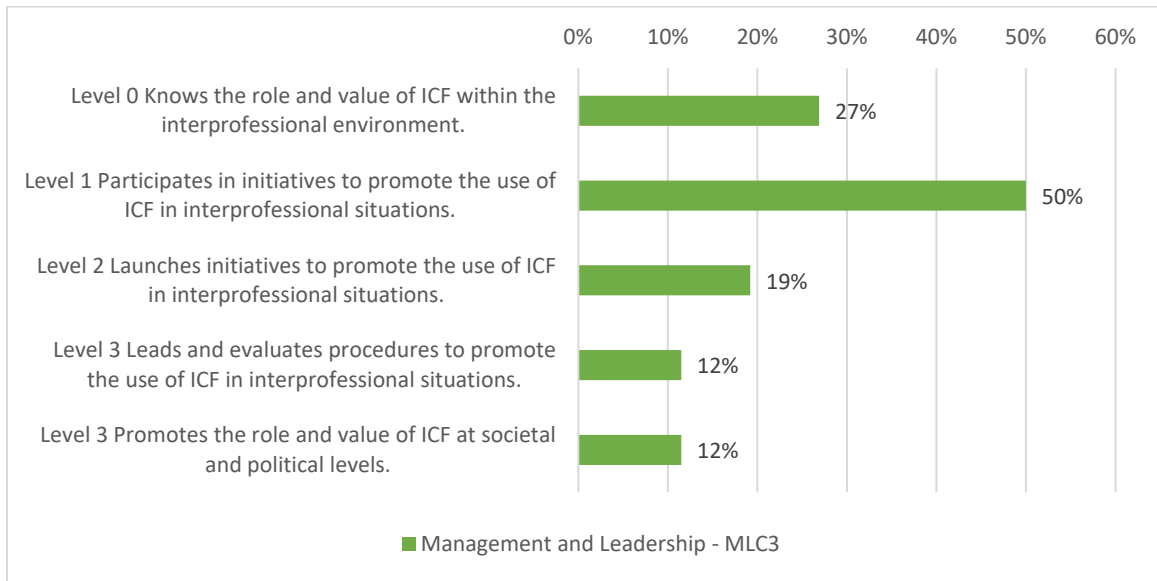


Figure 20. Management and Leadership - MLC3. Acts as an interprofessionalism advocate. Participants self-rate on a level of 0–3 (n=26).

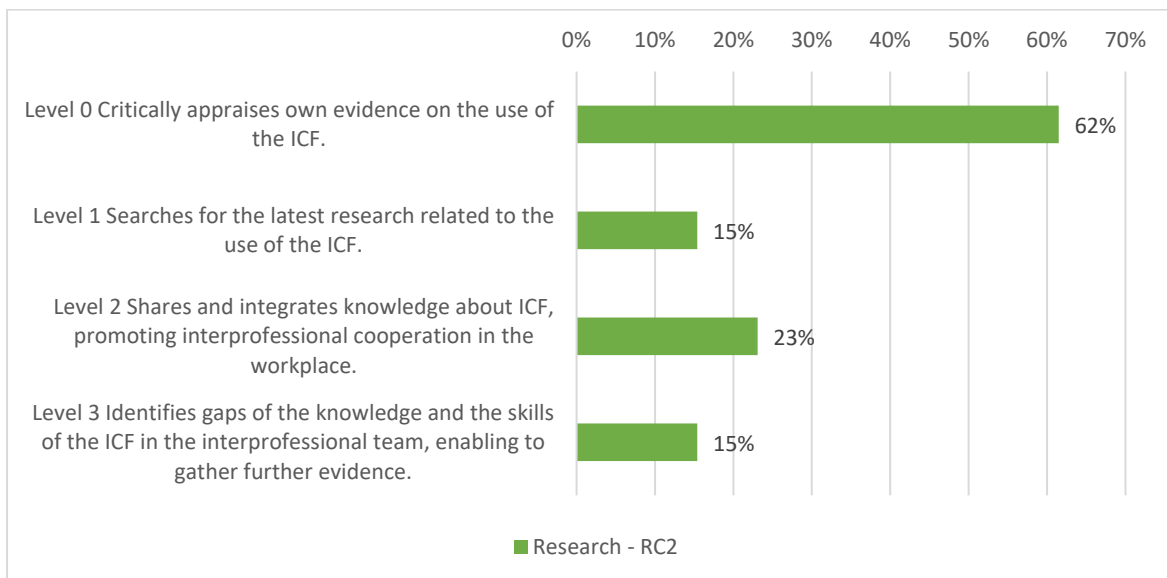


Figure 21. Research - RC2. Works to strengthen evidence for interprofessional rehabilitation. Participants self-rate on a level of 0–3 (n=26).

5.2.3. Feedback from the teachers / facilitators

Webropol feedback

Overall, 8 teacher / facilitator gave feedback on the material developed, 6 from Finland, 1 from Austria and 1 from the Netherlands. They estimated that they have a good level of ICF knowledge ranging from 5–9 (mean 6,9) in a scale 0-10. One person, who scored 5 / 10 did not feel competent enough to give this course. However, given the small number of participants, everyone's feedback was considered.

The teachers / facilitators consider the material to be clear (Figure 22). More in-depth material was requested *“I thought it would go deeper in the material and give more insights”* as well as refinements to the layout *“difficult to perceive the heading level, the different task icons should be listed below, not in a list, and the icon should appear larger/clearer in the material”*.

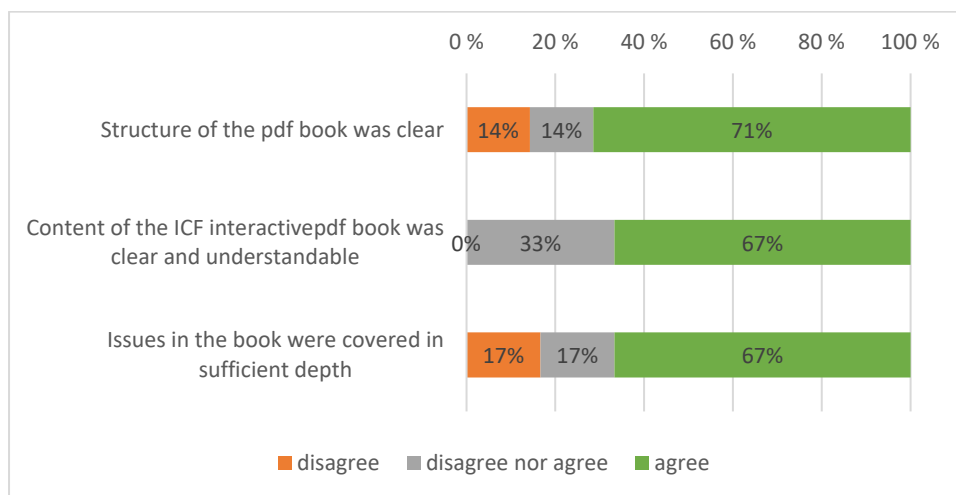


Figure 22. Teachers / facilitators evaluation of Advanced material (n=8).

Typically, teachers / facilitators had 3 meetings (seminars - webinars) with the group, but the content of each meeting was not described. It was mentioned that *“it depends on the participants as I see it and the needs which come from the participants”*. The proposed topics / contents for webinars / seminars was:

- *“(1) Why use ICF instead of your own way. and (2) How fill in ICF, what has to be under what topic”.*
- *“(1) The overall usage of ICF (ethical rules etc.); (2) How to make a person-centred interview / collect person-centred information; (3) The experiences of using different ICF approaches / tools / apps”.*
- *“(1) ICF- and gathering information of function; (2) The idea of GAS and how to lead the person-centred goal setting; (3) The collaboration in interprofessional rehabilitation.”*

Overall, there was quite little that teachers had left out of the material, but some of them would restructure it. Only one respondent would have omitted the material: *“All the examples of forms, it is too much and most of them you don't use with your own EPD. And the other links to core sets, i don't see the use of them.”* The others mentioned that *“Not leave out but distribute more equal an/or better structures to the chapters”* or *“I would not leave out anything. However, it depends so much on the audience what is needed for a specific group”*.

Finally, some general important comments from teachers / facilitators:

- *“The time spend together with colleagues was very useful, discuss together how we use ICF and can improve this!”*
- *“I think this material is an excellent guide for teachers of health and social sector teaching students or professionals.”*
- *“Guidance on how to use the material is very general which means that most of the preparational and didactical work is left to the coach doing it.”*
- *“There was quite a lot of text on the same page in some places. A bit of a challenge to read on a laptop. On a big screen ok.”*

Focus Group

A focus group discussion was organised on June 1, 2023. The aim was to discuss the evaluated ICF Advanced material with experts from the INPRO project who were interested in the development of the material. There were 6 people participated (one from Austria, Belgium and Finland, and three from the Netherlands) in addition to two Jamk project specialist who had developed the material. It took 2 hours.

The discussion was based on the above feedback from teachers / facilitators. The most significant comments and topics of discussion were the name of the material and its intended use. Participants felt that "Advanced material" is misleading and that the name should instead emphasise the implementation of the ICF. The name was updates as follows *“ICF in person centred rehabilitation – Material to support the interprofessional implementation”*.

In addition, it was stated that it is not a course, which was somewhat confusedly mentioned in the material. The point is that the material allows users to choose the matrices to be presented according to their own target group and use the pedagogic and national examples needed.

Participants made constructive suggestions for the development of the material, which were considered in the finalisation process.

5.3. Final INPRO ICF Advanced material

The feedback from Advanced material was read on a case-by-case basis and used to develop the final material. In particular attention paid to readability and structure (links, thumbnails), when edited the material. It was also clarified that this is not a course like the INPRO ICF Basic course, but a material

that can be used by a teacher or ICF facilitator in the workplace to introduce the use of the ICF. The name Advanced caused confusion, which is why its name has been clarified.

Advanced material organised according to the MAGPIED rehabilitation cycle shows different ways of using the ICF in practice and some examples of what tools are available e. [The INPRO ICF Advanced material](#) includes:

- A pdf book "ICF in person centred rehabilitation – Material to support the interprofessional implementation"
- Supplementary Power Point slides of pdf book "ICF in person centred rehabilitation"

6. Summary

The developed ICF education continuum offers a learner friendly, understandable basic knowledge of ICF framework and variety of different ICF tools for person-centred, interprofessional implementation.

The INPRO ICF Basic course is based on ICF e-learning material developed by WHO-FIC xxxx. The objective of the material is to offer participant the basic knowledge of ICF. The gathered feedback from the ICF e-learning material was that more explanations are needed and chapter explaining codes & qualifiers was difficult to understand without additional explanations. Also, more practical examples were asked for clarifying the usage of ICF.

The added value of INPRO ICF Basic course

- During the INPRO ICF basic course development phase the supplementary material were produced: Introduction and motivation lecture for explaining the needs of the ICF and importance of ICF framework as a person centred interprofessional framework well as describing the national examples of ICF usage.
- Two short videos: one about the ICF terminology and the other about the ICF codes and qualifiers.
- The reflection lecture: Six questions and answers for lecture or coach was created. The idea is the participants discuss the most important aspects of ICF in small groups and the discussions is shared together in a big group.

The objective of ICF "Advanced" material: ICF in person centered rehabilitation – material to support the interprofessional implementation", is to support the implementation of ICF in practice and offer ICF tools. Even though the material follows the MAGPIED rehabilitation model, it can be used by any professionals who uses ICF. The idea of the material is to offer a short theoretical background, examples, tools and examples of assignments for the reader. It can be used by any professionals as an inspiring package of ICF tools or supporting material when educating the usage of ICF in HEIs. For the lectures the material includes supplement power point presentation for Assess and Plan phases.

During the process, the teachers / facilitators (i.e., lecturers and work field trainers) who supervised the learners during the course identified their own level of ICF knowledge and the need to develop it. Therefore, an ICF Facilitator Course organised by WHO Collaborating Centre for the Family of

International Classifications was offered to the project partners. The total length of the course was 50 hours between January and June 2023 containing Zoom meetings, working with Teachable platform, 9 module assignments and final assignment. This is considered to support the users of the ICF education material in their own teaching process.

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