Flexi-Comp

Digital Competences for adaptive, flexible and inclusive VET

IO3: Transferability Toolkit

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

Document Information

Document Reference	IO3	
Document Title	Transferability Toolkit	
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Agreement no.	2020-1-UK01-KA226-VET-094538	
Dissemination level	PU Public PP Restricted to other programme participants (including the Commission Services) CO Confidential, only for members of the Consortium (including the National Agency and Commission Services)	☒ ☐ ☐
Programme	Erasmus+	
Start date of Project	01/06/2021	
Duration	25 months	
Project Coordinator	Arcola Research LLP- UK	

Abstract

The FLEXICOMP Transferability Toolkit aims to help future users of the FLEXICOMP Programme access and use its tools and content. It's essentially a 'User Manual' – or 'Handbook' - for the FLEXICOMP programme that provides Guidelines, procedures, tools and practice examples to support the successful transferability and implementation of the programme within VET organisations who work with vulnerable learners

Document History

Version no.	Date	Contents and/or changes made
1	31/05/23	Draft
2	15/06/23	First Review and re-writing
3	15/07/23	Second review and formatting
4	24/07/23	Final version

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Statement of Originality

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Document Summary

The FLEXICOMP Transferability Toolkit aims to help future users of the FLEXICOMP Programme access and use its tools and content. It's essentially a 'User Manual' – or 'Handbook' - for the FLEXICOMP programme that provides Guidelines, procedures, tools and practice examples to support the successful transferability and implementation of the programme within VET organisations who work with vulnerable learners.

The Toolkit approach is based on 'Ten Steps to Transferability' each of which takes the reader through the process of developing and customizing their local FLEXICOMP programme to suit local needs, from familiarization with the programme and tools, through adaptation and customisation to evaluation and sustainability.

Each step is based on a 'primary task' and provides:

- guiding principles to perform the task
- a checklist of activities to be carried out
- pitfalls and trouble-shooting tips, including good practice examples of how to carry out the task and activities successfully
- list of resources to support the task and activities.

Table of Content

SECTION 1: BACKGROUND AND CONTEXT

INTRODUCTION

About FLEXICOMP

FLEXICOMP- Digital Competences for adaptative, flexible and inclusive VET – is a project funded by the EU 'Erasmus+' Programme. It aims to help educators working in the vocational education and training (VET) sector acquire the digital and pedagogic skills they need to help learners – particularly those who find formal education challenging – themselves improve their digital skills. The project builds on existing digital competence frameworks – like DigCompEdu (developed by the European Commission to improve educators' digital skills) to create a digital competence framework specifically designed for the VET sector. This framework forms the basis of an online training programme that combines micro-learning with an interactive game to support educators to understand how to apply digital competences in real teaching and learning situations. By participating in the programme, VET educators increase their understanding of how digital tools can be applied in teaching practice, and how they can be used to deliver quality learning. In turn, the learners they work with improve their digital skills and life opportunities.

About this Toolkit

The FLEXICOMP Transferability Toolkit aims to help future users of the FLEXICOMP Programme access and use its tools and content. It's essentially a 'User Manual' for the FLEXICOMP programme that provides Guidelines, procedures, tools and practice examples to support the successful transferability and implementation of the programme within VET organisations.

Its main objectives are:

- to inform users of what the programme is about and show them which tools and services FLEXICOMP can provide.
- to make users aware of the benefits of the programme and provide evidence of its success.
- to show users how to access the programme on-line.
- to provide advice on how to adapt the programme to suit their context and needs.
- to provide advice on how to evaluate their adapted programme and sustain it going forward.

Who the Toolkit is for

The Toolkit is intended to be used by:

- Policy makers
- Public sector agencies, for example national, regional and local government actors responsible for implementing digital agendas.
- Organisations providing services in the VET sector.
- Civil Society organisations – for example NGOs and community groups working with marginalized learners.
- Professional educators working with at risk and marginalized learners.

What is the Toolkit for?

The Toolkit is designed to help people who want to apply the FLEXICOMP approach and its tools and content in their own context and to suit the specific needs of the learners they are working with. It helps them adapt the FLEXICOMP project 'story' to their own story. A good way of understanding the FLEXICOMP story is to look at the programme's 'Theory of Change'. Theory of Change is a way of presenting FLEXICOMP's 'journey' – from the challenge it is presented with at the start of the journey to where it hopes to be at the end. Connecting the presenting challenge to the journey's end- the impacts and changes FLEXICOMP hopes to make to the existing problem – are the activities FLEXCOMP carries out; the outputs produced by these activities and the changes in peoples' understanding, knowledge, skills and behaviours associated with using these outputs.

The ***presenting problem*** FLEXICOMP wants to address is the relatively low level of digital competences in the EU VET sector. FLEXICOMP's ***solution*** to this problem is to develop, implement and evaluate an innovative approach to delivering digital competence training for VET educators, and support them to apply their new skills to work with disadvantaged learners, so these learners in turn acquire new digital skills that can improve their life opportunities. In the long term, FLEXICOMP hopes to improve the quality of VET teaching in Europe through better targeting of teaching practice that in particular meets the needs of marginalised and disadvantaged learners. The ***expected impact*** of improved teaching practice for leaners – in particular disadvantaged learners – is improved digital and media competences; improved life opportunities, including increased employability and access to labour market opportunities; improved social and personal development and increased social and digital inclusion.

The main objective of this Transferability Toolkit is to help programme users adapt this Theory of Change to their ***specific*** context and needs - in other words to help them tell their own story and make their own journey.

But, as with any journey - from Star Wars to Lord of the Rings; from Batman to Bambi – the hero of the story (aka the Toolkit User) encounters challenges and obstacles on the way that s/he needs to overcome – by changing the destination of the journey, by changing the route, by finding tools to dig her/his way out of a problem, and so on.

The Toolkit helps the hero overcome these obstacles and successfully reach their intended destination by:

- pointing out the pitfalls and monsters that might be lurking along the way.
- providing advice on how to overcome them.
- providing tools to help overcome them.
- showing real world examples of how other people successfully reached their destination.

Structure and Content of this Document

This document is comprised of three sections:

- Section 1 – this Section – provides the background and context to the development of IO3. It sets out the approach and methodology applied in IO3, including how the FLEXICOMP training programme was evaluated and the key findings of the evaluation.
- Section 2 takes the key results of the FLEXICOMP evaluation and applies them to develop a 'Transferability Toolkit' for FLEXICOMP.
- Section 3 sets out some policy recommendations to support the Digital Skills Labs for VET teachers and educators that are proposed in the final sub-section of the Transferability Toolkit (Step 10).

Approach and Methodology

The approach to developing IO3 is summarised in Figure 1.

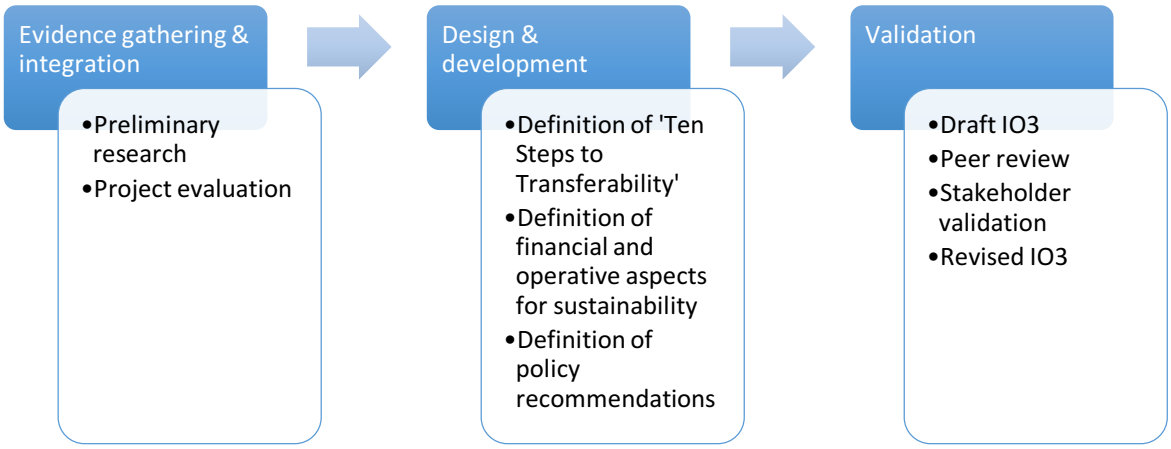


Figure 1: IO3 Methodology

As Figure 1 shows, the IO3 development methodology combines three stages.

Stage 1: Evidence gathering and integration. This stage lays the foundations for design and development of the Transferability Toolkit, through gathering, analysing, triangulating and integrating available evidence. The evidence is drawn from two sources. First, reviewing the results of preliminary research carried out in the first phase of FLEXICOMP. Second, collecting and analysing data on the project evaluation, including 'process' and 'summative' evaluation.

The preliminary research involved two research activities carried out in the first phase of the project – lifeworld analysis and state of the art review. The main purpose of using lifeworld analysis in FLEXICOMP was to document and understand the digital experiences and needs of VET educators, as well as those of disadvantaged learners. To carry out the analysis, 6 interactive Focus Groups were implemented involving 29 VET educators and 23 individual structured interviews, totalling 52 participants, together with 9 interactive Focus Groups involving 80 learners in total. The state of the art review aimed to find examples of good practices of digital competence frameworks and training programmes that can be learned from in order to develop the FLEXICOMP competence framework and training programme. It involved in depth analysis of 73 examples of good practices.

Stage 2: Design and development. This stage applied the results from stage 1 to define the 'Ten Steps to Transferability' needed to deliver the FLEXICOMP programme across a range of settings, and to design the financial and operational aspects for sustainability needed to scale FLEXICOMP up and out, including policy recommendations on how to plan Permanent Digital Skills Labs for VET teachers and educators.

Stage 3: Validation. This final stage in the approach starts with the production of the draft version of IO3. Subsequent rounds of validation activities – including partner peer review, and review by educators of the draft – lead to refinements and improvements in the finished product.

The following sections present the results of the Stage 1 activities, focusing on the findings of the preliminary research and the project evaluation.

Results of FLEXICOMP preliminary research

The research phase in FLEXICOMP entailed extensive lifeworld analysis research with VET educators and disadvantaged learners to explore the central hypothesis – and 'presenting problem' - of the project: that VET educators lack the digital and pedagogical competences needed to deliver more flexible, adaptive and resilient solutions to meet future new challenges and realities – particularly the competences needed to work effectively with people who suffer 'dual exclusion', and who need support to transition into a rapidly evolving digital economy. In addition, it reviewed in detail over 70 examples of good practices to support the digital competences of educators and vulnerable learners.

This research and its results is presented in detail in FLEXICOMP IO1: Competence framework and pedagogic approach. A key objective of this research was to identify the 'critical incidents' and key challenges educators had to deal with in their routine practice, working with disadvantaged learners. The research highlighted specific sets of digital competence needs, and challenges to be addressed, that had hitherto not been sufficiently comprehensively covered in the literature. These included VET educators' workload pressures and a widespread lack of support for CPD in the VET system; financial constraints on training – including the 'opportunity costs' of participating in training; the negative previous experience of formal education of many disadvantaged learners; uneven access to digital infrastructure and tools for both educators and learners; lack of skills for VET educators to help adult learners prepare for integration with the labour market; low level of use of digital tools that reflect learners' lifestyles and lived experience, their aspirations and their experiences of education; VET educators' under-developed interpersonal skills and skills specifically oriented to the needs of disadvantaged and vulnerable learners.

FLEXICOMP Evaluation and Key Findings

Evaluation methodology

The overall approach applied in the FLEXICOMP evaluation is based on 'theory-driven' evaluation and an adaptation of the 'realist evaluation' methodology (Pawson, 2006) [1]. This looks at how something is supposed to work, with the goal of finding out what strategies work for which people, in what circumstances, and how. A realist approach is theory-based and is essentially about testing a theory about what 'might cause change', even though that theory may not be explicit. One of the tasks of a realist evaluation is therefore to make the theories within an intervention explicit, by developing clear hypotheses about how, and for whom, projects and programmes might 'work'. The implementation of the project/programme, and the evaluation of it, then tests those hypotheses.

A key tool in carrying out realist evaluation is 'Theory of Change'. Theory of Change tells the project 'story' – from the 'presenting problem' it addresses through to the change it hopes to make on that problem at the end of the project and beyond (i.e. the project's expected 'impacts'). Theory of Change gives us a framework for the evaluation because it develops clear hypotheses about how, and for whom, FLEXICOMP might 'work'. The implementation of the project, and the evaluation of it, then tests those hypotheses and, if necessary, revises them in light of evaluation evidence. This means collecting data, not just about intervention impacts, but also the processes of the intervention implementation. A simplified Theory of Change for FLEXICOMP is shown in the diagram below (Figure 1).

As Figure 1 shows, the ***presenting problem*** FLEXICOMP wants to address is.:

The level of digital competences in the EU VET sector is relatively low. VET educators need to acquire a wider range of skills to help disadvantaged learners – who themselves lack the digital competences they need to improve their life opportunities.

FLEXICOMP's 'theory' about the ***causes of this problem*** is:

COVID-19 accelerated the transition of many of the aspects of everyday life online, including education. The pandemic exposed the many inadequacies and inequities in our education systems. Moreover, it amplified existing structural inequalities in society. COVID-19 added a further dimension to the existing problem of 'dual exclusion' – the tendency for digital technologies to play play a major role in *reinforcing* social inequalities. Against this background, VET educators lack the digital and pedagogical competences needed to deliver more flexible, adaptive and resilient solutions to meet future new challenges and realities – particularly the competences needed to work effectively with people who suffer 'dual exclusion', and who need support to transition into a rapidly evolving digital economy.

FLEXICOMP's ***solution*** to this problem is:

- develop, implement and evaluate an innovative approach to delivering digital competence training for VET educators. Support them to apply their new skills to work with disadvantaged learners, so they in turn acquire new digital skills that can improve their life opportunities.

[1] Pawson R, Greenhalgh T, Harvey G, Walshe K. (2005), Realist review--a new method of systematic review designed for complex policy interventions. J Health Serv Res Policy. 2005 Jul;10 Suppl 1:21-34.

FLEXICOMP's longer term ***expected impacts*** are:

- for VET organisations, the integration of good practices and new methods into professional activities; increased workforce capacity and professionalism; improved cooperation with partners from other countries; better targeting of teaching practice that in particular meets the needs of marginalised and disadvantaged learners and improved digital capacity and application of digital tools to deliver quality teaching.
- for disadvantaged learners, improved digital and media competences; improved life opportunities, including increased employability and access to labour market opportunities; improved social and personal development; Increased social and digital inclusion.
- at the macro-level: contributing to building capacity to implement online, blended and distance teaching and learning; promoting networking of institutions across the EU, sharing of resources and expertise; promoting collaboration with digital technology providers and experts in educational technologies and relevant pedagogical practice to stimulate cross-sectoral knowledge sharing; supporting the development of tailor-made solutions adapted to local challenges and realities.

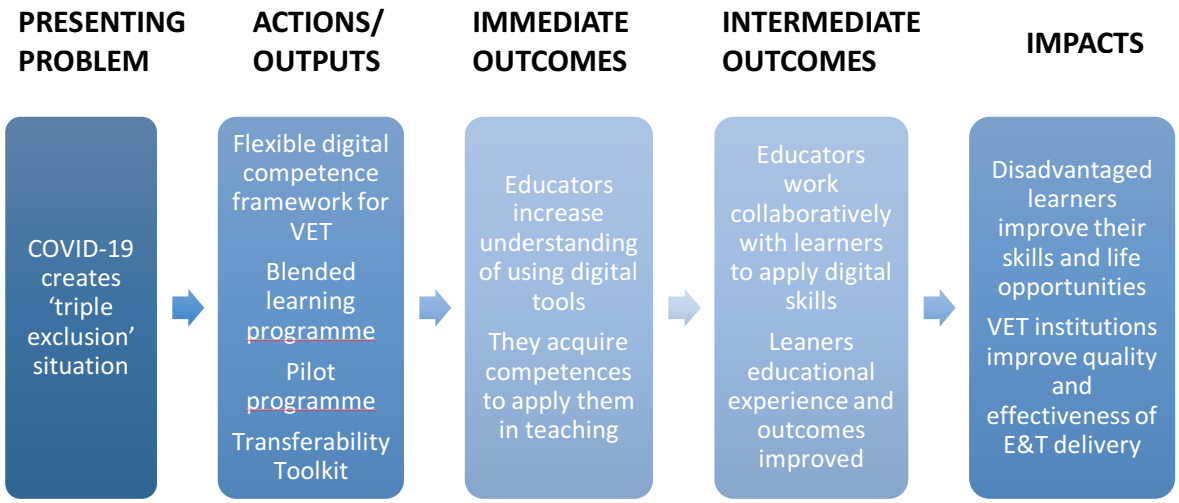


Figure 1: FLEXICOMP's 'Theory of Change'

FLEXICOMP's ***immediate outcomes*** are:

- For participating educators - an increased understanding of how digital tools can be applied in teaching practice; an increased understanding of the opportunities afforded by digital tools in delivering quality learning; an increase in the core digital competence areas covered by the programme, aligned to the EU DigCompEd framework; programme participants acquire additional applied digital competences to deliver innovative learning for disadvantaged and excluded learners.

FLEXICOMP's ***intermediate outcomes*** – changes in behaviours, situation and organisational structures- are:

- continuing professional development of VET educators; VET educators apply new competences to developing and using innovative teaching practices; improved teaching practice and learning outcomes for learners; increased professional mobility for VET educators.
- Ultimately, these outcomes, combined together, will lead to the longer-term impacts FLEXICOMP aspires to. In particular theory of change looks to identify and understand 'mechanisms' – the combination of factors which operate in particular contexts to generate outcomes of interest (Befani, 2012).[2]. Essentially mechanisms describe how the use of FLEXICOMP resources – e.g., the training programme – by project participants changes their 'reasoning' and how this ultimately leads to changes in behaviour, practices and systems.

This Theory of Change shapes all the evaluation activities implemented in the project and the methods and tools these activities apply. The main objectives of applying Theory of Change are:

- To assess to what extent FLEXICOMP achieved its expected outputs and outcomes.
- To assess whether these outcomes are 'caused' by the activities carried out in FLEXICOMP.
- To assess to what extent FLEXICOMP progressed along its planned 'change journey'.

The next section explores these objectives in more detail by presenting the key findings of the evaluation.

Evaluation key findings

Outputs analysis

The initial part of the evaluation analysis explores the extent to which FLEXICOMP delivered on its key outputs. This can be measured by five key variables which compare the actual project progress against the targets set in the project proposal and Grant Agreement (Table 1).

Table 1: FLEXICOMP Outputs analysis

Output	**Target**	**Actual**
No. review items – competence frameworks and good practice training programmes – reviewed	50	80
No. participants in LWA	50	132
No. of content modules developed	8	8
No. VET educators participating in online course	200	358
N. participants Multiplier Events	100	292

[2] Befani, B. (2012) 'Models of Causality and Causal Inference', in E. Stern, N. Stame, J. Mayne, K. Forss, R. Davies and B. Befani (eds), Broadening the Range of Designs and Methods for Impact Evaluations, DFID Working Paper 38, London: Department for International Development

Table 1 shows:

- FLEXICOMP exceeded its research targets – number of good practices reviewed and number of participants in the lifeworld analysis – by 60% and 164% respectively.
- The project delivered its set target of content modules for the training programme, which was offered in 5 languages – English, Spanish, German, Italian and Swedish. The 8 modules covered by the course, corresponding to the 8 competence areas in the FLEXICOMP framework, provide 26 sub-topics in total, corresponding to the 26 competences in the framework. Each sub-topic consists of 1 text, 1 video, 1 podcast and a 'quiz' to assess trainee efficacy in the competence. An interactive game scenario was developed for each module.
- FLEXICOMP recruited 358 VET educators to its training programme, exceeding its training programme participant target of 200 by 79%.
- With a total of 296 people, FLEXICOMP achieved a multiplier event participation level almost three times greater than the target set.

Outcomes analysis

The outcomes analysis draws on three main data sources:

- Statistical analysis of participation data, using recorded recruitment and retention statistics, together with analysis of the use of the online FLEXICOMP training platform
- A 'pre-test/post-test' survey of training programme participants, measuring their self-reported level of competences in the three FLEXICOMP 'meta domains' before and after participating in the FLEXICOMP training programme.
- Analysis of training programme participants' scores on 'quiz' questions, aimed at assessing the level and degree of efficacy in the competences covered by the training course

Participation data analysis

Table 2 summarises the results of the analysis of training programme participation data.

Table 2: FLEXICOMP training course participation analysis

	N.	**%**
Enrolled users	358	100
Completing course	212	59

As Table 2 shows a total of 358 educators were enrolled on the training course, set against a target of 200. Of these just under 60% completed the course. Participation rates varied significantly across the five countries in which the course was delivered. Spanish VET educators constituted the largest proportion of enrolled participants, followed by Italian educators. Similarly, Spain recorded the highest course completion rates, at 96%, with 20% for Italy and below 20% for the UK, Sweden and Germany.

Changes in competence levels

How did course participation affect the acquisition of competences in the three FLEXICOMP key competence domains? To assess this the evaluation included a pre-test/post-test' survey of training programme participants, measuring their self-reported level of competence in the three competence domains and 26 competences covered by the FLEXICOMP training programme before and after participating in the programme. The survey asked enrolled teachers to rate their level of competence on a five point scale from very low to very high. The survey involved educators who were completed the course. 185 educators completed the pre-test survey, and 181 teachers completed the post-test survey.

The survey was set up to try to capture both immediate and intermediate outcomes. To cover ***immediate outcomes*** - changes in awareness and increased knowledge - educators were asked to rate their ***level of knowledge and understanding*** of a competence. To illustrate, to assess the competence level for the '***professional collaboration'*** competence, educators were asked to respond to the question "How would you rate your level of knowledge and understanding of ***professional collaboration*** in a teaching context? For example, knowledge of relevant technology platforms and tools for sharing".

To cover ***intermediate outcomes*** - changes in behaviour and structures - educators were asked to rate their ability to ***apply*** their understanding of a competence in their teaching practice. So, for for the '***professional collaboration'*** competence, educators were asked to respond to the question "How would you rate your ability to apply understandings of ***professional collaboration*** in your teaching practice? For example, applying tools like social media to share information".

Since it was not possible in the project timeframe to carry out a longitudinal survey of the teachers who took part in the training course – i.e. rating their actual application of the FLEXICOMP competences in their real life practice at a point in the future - the 'application' responses can be seen as a surrogate for behavioural outcomes.

Figure 2 shows the change in aggregated mean educator score for the three meta-domains of the training programme as well as the total combined competence score after completion of the training programme. The aggregate scores for each domain were calculated as a percentage of the total maximum % score, combining the scores for each competence in each domain, and the total score for the three domains combined.

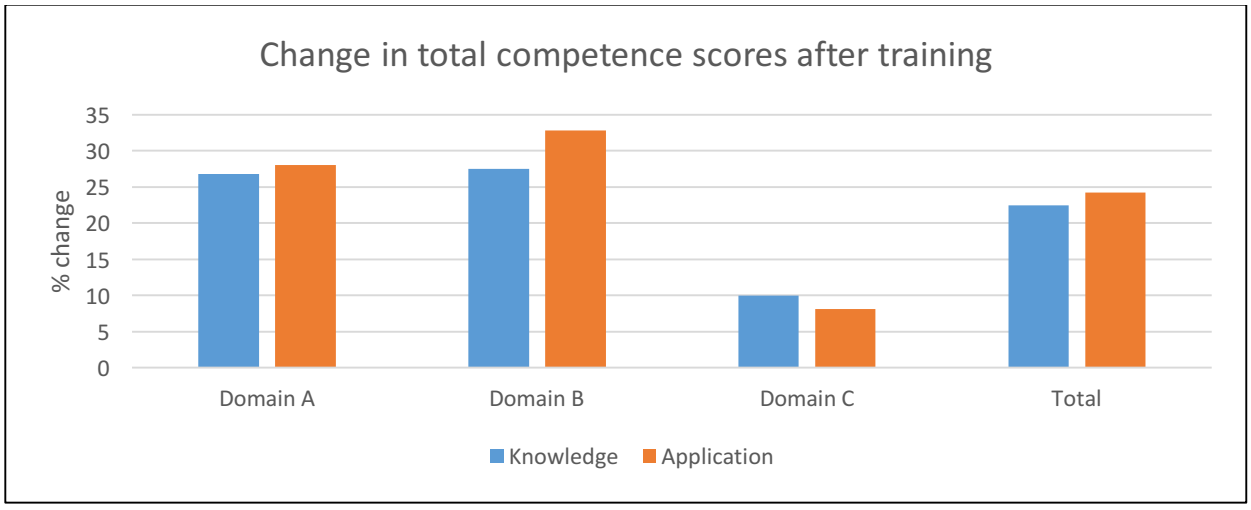


Figure 2: Change in digital competence scores

Figure 2 shows:

- In Domain A – Core digital competences – VET educators who completed the course increased their aggregate 'knowledge' competence score by 27% - from an average of 65/100 to 82/100 – and their aggregate 'application' competence score by 28% - from an average of 64/100 to 82/100
- In Domain B –Enabling digital competences – VET educators who completed the course increased their aggregate 'knowledge' competence score by 27% - from an average of 64/100 to 82/100 – and their aggregate 'application' competence score by 33% - from an average of 61/100 to 81/100
- In Domain C – FLEXICOMP-specific competences - VET educators who completed the course increased their aggregate 'knowledge' competence score by 10% - from an average of 65/100 to 71/100 – and their aggregate 'application' competence score by 8% - from an average of 66/100 to 71/100.
- Overall, VET educators who completed the course increased their aggregate total 'knowledge' competence score by 22% - from an average of 65/100 to 79/100 – and their aggregate 'application' competence score by 24% - from an average of 63/100 to 79/100.

A students t-test using a matched pair comparison of VET educator combined domain and total competence scores before and after participating in the training programme – adding together the ratings for each competence for each participant - showed that the difference in competence levels was extremely statistically significant, as Table 3 shows.

Table 3: Students t-test, matched pair sample, educator competence scores before and after training programme participation

	Domain A	**Domain B**	**Domain C**	**Combined**
Mean pre-test	57.6	63.3	46.6	167.5
Mean post-test	73.6	81.5	58.1	213.2
t-Stat	15.38307982	14.16574912	13.55417287	15.55802032
P(T<=t) one-tail	4.25214E-31	3.2656E-28	9.69273E-27	1.65756E-31
t Critical one-tail	1.656940344	1.656940344	1.656940344	1.656940344
P(T<=t) two-tail	8.50429E-31	6.5312E-28	1.93855E-26	3.31513E-31
t Critical two-tail	1.978819535	1.978819535	1.978819535	1.978819535

These large increases in competence levels in each of the three FLEXICOMP competence domains and overall were replicated in the analysis of changes in self-rated competence levels across each of the 26 competences covered in the training programme, as Figures 4 to 6 show. The figures show % changes in educators' aggregate mean score (out of a maximum 5) for each competence in the three competence domains before and after participating in the training course.

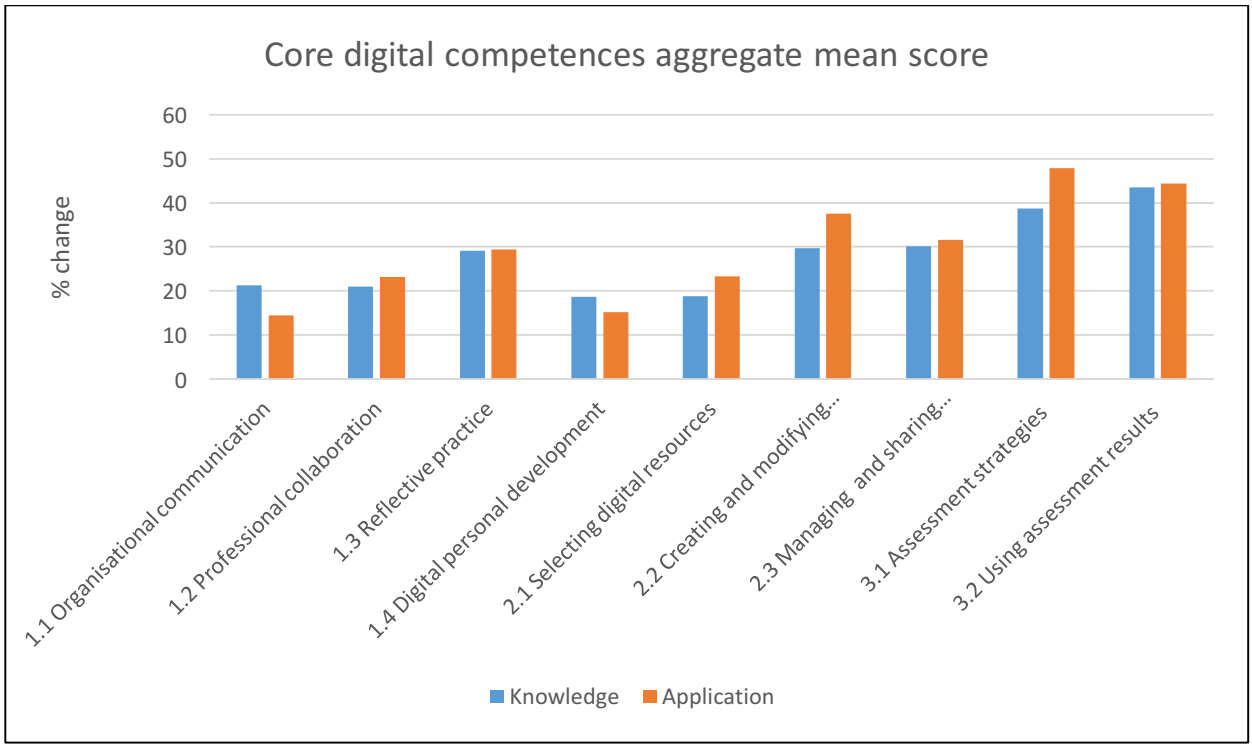


Figure 4: Changes in competence scores Domain A – Core digital competences

As Figure 4 shows educators increased their competence levels across the board in Domain A – Core digital competences, both in terms of 'knowledge' and in 'application'. The biggest increases in competence levels were for 'assessment strategies', which increased from an average score of 2.9 to 3.9 on knowledge, and 2.8 to 3.9 on application; for 'using assessment results for feedback', which increased from an average score of 2.8 to 3.9 on knowledge, and 2.8 to 3.8 on application, and for 'creating and modifying digital resources', which increased from an average score of 3.0 to 3.8 on knowledge, and 2.8 to 3.8 on application.

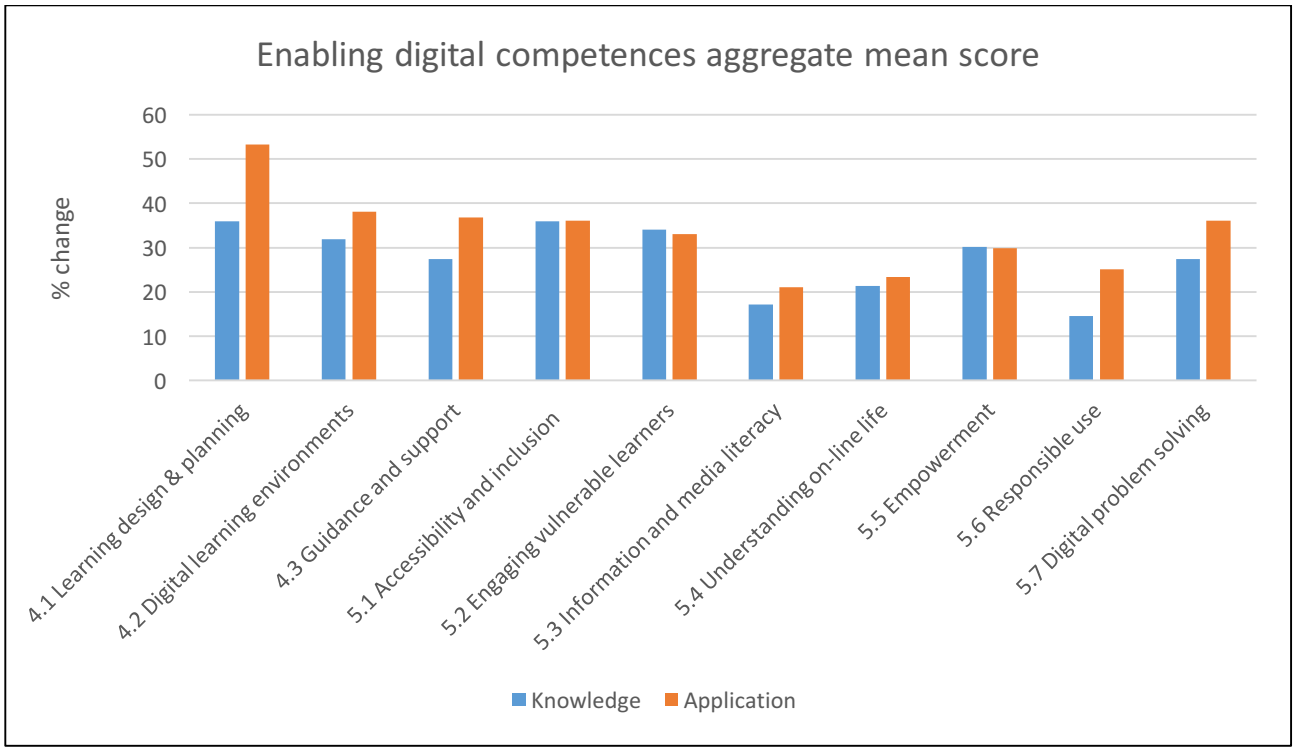


Figure 5: Changes in competence scores Domain B – Enabling digital competences

As Figure 5 shows also educators increased their competence levels across the board in Domain B – Enabling digital competences, both in terms of 'knowledge' and in 'application'. The biggest increases in competence levels were for 'learning design and planning', which increased from an average score of 2.9 to 4.0 on knowledge, and 2.9 to 3.9 on application; for 'accessibility and inclusion', which increased from an average score of 3.1 to 4.0 on both knowledge and application, and for 'engaging vulnerable learners, which increased from an average score of 3.0 to 4.1 on knowledge, and 3.1 to 4.0 on application.

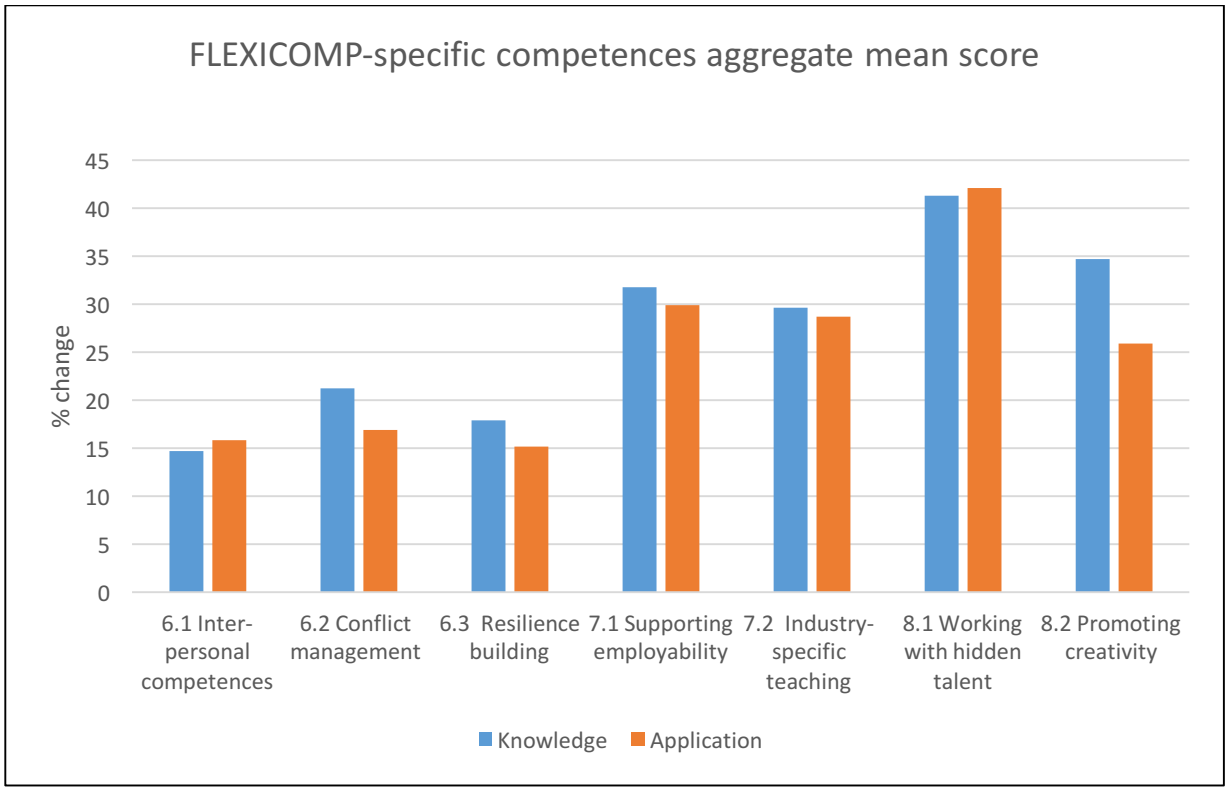


Figure 6: Changes in competence scores Domain C – FLEXICOMP-specific competences

As Figure 6 shows educators increased their competence levels across the board in Domain C – FLEXICOMP-specific competences, both in terms of 'knowledge' and in 'application'. The biggest increases in competence levels were for 'working with hidden talent, which increased from an average score of 2.9 to 4.1 on both knowledge and application; for ''promoting creativity', which increased from an average score of 3.1 to 4.0 on both knowledge and application, and for 'supporting employability', which increased from an average score of 3.1 to 4.1 on knowledge, and 3.3 to 4.1 on application.

Arguably, a more objective picture of changes in competence levels associated with participation in the FLEXICOMP training programme is afforded by the results of the 'quizzes' that were incorporated in the programme as part of the inter-relationship between the content modules – delivered through text, video and podcasts - and the interactive game. The quizzes had a dual purpose of supporting participant motivation and engagement through 'gamification' and enabling monitoring and assessment of progression. At the end of each module, participants were provided with a set of questions based around a 'scenario challenge' they were asked to solve using the learning derived from the training programme. Selection of a particular choice option for the scenario (the choice options were graded from 1 – incorrect through 2 – partly correct – to 3 – fully correct) provides a reasonable indication of a participants' competence efficacy. The quiz scores were then used to grade each participant on their competence level for each module – with grades running from a minimum of 1 to a maximum of 10.

Table 4 shows the mean grades for the educators who completed the FLEXICOMP training programme for each of the eight programme modules.

Table 4: Mean Grades on FLEXICOMP training modules

No.	Title	Mean grade
1	Professional development & engagement	8.3
2	Resource & Content Use	8.7
3	Assessment	7.3
4	Teaching & Learning	8.4
5	Empowering Learners	8.3
6	Collaboration Intelligence	8.8
7	Unlocking Potential	7.5
8	Promoting Creativity	8.3
Overall		**8.2**

As Table 4 shows, based on their quiz scores, the educators who completed the training programme achieved a high level of competence, with an overall mean grade of 8.2 and no module achieving a mean grade of below 7/10. The highest mean grades were for Module 6 – Collaboration Intelligence, with a mean grade of 8.8, and Module 2 – Resource and Content Use, with a mean grade of 8.8 – with the lowest for Module 3 – Assessment – and Module 7 – Unlocking Potential – with mean grades of 7.3 and 7.5 respectively.

User satisfaction and the user experience

The user experience and satisfaction with the training course was evaluated through two instruments:

- A retrospective User Survey carried out with training programme participants after completion of the programme
- Qualitative feedback from training programme participants collected through interviews.

The User Survey was completed ex-post by 169 training programme participants after completing their training. The Survey covered two evaluation dimensions: the user experience and satisfaction with the programme content. The user experience dimension is sub-divided into three evaluation criteria:

Meeting educator needs, which was assessed through the following indicators:

- Coverage of training needs
- Ease of understanding of the programme content
- Contribution of the programme to improving the digital competences of educators
- Relevance of the programme to CPD needs
- Level of Interest and motivation in the programme.

Outcomes, which was assessed through the following indicators:

- Degree of improvement in educator understanding and teaching of digital competences
- Degree of application to teaching practice
- Usefulness of the programme to improving teaching practice.

Technical usability and user-friendliness, which was assessed through the following indicators:

- Ease of use of the platform
- Intelligibility and understanding of functionalities
- Navigability of the platform.

For each indicator, survey respondents were asked to rate the programme using a Likert scale from 1 – very dissatisfied – to 5 – very satisfied.

The second evaluation dimension focused on assessing participant satisfaction with the programme content. Survey respondents were asked to rate their satisfaction with the eight modules covered in the training course, using the same scale.

Figure 7 shows how survey respondents rated the FLEXICOMP training programme on the three key user experience criteria, together with their satisfaction of the training programme overall, and how they rated the programme content overall.

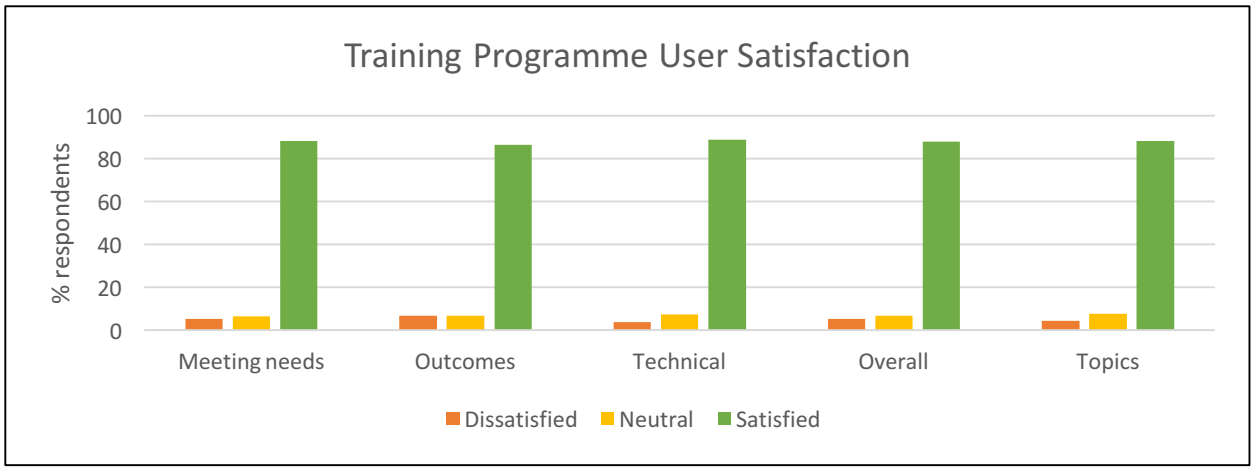


Figure 7: FLEXICOMP training programme user satisfaction

As Figure 7 shows, on ***meeting needs***:

- 88% of survey respondents said they were satisfied or very satisfied with how the FLEXICOMP training programme met their needs.
- Only 5% were dissatisfied or very dissatisfied.
- The Survey respondents rated the training programme highest for 'Ease of understanding content' - 59% were satisfied and 36% very satisfied with this aspect of the programme.

In terms of ***outcomes***:

- 86% of survey respondents said they were satisfied or very satisfied with how the FLEXICOMP training programme had contributed to positive outcomes for their teaching practice and professional development.
- Only 7% were dissatisfied or very dissatisfied.
- 53% of survey respondents were satisfied and 31% very satisfied with the extent to which participating in the programme had led to improved teaching outcomes.
- 56% of survey respondents were satisfied and 31% very satisfied with the extent to which the programme had contributed to improved teaching practice.

With regard to ***the technical aspects*** of the programme:

- 89% of survey respondents were satisfied or very satisfied with the technical aspects of the programme.
- Only 4% were dissatisfied or very dissatisfied.
- 49% were satisfied and 42% very satisfied with the ease of use of the platform.
- 50% were satisfied and 36% very satisfied with the platform functionalities.
- 58% were satisfied and 31% very satisfied with the navigability of the platform.

The evaluation of participant satisfaction with the ***programme content*** showed a high level of satisfaction with the content of the programme overall and with the content provided in each of the eight modules:

- 88% of survey respondents were satisfied or very satisfied with the programme content.
- Only 4% were dissatisfied or very dissatisfied.
- The highest satisfaction level was recorded for Topic 2 – Use of Resources – with 59% of survey respondents satisfied and 36% very satisfied.
- For the other topics at least 45% of survey respondents said they were satisfied with the content and at least 30% said they were very satisfied with the topic.
- The topic with the lowest satisfaction score was 'Unlocking potential' with 45% of respondents satisfied, and 43% very satisfied.

The positive outcomes identified through the user survey are reinforced by the results of the interviews carried out with participating educators. Overall, there was strong endorsement of the training programme's usefulness, usability and comprehensiveness expressed by respondents, together with positive comments made about the training experience, as the following extracts from interview transcripts show:

> *"What a huge and great job you did! I've started listening to Book 1 and I've already found a lot of interesting information. I'll listen to all of it, take the test and go on." (M.C., educator who works with migrants).*
>
> *"The videos are really interesting! You could also do webinar series with these materials." (D.G., IT trainer).*
>
> *"I am doing the course modules, congratulations, it is really very interesting. I'm still on the second module, but I definitely want to finish it. I wanted to tell you that if you have other training courses, keep me in mind, because they are highly educational." (R.C., high school teacher)*
>
> *"Thank you very much! The course was extremely interesting, engaging and full of food for thought. In case more courses are available, I am ready to participate." (F.M., vocational school teacher).*

Many participants interviewed stated that they had learned new ideas and learned about new digital tools, as well as how to apply these tools in their teaching practice.

The user survey and interviews highlighted some areas for improvement. On ***content*** proposed recommendations covered reducing repetition; expanding the content to cover more target groups

in addition to VET educators (e.g. secondary school teachers); more content on emotional intelligence; more practical examples and more support information on working with the platform. On ***structure,*** proposed recommendations covered more extensive use of devices to retain user interest and a more 'intuitive' navigational structure. On ***format,*** proposed recommendations covered improving the video format to make it more interesting, and better dialogue and interactivity between the participant and the tutor. Some participants thought the course was too long generally, and also that the length of the videos could be shortened. For example, several Swedish participants pointed out that self- enrolled courses, i.e. those that do not give any continuing education or CPD credits, need to be shorter in order to retain participation. One participant pointed out that the course could easily be divided into two separate courses, one focusing on teaching practice and the 'soft skills', while the other drilled down into how to select digital tools.

The FLEXICOMP 'change journey'

Returning to the starting point of the evaluation – the FLEXICOMP 'Theory of Change', what do the evaluation results tell us about how far the project has travelled on its 'change journey'? As noted above in the 'evaluation methodology' section, to answer this question we need to look at the 'primary mechanism' that underpins the project Theory of Change and, in particular, make a judgement, based on the evaluation evidence, as to whether the 'resources' developed and applied in FLEXICOMP had the effect of changing the 'reasoning' of participants, which in turn led to changes in behaviours and structures.

The 'primary mechanism' of FLEXICOMP is summarised in the box below.

FLEXICOMP 'Primary Mechanism'

VET educators across Europe lack the digital and pedagogical competences needed to deliver more flexible, adaptive and resilient solutions to meet future new challenges and realities – particularly the competences needed to work effectively with people who suffer 'dual exclusion', and who need support to transition into a rapidly evolving digital economy.

If more evidence was collected on the issues and challenges VET educators face working with vulnerable learners, how they occur, and what are the most effective ways of dealing with them, and if more evidence was collected on the needs of vulnerable learners, a competence framework could be developed that shows what educators need to learn to deliver digital competences more effectively.

This competence framework can then be used to develop a training programme that fits not only educators' needs for the right competences but fits their work and lifestyle – including accommodating the time pressures they are subject to, and supporting them to be able to apply new skills in real teaching situations.

Through participating in this training programme, teachers acquire the digital and pedagogic skills they need, and the capacity to adjust their teaching practice to work more effectively with vulnerable learners.

In the longer term, a core base of educators trained in digital skills develops which, in turn, leads to better teaching, better learning outcomes for students and improved quality of teaching and learning outcomes within the VET system across Europe.

Table 5 unpacks the component parts of this primary mechanism; sets out the requirements needed to demonstrate they work and reviews the evidence in support of each component.

Table 5: FLEXICOMP primary mechanism analysis

Component	Requirements	Supporting evidence
Presenting problem	Evidence of key gaps in VET educator digital competences. Evidence of low level of digital competences of learners in the VET system.	52 VET educators and 80 vulnerable learners participate in collaborative 'lifeworld analysis' research. 73 good practice examples of competence frameworks and training programmes reviewed in depth. Key digital competence needs of educators and learners identified and key teaching and learning challenges highlighted
Resources	Activities carried out that produce resources that meet educator and vulnerable learner digital competence needs	Evidence-based competence framework produced that covers 3 key competence domains, mapped to the identified challenges. Online training programme developed mapped to competence framework that uses 'micro-learning' to address educator time constraints and interactive game that simulates real challenges educators likely to face
Target group participation	200 teachers enrol on the course	358 educators enrolled on the course
Immediate outcomes	Participating educators increase their awareness of digital competence challenges. They acquire skills to deliver more effective teaching to vulnerable learners	Across all 26 competences, participating educators improved their competence levels in terms of knowledge and understanding following participation in the FLEXICOMP training course. These increases in competence levels were all statistically significant. Educators who completed the training programme achieved a high level of competence, with an overall mean grade of 8.2 and no module achieving a mean grade of below 7/10
Intermediate outcomes	Participating educators increase their understanding of how digital tools can be applied in teaching practice. They acquire additional	Educators who completed the training programme increased their ability to apply digital competences in their practice by 24% on average. 86% of educators who completed

Component	Requirements	Supporting evidence
	applied digital competences to deliver innovative learning for disadvantaged and excluded learners	the training programme were satisfied or very satisfied with how the programme had contributed positively to their teaching practice and professional development. 84% said it had led to improved teaching practice and 87% said it had led to improved teaching outcomes.
Impacts	Longer term, the integration of good practices and new methods into professional activities in VET institutions leads to better targeted and higher quality delivery, and ultimately improves the life chances of disadvantaged learners	292 participants at FLEXICOMP Multiplier events disseminate learning from programme and support scaling up and out. Transferability Toolkit disseminated to over 1,000 VET organisations and other stakeholders

As Table 5 shows, there is strong evidence to suggest that this ‘primary mechanism’ holds true.

With regard to the ‘presenting problem’ FLEXICOMP aims to address, the research phase in FLEXICOMP entailed extensive lifeworld analysis research with VET educators and disadvantaged learners to explore the central hypothesis – and ‘presenting problem’ - of the project: that VET educators lack the digital and pedagogical competences needed to deliver more flexible, adaptive and resilient solutions to meet future new challenges and realities – particularly the competences needed to work effectively with people who suffer 'dual exclusion', and who need support to transition into a rapidly evolving digital economy managing relationships, communication and conflict is a major cause of teacher stress. In addition, it reviewed in detail over 70 examples of good practices to support the digital competences of educators and vulnerable learners.

This research and its results is presented in detail in FLEXICOMP IO1: Competence framework and pedagogic approach. A key objective of this research was to identify the ‘critical incidents’ and key challenges educators had to deal with in their routine practice, working with disadvantaged learners. The research highlighted specific sets of digital competence needs, and challenges to be addressed, that had hitherto not been sufficiently comprehensively covered in the literature. These included VET educators’ workload pressures and a widespread lack of support for CPD in the VET system; financial constraints on training – including the ‘opportunity costs’ of participating in training; the negative previous experience of formal education of many disadvantaged learners; uneven access to digital infrastructure and tools for both educators and learners; lack of skills for VET educators to help adult learners prepare for integration with the labour market; low level of use of digital tools that reflect learners’ lifestyles and lived experience, their aspirations and their experiences of education; VET educators’ under-developed interpersonal skills and skills specifically oriented to the needs of disadvantaged and vulnerable learners.

The evidence therefore supports the central proposition and presenting problem specified in the FLEXICOMP theory of change.

These research results fed into the production of a competence framework and pedagogic approach that covers three key competence domains, mapped to the critical incidents and key challenges likely to be faced by VET educators working with digital skills in teaching and elearning situations. An online training programme was developed mapped to the competence framework that uses ‘micro-learning’ to address educator time constraints and an interactive game that simulates real critical incidents educators are likely to face in their everyday practice. 358 teachers enrolled on the course and just under 60% completed it. Evaluation evidence suggests that across all 26 FLEXICOMP competences, participating teachers improved their competence levels in terms of knowledge and understanding following participation in the FLEXICOMP training course. These increases in competence levels were all statistically significant. In turn, almost 90% of participating educators confirmed that participation in the course improved their teaching practice and led to improved teaching outcomes. Educators who completed the training programme increased their ability to apply digital competences in their practice by 24% on average.

It would appear therefore that FLEXICOMP has progressed significantly along its ‘change journey’. The package of digital and pedagogic competences embedded in an innovative on-line training course using ‘micro-learning’ and interactive gaming – the project ‘resources’ – led to significant benefits in terms of increased understanding, awareness and skills, and, subsequently led to improved capacity to apply these understandings and skills in teaching practice. Although it is not possible in the time frame of the project to assess the effects of this improved practice on quality of learning outcomes at the macro-level, the indications are that FLEXICOMP, through its dissemination activities, has the potential to lay the foundations for supporting large scale improvements in quality of teaching within the VET institution and the VET system more widely across Europe.

SECTION 2: TRANSFERABILITY TOOLKIT

INTRODUCTION

The Toolkit structure follows a process based on 'Ten Steps to Transferability', as shown in the Figure below. These steps are what are required to help you adapt and transfer the FLEXICOMP programme to suit your context and needs.

Ten Steps to Transferability

Each step involves a 'primary task' which in turn links to activities that are required to complete the task. To support Toolkit users in completing the task each step provides:

- guiding principles to perform the task
- a checklist of activities to be carried out
- pitfalls and trouble-shooting tips, including good practice examples of how to carry out the task and activities successfully
- list of resources (from the 'Resources' folder on website) to support the task and activities

The ten steps are incorporated into five sections (chapters) in this Handbook. Each section covers two of the Ten Steps to Transferability.

STEP 1: FLEXICOMP PROGRAMME FAMILIARISATION

Primary Task of this Step

The Primary Task of Step 1 is to familiarize yourself with the FLEXICOMP programme and the tools and services it has to offer, so you can then make decisions about how you need to adapt them to the needs of the educators it aims to support.

Guiding Principles

- Make sure you and relevant people in your organization familiarize yourselves with the FLEXICOMP programme and the tools and services it can provide
- Understand that the programme is designed to be flexible - its methodology and tools are adaptable to suit the needs of different kinds of organisations and teacher groups
- Read the Course Tutorial and Game Tutorial that are provided on the FLEXICOMP website so you know how to run the training programme
- Take a tour of the training programme and explore how it works

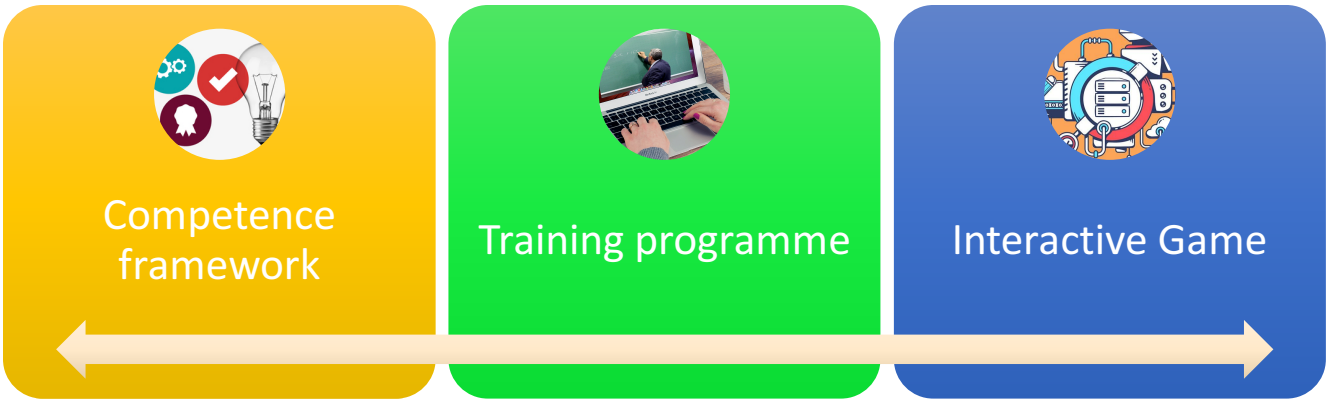
Checklist of Actions

Read the FLEXICOMP Programme Tour Guide below	❑
Download and read the FLEXICOMP Course Tutorial and Game Tutorial	❑
Take an online tour of the FLEXICOMP training programme	❑
List the tools and services you need and what needs to be adapted	❑

Tools to help you position your organisation.

FLEXICOMP Programme Tour Guide

It's long been recognised that VET educators need to improve their continuing professional development to acquire the digital skills needed in a constantly changing digital landscape. This is particularly the case for educators who work with vulnerable groups – who research shows themselves are more likely to lack the digital skills needed to compete in a changing labour market. To help address this major problem FLEXICOMP aims to support the professional development of educators by strengthening their competences in three key areas: core digital skills; enabling digital skills, and the skills needed to work successfully with vulnerable learners. As the diagram below shows, the Programme is made up of three main components, all of which feed into and complement each other.



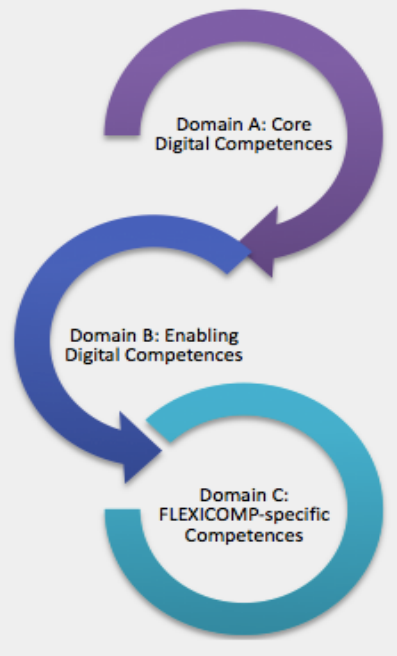
Structure of the FLEXICOMP programme

The three components of the Programme are:

- The FLEXICOMP Competence Framework.
- The FLEXICOMP Training Programme.
- The FLEXICOMP interactive game.

FLEXICOMP Competence Framework

The FLEXICOMP competence framework sets out the digital and pedagogic skills VET educators need to work effectively with learners – particularly those who are vulnerable – in order to in turn develop learners' digital skills. It was developed using comprehensive research combining a review of state of the art, an analysis of VET educator needs and case studies of competence frameworks in the VET and related fields.



3 domains

1. Core Digital Competences
2. Enabling Digital Competences
3. FLEXICOMP-specific Competences

9 competence areas and 26 competences in total

Each with knowledge, skills attitudes and learning outcomes examples

The framework specifies three 'high level' competence domains:

- Domain A – Core (Generic) Digital Competences. This covers the basic digital competences VET educators would need to apply digital tools successfully in their practice
- Domain B – Enabling Digital Competences. This focuses on supporting VET educators in collaborating with learners in the classroom and facilitating their acquisition and application of digital skills
- Domain C – FLEXICOMP-specific competences. This focuses on two key aspects that are specific to FLEXICOMP. Firstly, the need to apply digital tools to support the needs of adult learners in the VET sector. Secondly, the need to equip VET educators with the skills needed to work with vulnerable and disadvantaged people in that sector.

.

These three domains are associated with eight competence areas. Each competence area covers a set of specific competences, providing 26 competences in total within the framework. Each competence describes the learning outcome associated with it. Examples for each competence are provided, broken down into knowledge, skills and attitude examples.

The FLEXICOMP programme includes a tool that allows participating educators to take a self-assessment test that gives them a picture of their level in each competence. This can be taken before joining and after completing the training. It helps them to highlight their strengths and weaknesses and can be used to tailor the training to individual educator needs. By comparing the assessment results before and after training, educators– and their organisations– can get an idea of how far they have progressed in improving their digital and pedagogic skills.

FLEXICOMP training programme

The online training programme maps on to the FLEXICOMP competence framework. It provides eight 'Topics' – corresponding to the following eight competence areas:

1. Professional development
2. Use of resources
3. Evaluation
4. Teaching and Learning
5. Empowering learners
6. Collaborative intelligence
7. Unlocking potential
8. Promoting creativity.

The training course combines three types of teaching methods, which have been selected to suit the life and work style of VET educators and their professional development needs – in particular the need to reduce the time and resources required to learn new things in an already crowded curriculum.

The training course combines three kinds of teaching methods and resources:

Micro-training - delivering knowledge through short videos (3-5 minutes duration)

Podcasting - training content in audio format

Written text – 'traditional' content that mirrors the podcasts and videos

Micro-training is a training method that delivers knowledge to the learners through short video resources (3-5 minutes duration). Each video resource aims to teach a single learning component and the learning can be put into practice by the users immediately in their day-to-day practice (just-in-time training). Micro-training is a particularly effective tool in the training of professionals who carry out activities in contact with people (professions in the sectors of social health and welfare, education, and personal service activities).

Podcasting (production of training content in audio format) makes it possible to benefit from training resources in multi-tasking mode where ancillary activities do not activate other brain areas (e.g. running, gardening, DIY, manual work, etc.)

Written text complements the micro-training and podcasting by providing 'traditional' text versions of those resources – the 'Book'.

The training course is accessed through a 'Moodle' learning platform. Trainees need to be provided with a login and access keys. They take the competence 'self-assessment' test before starting the course and then are free to progress through the course using the platform navigation features.

The three different types of course content are combined together using 'Moodle Books' - a multi-page resource with a book-like format and a table of contents. Each chapter and subchapter contains a learning resource in video and/or podcast format and text. Once a resource has been completed, the trainee can go to the 'quiz' section which provides an assessment of what has been learned, together with an assessment report and feedback. The quizzes are an important part of the progression process through the course.

In summary, the training course consists of 8 learning modules divided into 3 units, followed by a ninth section containing downloadable versions of course materials including PowerPoints, Podcasts, Texts and Infographics as well as a Tool Glossary. Each of the 8 learning modules follows the same format:

- The Game scenario
- The Book
- The Quiz
- The Interactive Game.

At the end of each of the 3 Units, the user is directed to the FLEXICOMP 'Co-creation corner'. They can use this to create their own scenarios that cover the current topic and share their knowledge and experience with the FLEXICOMP community, as well as contribute to the course materials.

When all of the activities in a Unit have been completed the trainee is awarded a badge. Badges are awarded for each completed Unit. After each Unit test has been completed the trainee is awarded a Completion of Course badge.

FLEXICOMP Interactive Game

The game-based learning approach used in the FLEXICOMP programme is based on the concept of teaching through repetition, failure and the accomplishment of goals. Just as in video games the player starts off slowly and gains in skill until they're able to navigate the most difficult levels, game-based learning applies the same concept to teaching. Users navigate their way through the game toward a goal, choosing actions and experiencing the consequences of those actions. They actively learn and practice the right way to do things.

The interactive game is mainly used in FLEXICOMP in 'assessment' mode. At the end of each Training Unit users are redirected to the FLEXICOMP online game that will present several interaction scenarios that users will have to solve by applying the appropriate behaviour or response. These scenarios are based on detailed surveys, interviews and focus groups carried out with educators to identify the 'critical incidents' they typically have to deal with, how these situations arise and what strategies educators use to cope with them.

8 game 'scenarios'.

Each represents a 'critical incident' and the story of it.

The player is presented with 3 solutions to resolve the incident and asked to choose the right one.

Feedback is provided on their choice.

You can take a virtual tour of the FLEXICOMP programme by visiting the project public website and checking out 'How to make the most of this course' at https://training.FLEXICOMP.eu/mod/page/view.php?id=435

Pitfalls and how to survive them

- Don't assume FLEXICOMP is the answer to all of your prayers. The programme has been specifically designed to be flexible. It provides a framework and tools to help educators acquire the skills they need to work more effectively with vulnerable learners. You'll need to do some work to make sure you understand your users' needs and to adapt the framework and tools to suit them
- Don't assume educators will welcome the programme with open arms. Our needs assessment shows that educators sometimes treat professional development programmes with suspicion. They are particularly concerned about the time and 'opportunity cost' involved in taking time out of their non-work life for personal development. Alternatively, they tend to think that their organisations themselves should provide professional development time and, if necessary, pay them for it. It takes time to win the trust and commitment of educators. You'll need to engage them as active co-collaborators in setting up a FLEXICOMP programme.

- Make sure the devices and platforms you choose to deliver the programme fit with the devices and platforms your users routinely use on a day-to-day basis. For example, our research shows that younger educators are likely to use Snapchat and Whatsapp for communication rather than Twitter.
- The programme is likely to fail unless its gets the commitment of educators and key stakeholders – particularly management and policy-makers. Unless you are in the enviable position of having access to significant funding to start a programme from scratch, you'll need to get partners on board who have the resources you need. These issues are covered below in Step 6.

Resources

- FLEXICOMP IO1– sets out the competence framework for FLEXICOMP
- FLEXICOMP IO2 – provides the training programme content
- FLEXICOMP Course Tutorial – shows how to access and navigate around the training course
- FLEXICOMP Game Tutorial - shows how to access and navigate around the interactive game

STEP 2: UNDERSTANDING EDUCATOR NEEDS

Primary Task of this Step

The Primary Task of Step 1.2 is to identify the specific professional development needs of your target group so as to better develop the FLEXICOMP training programme. This task aims to carry out an educator needs assessment.

Guiding Principles

- Be clear who your target users are for the training programme and what their needs are
- Compare your user needs against what the FLEXICOMP programme can provide
- Develop a vision for the FLEXICOMP training programme that is user-led
- Ensure the program is co-designed in collaboration with your target group of educators

Checklist of Actions

Produce a categorization of the Training programme user groups	❑
Produce a user needs analysis for these groups	❑
List the FLEXICOMP tools and services the groups need and what needs to be adapted	❑

Tools to help you understand educator needs

Cultural Probes (Lifeworld analysis)

Cultural probes are used to create a deeper understanding of the context of the users and to map their needs within that context. With a cultural probe, participants record any information about their day-to-day activities or environment which they feel is important to them and which reflects their 'lived experience'.

Cultural probes can range from writing a diary, taking pictures, from using postcards to notebooks or cameras to take pictures of relevant moments of a user's everyday life. The idea is to capture the 'lived experience' of the user – for example getting a VET educator to record a video of a week in their working life-.

In FLEXICOMP a particular form of cultural probe we have used is based on 'Lifeworld analysis'. Its objective is to record 'descriptions of what people experience and how it is that they experience

what they experience' (Patton, 1990; Schutz and Luckmann, 1995). Lifeworld analysis aimed to answer these kinds of questions: What does it feel like to be an educator in this particular place and time? What are the most difficult issues and problems educators face in their centre? Would the FLEXICOMP programme give educators more voice and more power to solve some of the problems and issues they face on a daily basis?

Lifeworld analysis aims to record this 'lived experience' in terms of five constructs:

Construct	Focus
Life-world	The defining features and characteristics of the lifeworld and how the lifeworld is experienced through everyday life – for example how digital exclusion is experienced when carrying out everyday tasks like shopping or how digital challenges are experienced on an everyday basis in the VET classroom
Temporality	How people experience time, both in terms of their broader historical position (for example how does being in a particular point in the 21st century affect digital exclusion?) and in an everyday sense, for example are there particular times in the day that affect disadvantaged learners' access to digital technologies?
Spatiality	How people make sense of the world through geographical structures and boundaries (for example, how does the way the neighbourhood is constructed shape access to digital technologies? Does the VET classroom environment affect how digital technologies are/could be used?)
Embodiment	Focuses on the body and the physical space in which the body operates. It refers to the actual shape and innate capacities of the human body. It also refers to how people acquire 'embodied skills' by dealing with things and situations -how our relation to the world is transformed as we acquire a skill-.
Inter-subjectivity	How an individual makes sense of their world and how this sensemaking gets communicated and understood collectively through social interaction. How people and groups interact with 'the system'. For example, how power relations between educators and management affects educators' sense of being in control.

Whatever the type of cultural probe used – diary, video, or even an interactive focus group – the collection of data would cover these five elements. Analysis of the results of the cultural probe will be very useful in subsequently identifying and listing the key needs of the VET educators related to Digital Competences.

Co-creation workshop

The aim of co-creation workshops is to involve educators as active collaborators in developing and improving Digital Competences. These workshops are not just a mechanism for listening to their points of view. They are intended to involve educators as equal partners in the design of task and activities related to Digital Competences.

There are many ways to design and run a co-creation workshop to explore and work with ***user***

needs. These include:

- Using post-it notes and flip-charts
- Presenting a visual story of ideas for the Competences domains that can then be explored together
- Getting educators to tell stories from their own life experience
- Taking a walkabout in a centre in which the training programme will operate and then discussing educator's thoughts and observations.

Whatever tools are used, the format of the workshop would typically go like this:

- An introductory session
- A motivational session (what the problem the programme addresses is and how it might be addressed)
- Icebreakers and short presentation round of participants
- Production session(s) & co-design activity
- Specification of challenges
- Mapping exercises – needs analysis
- Project Vision storyboard
- Feedback
- Wrap-up and next steps

Personas

A persona is a fictitious description of an 'archetype' person who represents a user involved in the training programme. The aim is to provide a vivid representation of the user, so that the FLEXICOMP programme can be developed in light of these representations. The persona can be described in just a short sentence but typically includes more detail, sometimes supported by visual content, like a photograph or cartoon. Typical elements that could be included in the persona are:

- Fictional name
- Personal information (e.g., age, gender, education, ethnicity, family status, location)
- Profile (e.g., their background, their use of digital technologies)
- Motivation for getting involved in the FLEXICOMP programme
- Concerns and needs
- Likes / Dislikes

The Table below shows an example of Personas.

	Sofia	Erik	Letitia	George
Background	I'm the Head of a large Adult Education College. I'd describe myself as quite competent in using digital tools. I'd like to improve my understanding of the kinds of digital technologies that would improve the quality of the education and training programmes we provide – especially for disadvantaged learners	I'm a 'second chance education' teacher, working with adults from a range of age groups who have all dropped out of education early. I'm confident in using routine apps like word processors and spreadsheets but I don't have much idea of how to use digital tools to improve my teaching practice	I'd describe myself as 'tech-savvy'. I use a lot of digital tools in my teaching practice – for example interactive games and class blogs – but I don't have a good understanding of the challenges disadvantaged learners face and how technologies can improve learning outcomes for them	I work mainly with young people who have a low level of formal education and who need practical support to get them started on a vocational career path. To be honest, I'm a digital novice. I don't have much clue about which technologies work best in which situations
Motivations and needs	I want to improve my digital technical skills. I need a training programme that gives me access to the latest technologies and the support to know which ones to use effectively	I want to find out how to use digital tools to improve my teaching practice. I need practical support so I know how the tools work in different teaching situations	I want to understand the challenges disadvantaged learners face and which digital tools can help me work with them more effectively in a teaching situation	I want to understand digital technologies from scratch. I need to know the basics – like what kinds of learning technologies are available
How I see the FLEXICOMP training programme	It's an online course that allows me a lot of autonomy to pick and choose the elements that suit my needs.	The programme has to be very practical. It should be less about technologies themselves and more about how technologies can help improve my teaching.	The programme has to have a collaborative focus so I know which tools will empower my learners to work together with me as their guide	It's an online course that has a lot of guidance and support – particularly technical support – so I can learn at my own pace
Concerns and Challenges	The course will be too basic for my needs.	The course will be too technical and won't pay enough attention to learning needs and outcomes	My learners will not be motivated of confident enough if I introduce digital tools into my teaching practice	The course will be too advanced and I'll feel out of my depth

Pitfalls and how to survive them

- Over-ambition – FLEXICOMP needs engagement and commitment from potential users. Make sure you factor the level of potential educator demand for the training programme into the implementation plan.
- Relevance – no matter how well you capture the 'user experience', through using tools like personas and journey maps, the FLEXICOMP programme relies for its success on the active engagement of educators. You can model their lived experience, but you won't recruit or retain them unless they see your programme has relevance for their lives and their professional development. They need to take away skills they can use in real professional practice.

Resources

- Ashworth, P: (2003). An approach to phenomenological psychology: the contingencies of
- Benson, T., Pedersen, S., Tsalis, G., Futtrup, R., Dean, M., & Aschemann-Witzel, J. (2021). Virtual co-creation: A guide to conducting online co-creation workshops. *International Journal of Qualitative Methods*, *20*, 16094069211053097.
- Dahlberg, K, H. Dahlberg, H., Nystrom, M. (2008) Reflective lifeworld research. 2nd edition. Studentlitteratur
- How to do training needs analysis – video https://www.youtube.com/watch?v=-glpE8kxFPk
- lifeworld. *Journal of Phenomenological Psychology*, 34 (6), 145- 156.
- Patton. M. Q. (1990). Qualitative Evaluation and Research Methods (2nd ed.). Sage. 1990.
- Personas Template - https://miro.com/templates/personas/
- Schutz, A. (1962). Collected Papers I: The Problem of Social Reality, Maurice Natanson (ed.). Martinus Nijhoff.

STEP 3: IDENTIFYING STAKEHOLDERS AND THEIR ROLES

Primary Task

The primary task of this Step is to identify other key stakeholders – in addition to educators – whose involvement will be needed to set up and run a successful competence training programme and to understand how they can best contribute to its implementation.

Guiding Principles

- Ensure everyone with a 'stake' in the training programme has a voice in its design and implementation.
- Understand each stakeholder groups' needs, expectations and what they can bring to the table.
- Make sure the training programme is designed to reflect the profiles of the stakeholders that need to be involved and maximize their strengths and the resources (digital competences and soft skills) they can bring .

Checklist of Actions

Identify and map the key stakeholder groups	❑
Set up a stakeholder database including key stakeholder contact details	❑
Produce a categorisation of the stakeholder groups	❑
Analyse and categorize the members of the database to in terms of stakeholder type; interests; degree of influence and attitude to the training programme	❑
Create a visual representation of the stakeholder population and their characteristics	❑

The importance of stakeholders

The FLEXICOMP project needs the active involvement of different people and groups to achieve its social and educational impact and, to do so, it needs different stakeholders to play different roles.

We can identify four important reasons to include Stakeholders in FLEXICOMP:

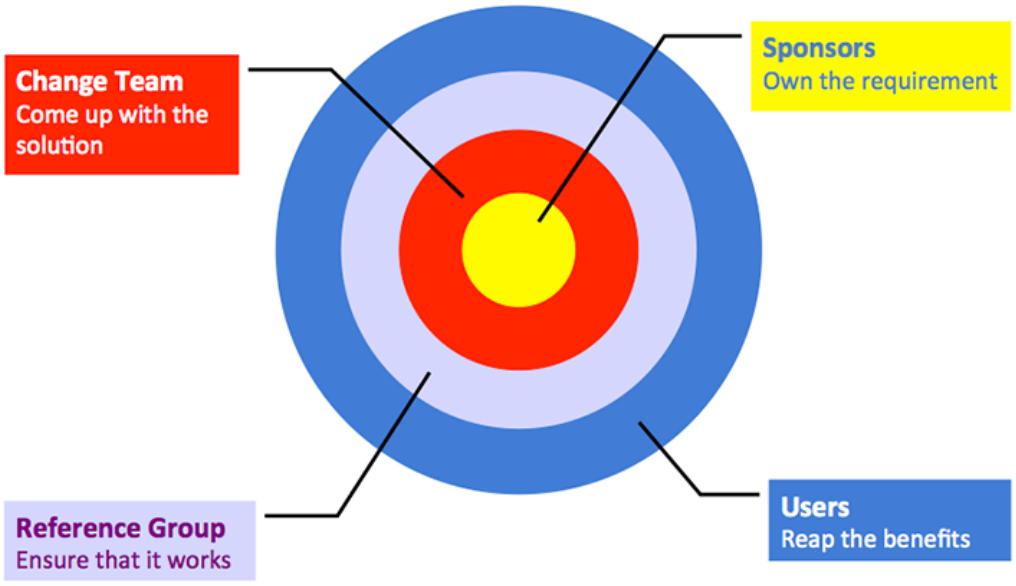
1. Increase the quality and quantity of input and reduce the chances of irrelevance.
2. Encourage ownership and involvement with the project goals.
3. Increase the chances of success.
4. Widespread consultation improves relationships and increases stakeholder self-esteem. It also reduces the chances of misinformation and complaints of lack of transparency.

Generally, when schools, universities and other education and training institutions think about stakeholders they think in terms of parents, board, students and staff. Given the nature of the FLEXICOMP project and its objectives, it is important to include other stakeholders as well:

professional organizations, potential partners, competitors, community leaders, community groups, employees who take students for work experience, volunteers, etc.

Stakeholders can be grouped into four broad types:

- Sponsors or project owners are often those who initiate change by mobilizing the resources needed and charging people with the responsibility for getting it done.
- Change Teams are those charged with the responsibility for executing the change and ensuring it happens.
- Reference Groups include those people that change teams must refer to in order to arrive at the right solution. They ensure that the change will work.
- Users are a broad group of people who benefit from the change solution. (Note: The Reference Group and some of the Change Team may also be classed as Users).



Source: Workshop bank (2023)

In education, *Tutors* conducting the training course represent another important key stakeholder group and their responsibilities include but are not limited to conducting needs investigation for training, devising detailed training plans and schedules, organizing and supervising the delivery of sessions, and conducting post-training evaluations and follow-ups (Dudovskiy, 2013).

Tools to help you identify stakeholders and their roles

Stakeholder Mapping

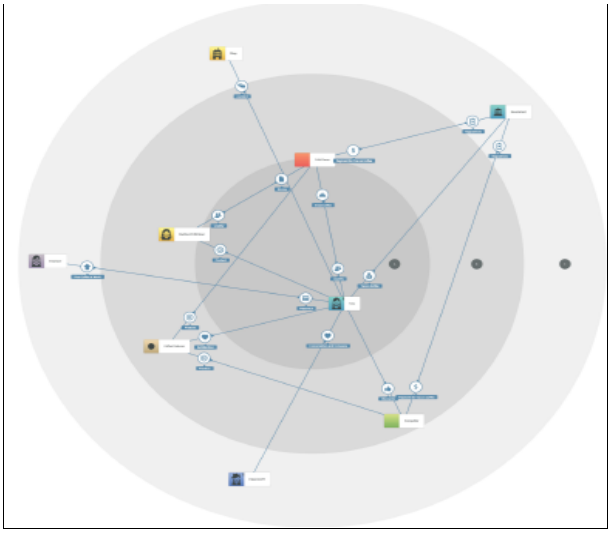
A Stakeholder Map - or actor network map - is a tool to create an overview of all stakeholders who may have an interest or a role to play in FLEXICOMP programme. Examples cover:

- potential partners who could provide resources – e.g. premises to host the training programme (platform, budgets, etc.)
- networks of organisations/people who could help raise awareness

- potential funders

This tool helps identify who these stakeholders are; what resources they could bring to the programme and the relationships between them. Stakeholder maps can be produced in a number of ways, but the most often used are either a Stakeholder Table or Network Map.

Name	Type	Assets	Role
Princess Educational Trust	Foundation	Funding Training expertise	Funder Training ctivities provider
CMT	Community Trust	Premises Staff	Lab host
Parents Association	Association	Good will Access to parents	Awareness-raising
City Hall	Civic Authority	Political networks Funding	Funder Networking
Community Hub	Education	Learning resources	Training provider
Market Traders Assoc	Business Association	Funding	Funder
Anytown University	HE provider	Learning resources	Training provider



The ***Network Map*** shows a visual representation of the location in which the programme will be delivered, with the key stakeholders situated within it, in approximate distance from each other.

Each type of stakeholder can be represented by a different colour and/or symbol.

Lines show how these different stakeholders are connected.

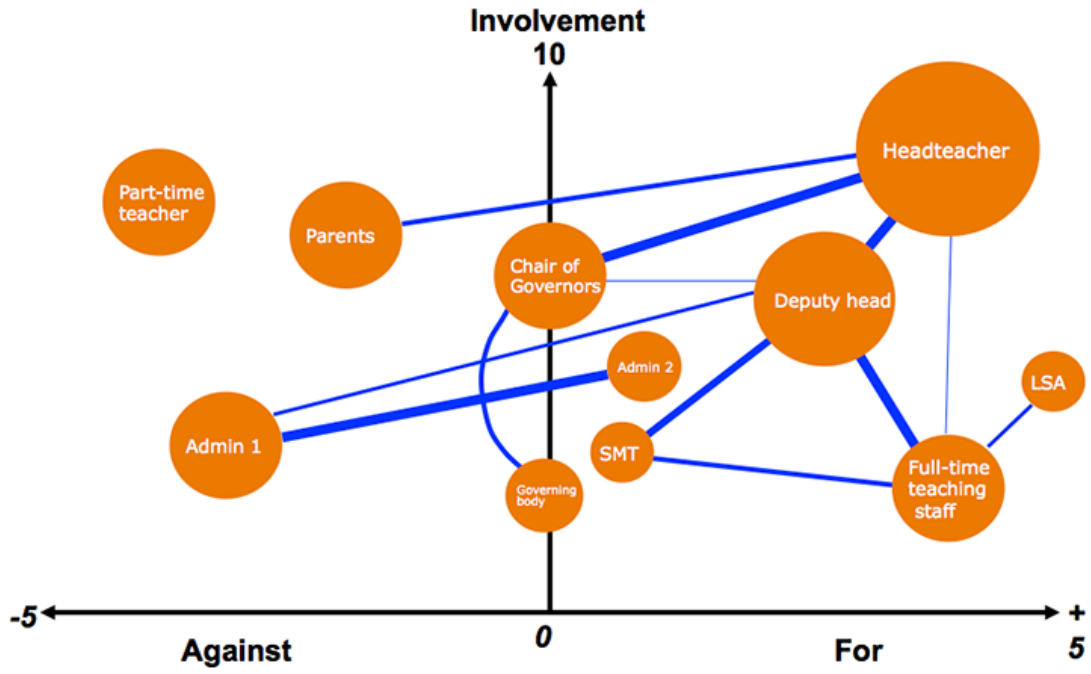
Assessing stakeholder interest and influence: the interest and influence matrix

The next step after stakeholder mapping is to assess the relative importance and influence the key stakeholder groups are likely to have on the FLEXICOMP programme. This can help to prioritise the actions that need to be taken to get them involved. You can do this using a different stakeholder map to reflect how the different stakeholder categories are positioned with regard to two indicators:

- interest – representing an estimate of the interest each group is likely to have in the programme, for example as users, content providers, funders and supporters –

- influence - representing an estimate of the degree of influence (or 'power') each group is likely to exert over the training programme development and future evolution.

These maps can be based on data collected through things like stakeholder surveys, key informant interviews and literature reviews. An example is shown below.



The X axis represents the spectrum of dispositions toward your change project; from Against at one extreme – to for at the other.

The Y axis represents the spectrum of involvement from high at the top to none at the bottom.

The Y axis intercepts at the mid-point of the X axis. This represents a position on the X axis equivalent to a neutral disposition – neither for, nor against, the change.

The thickness of line represents the strength of relationship.

The degree to which each stakeholder can influence the change is reflected in the size of the circle used.

Pitfalls and how to survive them

- Focusing too much on funding. Although identifying stakeholders with cash is an important part of stakeholder mapping and analysis, setting up and running a successful training programme requires the input of a wide spectrum of actors who represent different interests. Take account of the different perspectives and skills needed in the training programme and target the stakeholder mapping and analysis accordingly. FLEXICOMP provides free-versions of digital resources so the investment in terms of cost for digital resources is minimum.
- Lack of good data. Stakeholder mapping and analysis needs to collect and apply information that is robust and evidence based. To get this information requires a multi-

method approach. This would likely combine desk research – e.g. consulting databases and reports to identify who the stakeholders are – surveys, focus groups and interviews.

Resources

- Office of Government Commerce Category Management Toolkit, (2006). Category Management Toolkit. London: OGC
- The 'Influence-Interest' matrix, Murray-Webster R and P Simon (2007). Making sense of Stakeholder Mapping. https://www.researchgate.net/publication/265653139
- DIY Innovation Toolkit https://www.nesta.org.uk/toolkit/diy-toolkit/
- Stakeholder mapping. https://workshopbank.com/stakeholder-mapping
- Pangarkar, A. (2022). Here's What Your Stakeholders Think Of Training. Available at: https://elearningindustry.com/heres-what-your-stakeholders-think-of-training
- Dudovskiy, J. (2013). Key Stakeholders in Training Transfer and their Roles. Available at: https://research-methodology.net/key-stakeholders-in-training-transfer-and-their-roles/

STEP 4: DESIGNING THE TRAINING PROGRAMME

Primary Task

This stage of the Toolkit applied the results from previous steps needed to deliver the FLEXICOMP programme across a range of settings, and to support educators in their digital and social skills development. The previous results transform the needs into a vision and a concrete design.

Guiding Principles

- Develop a vision for the FLEXICOMP programme that is user-led and applies 'out of the box' thinking
- Make sure the vision aims to solve a clear set of problems and there is a clear understanding of the change the training programme are intended to make to that problem
- Translate this vision into a design plan for the training
- Ensure the program is co-designed in collaboration with your target group of educators and other key stakeholders

Checklist of Actions

Develop a vision for your programme using Design Thinking	❑
Create a Theory of Change plan for your Lab	❑
Review the vision and Theory of Change with users and stakeholders	❑

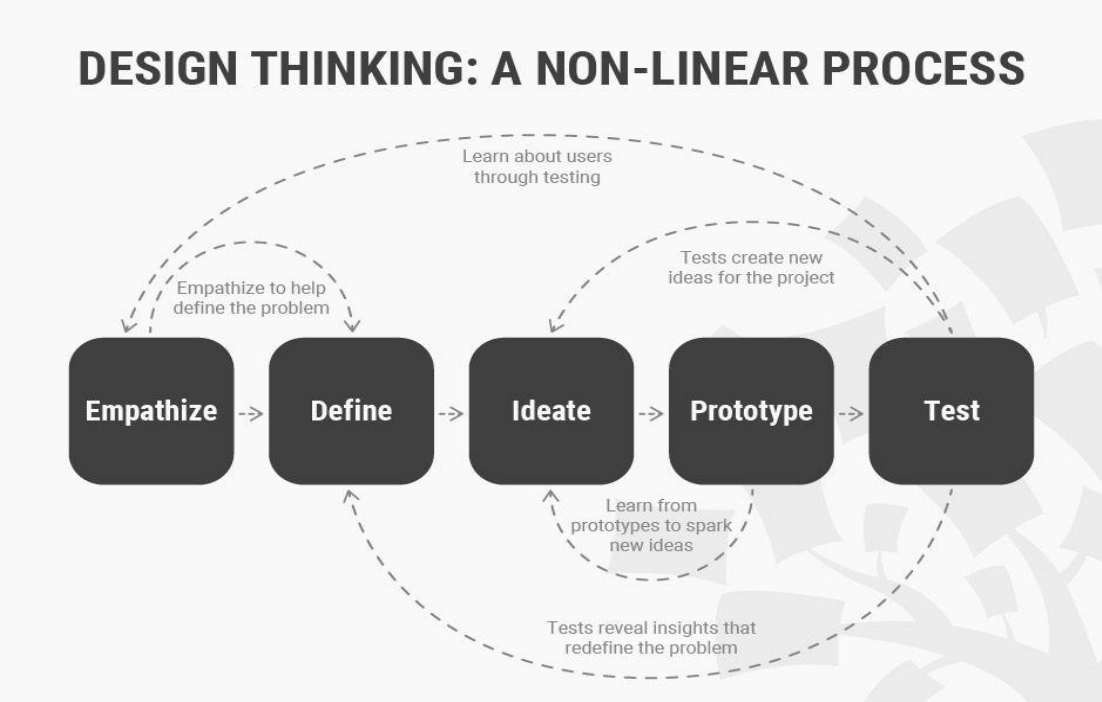
Tools to help you design the Programme

Design Thinking

Design thinking applies a five-stage process to develop solutions to a 'presenting problem' in 'human-centric' ways, by focusing on what's most important from the perspective of 'users' and by applying 'out of the box' and 'disruptive' ideas to address the presenting problem.

- Empathise - this involves gaining an 'empathetic' understanding of the presenting problem, through consulting experts, users and stakeholders, with the emphasis on immersion in the physical environment to gain a deeper personal understanding of the issues that affect educators.
- Define - this involves synthesising the information gathered to define the problem statement in a ' human-centred manner' – in a programme this would focus on defining 'what skills gaps (digital and social) do educators face and how can they be mitigated?'
- Ideate - this involves 'thinking outside the box' to identify new solutions to the problem statement created in the preceding stage, and looking for alternative ways of viewing the problem – this would involve educators collaborating with other key stakeholders – other educators/teachers, school managers, policy-makers - to think of creative ways to solve scenarios through delivering skills programmes

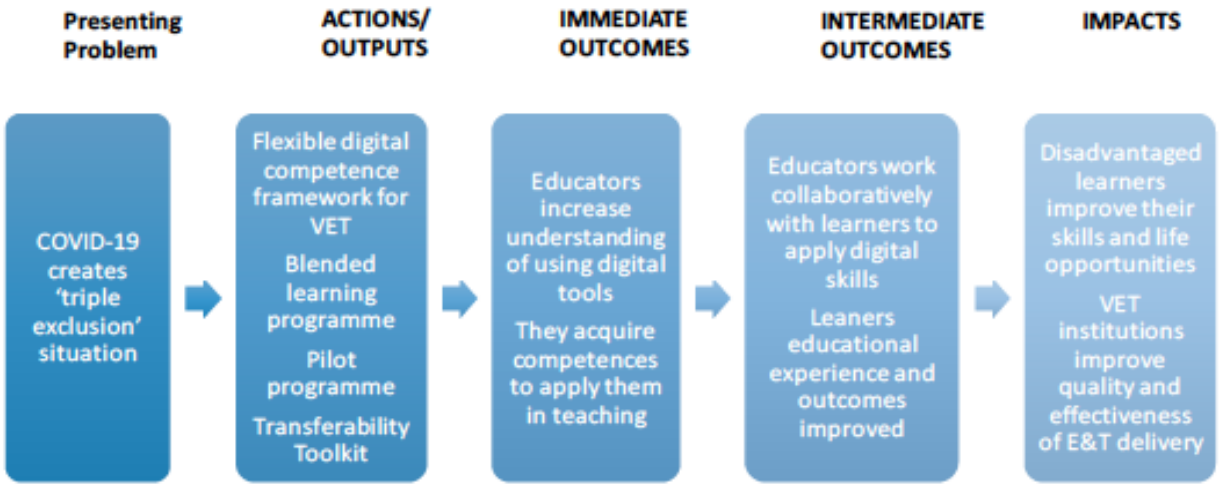
- Prototype - this involves creating a mock-up of the proposed solution to the problem, which can then be investigated by sharing with users and stakeholders
- Test - this involves validating the prototype to assess its potential effectiveness, usability and benefits.



Source: Interaction Design Foundation

Theory of Change

This tool helps you convert the Programme vision, developed through design thinking, into a roadmap for delivering. It's a way of presenting the programme 'journey' – from the challenge it is presented with at the start of the journey to where it hopes to be at the end. Connecting the presenting challenge to the journey's end- the impacts and changes the programme hopes to make to the existing problem - are: inputs (the resources available to deliver the programme); activities (the actions carried out by the programme); outputs (things produced by these activities); immediate outcomes, (changes in awareness and knowledge); intermediate outcomes (changes in behaviour and structures). Underlying this 'change journey' are 'theories' (assumptions and hypotheses), for example a theory of what is causing the 'presenting problem'; a theory of what is needed to bring about the desired solution; assumptions that if we take Action 'X', this will produce Output 'Y', which will then lead to Outcome 'Z'. The Theory of Change for FLEXICOMP is shown in the diagram below.



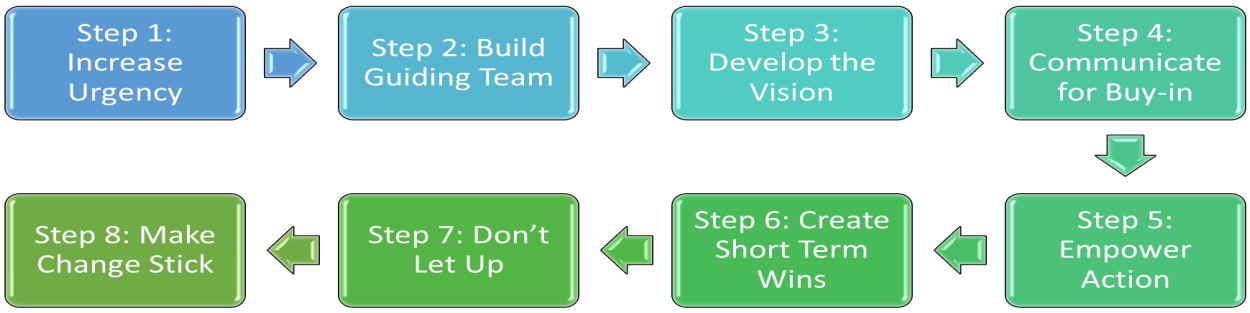
Source: FLEXICOMP

The '***presenting problem'*** FLEXICOMP addresses is: the level of digital competences in the EU VET sector is relatively low. VET educators need to acquire a wider range of skills to help disadvantaged learners – who themselves lack the digital competences they need to improve their life opportunities.

FLEXICOMP's longer term ***expected impacts*** are: VET organisations improve the quality and effectiveness of their training delivery. Disadvantaged learners improve their digital and media competences, leading to improved life opportunities.

To get from the presenting problem to the expected impacts, FLEXICOMP develops a digital competence framework and pedagogic approach; converts this into a blended learning programme for VET educators and pilots the programme. The piloting results feed into this Transferability Toolkit. The expected immediate outcomes - changes in awareness, attitudes, knowledge and skills - derived from participating in the programme include an increased understanding of using digital tools, and the acquisition of the competences needed to apply them in their teaching practice. These in turn lead to intermediate outcomes - changes in behaviour and systems - including improved teaching practice.

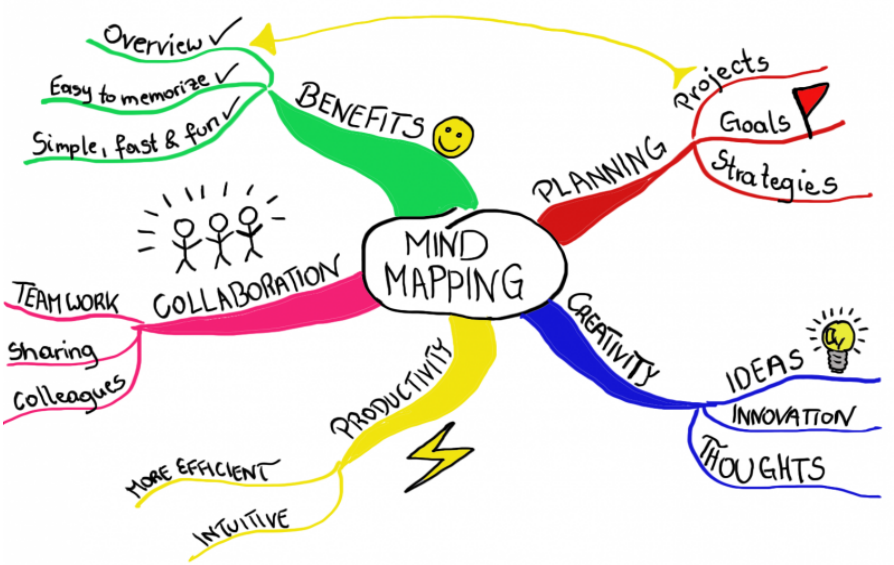
Another way of presenting a theory of change approach is shown in the diagram below. This focuses on the personal and organisational actions needed to deliver change.



Source: own elaboration based on Kotter (2012)

MindMap

Mind - or concept - mapping is a graphical technique that aims to illustrate how the design and implementation plan of a program works by showing the relationships between concepts, actors and activities. Like the Theory of Change, most mind mapping approaches start with the "problem statement" in the centre of the map. The program design team then writes ideas/solutions to the problem around this central statement, focusing on "thinking outside the box" to identify new solutions to the problem statement and looking for alternative ways of looking at the problem. The ideas/solutions are then connected using lines/curves. There are a number of software programs available for this purpose, some of which are open source.



Source: Mindmesiter.com

The MindMap typically starts at the centre with the problem or solution (programme).
Brainstorming the problem then reveals the things that need to go into the design and implementation of the program - such as products, benefits, resources - similar to the Theory of Change. The mind map then shows the connections between these things.

Design the Programme Tour Guide

Design a Tour Guide to facilitate the expectations of participants. Some useful tips for the FLEXICOMP programme are:

- **FLEXIBLE** to fit the pace and training needs of each educator. With basic content and additional information to be deepened in a personalized way.

- **PRACTICAL** with content applied to the educator's practice, reflection questions or tasks for agile application of what has been learned.

- **INTERACTIVE** with spaces for dialog through forums, with other teachers or with the FLEXICOMP team, to share experiences, reflections or doubts.

- **CO-CREATIVE**, ensuring that the participants are not passive spectators, but co-creative partners in the production, offering opportunities to share and compare case studies and critical incidents related to the competences.

Pitfalls and how to survive them

- Awareness-raising – many programmes fail because they are developed in a bubble. It's essential from the outset to engage stakeholders in the programme design and

implementation plan. This means active outreach from the start. Even if you only have a sketch of the programme, get it out there – through consultation workshops, social media, informal canvassing - so you can judge the potential level of support and commitment early on.

- Risk aversion – a design thinking approach means thinking outside the box, being creative, taking risks. A lot of training and CPD programmes are worthy, but unexciting. The programme aims to stretch educators by putting them in situations that challenge their ingenuity. Don't be afraid to tap into the ideas of educators themselves.

Resources

- A presentation explaining the use and design of theories of change for different contexts: https://www.cecan.ac.uk/news/cecan-seminar-theory-of-change
- Designscapes Design Thinking Toolkit' – comprehensive resource on how to apply design thinking with a range of tools to help you do it https://issuu.com/designscapes/docs/designscapes_toolkit_final
- Kotter, J. P. (2012). *Leading change*. Harvard business press.
- Mindmapping - bubbl.us; www.mindmeister.com; https://coggle.it/)
- Panke, S. (2019). Design thinking in education: Perspectives, opportunities and challenges. *Open Education Studies*, *1*(1), 281-306.
- Wentworth, D. K., Behson, S. J., & Kelley, C. L. (2020). Implementing a new student evaluation of teaching system using the Kotter change model. *Studies in Higher Education*, *45*(3), 511-523.
- Friis Dam, R., Yu Siang, T. (2022). Stage 5 in the Design Thinking Process: Test. https://www.interaction-design.org/literature/article/stage-5-in-the-design-thinking-process-test

STEP 5: IMPLEMENTATION PLANNING

Primary Task of this Step

The Primary Task of Step 3.1 to take the training programme developed in Step 4 (Designing the training programme) forward by developing an implementation plan to deliver the FLEXICOMP digital inclusion training programme.

Guiding Principles

- Be clear about who is involved in the training and what their roles are
- Understand the different delivery options available for the training and their advantages and disadvantages
- Be aware of the obstacles you are likely to face, for example in the institutional, political and policy environment
- Ensure you have a good idea of the phases involved in setting up the training and implementing it, and the time scales involved
- Select the right delivery vehicle for the FLEXICOMP digital inclusion training programme
- Make sure the relevant people in your organization familiarize themselves with the FLEXICOMP digital inclusion training programme and how it can deliver professional development for VET educators.

Checklist of Actions

Revisit your user needs and stakeholder analysis	❑
Download and read the FLEXICOMP Course and Game tutorials	❑
Experiment with and explore the FLEXICOMP digital inclusion training programme	❑
Develop an implementation plan for the training	❑
Develop appropriate management and monitoring systems	❑
Design the operational systems for running the training	❑
Identify and specify appropriate roles and role specifications	❑

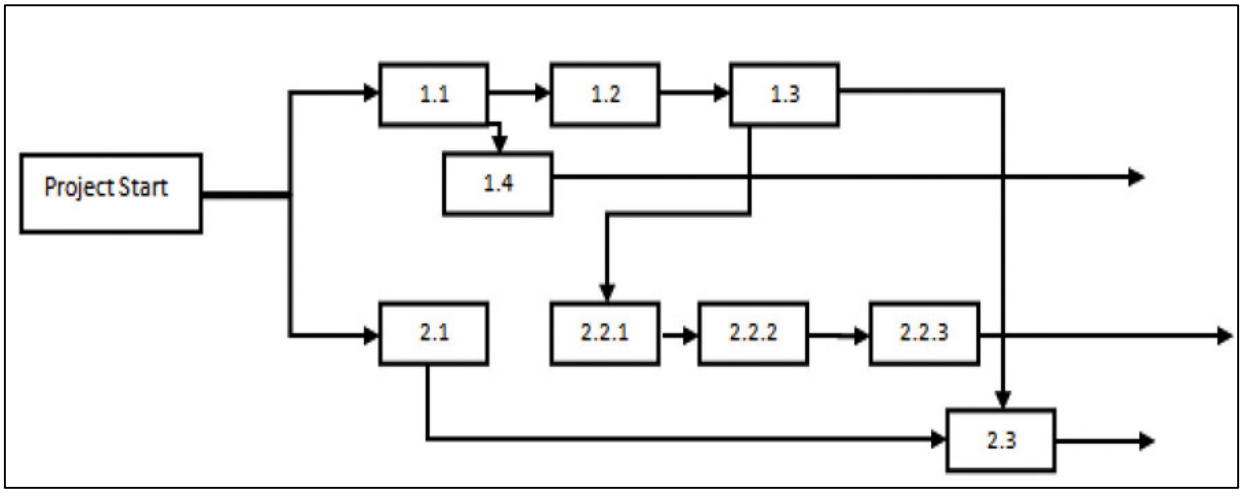
Tools to help you develop a training implementation Plan

Project Implementation Tools

Project implementation tools translate your project's Theory of Change and Mind/Concept Map (Step 2.2) into an implementation plan that has a logic, a sequence of steps/activities and outputs and a timeline. Typical tools used are:

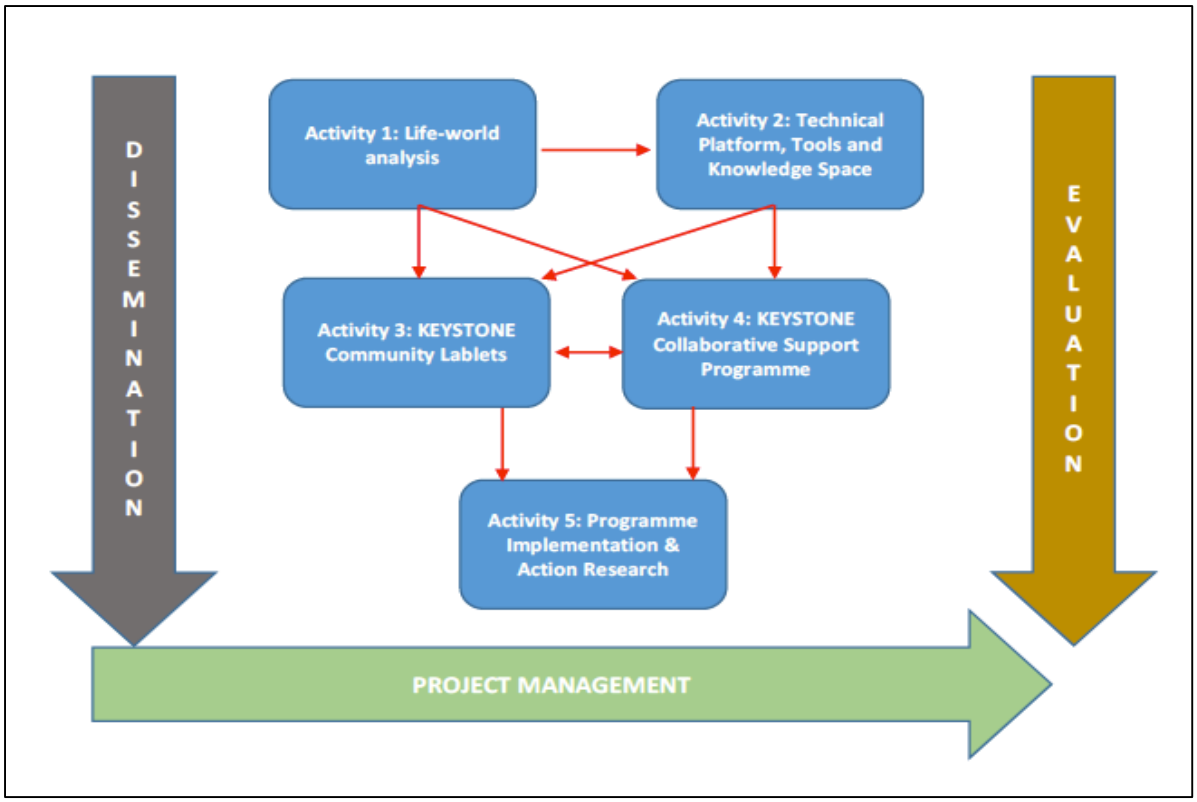
- Logic Network
- PERT chart
- GANNT chart

Logic Network



A Logic Network indicates the sequence of activities in a project over time. It shows which activity logically precedes or follows another activity. It can be used to identify the milestones and critical path of a project. It will help you understand the dependencies in your project, timescale, and its workflow.

PERT Chart



Like a Logic Network, PERT is a method for analysing the tasks involved in completing a given project, especially the relationships between tasks and their inter-dependencies. It shows which tasks need to be done first and which tasks are dependent on others.

GANTT Chart

Year/Month	21 - Jun	Aug	Oct	Dec	22- Feb	Apr	Jun	Aug	Oct	Dec	23-Feb	Apr
Activity/Task												
IO1: Flexi-Comp competence framework												
Task 1: Review & LWA Methodology and Toolkit												
Task 2: Lifeworld analysis implementation												
Task 3: State of Art Review												
Task 4: Competence Framework development												
Task 5: Pedagogic approach development												
IO2: Flexi-Comp Training Programme												
Task 1: Course and learning contents design												
Task 2: Production of learning materials												
Task 3: Simulated practice learning game												
Task 4: Adaption and localisation												
Task 5: Validation												
Task 6: Piloting and Evaluation												
IO3: Transferability Toolkit												
Task 1 - Review of evaluation results from IO3												
Task 2 - Toolkit Design and Methodology												
Task 3 - Toolkit production												
Task 4 - Toolkit dissemination												
Evaluation												
Task 1: Evaluation Methodology & Handbook V1												
Task 2: Evaluation Methodology & Handbook V2												
Task 3: Piloting evaluation												
Task 4: Process evaluation												
Task 5: Summative evaluation												
Dissemination												
Task 1: Dissemination approach and plan												
Task 2: Dissemination materials & website												
Task 3: Dissemination activities												
Task 4: Dissemination Report												
Project Management												
Task 1: Project Management Guidelines												
Task 2: Project co-ordination												
Task 3: Project Management and monitoring												

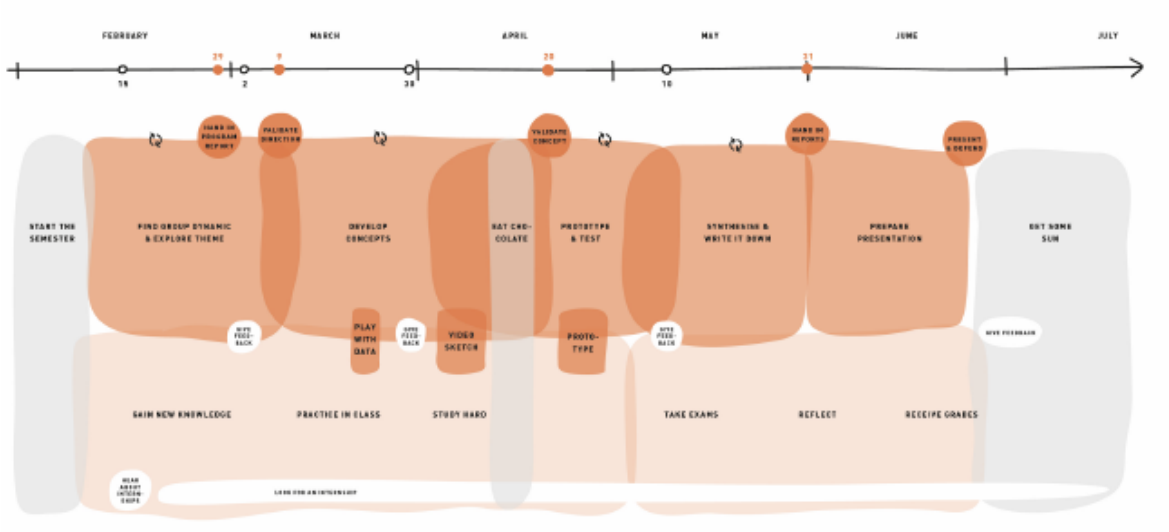
A Gantt chart is a project management bar chart that tracks tasks across time. It shows the phases, tasks, milestones and resources needed to deliver a programme.

The tasks are set out in linear format across the programme timeframe from start to finish, with a start and end date shown for each task.

Storyboard/Journey Mapping

Storyboards represent the programme 'journey' – as described conceptually in the Theory of Change outlined above in Step 4 – as a series of key actions the participant takes as they progress through the programme. They help to customize the overall process of the programme to the individual needs of participants/users. You could develop different storyboards for each of the 'Personas' developed (see Step 2) so you have a clear visual picture of how different types of user progress through the programme.

Journey Mapping is a more detailed application of the storyboard approach. The map models the 'user experience' of a potential programme participant so the programme design can be customized to represent a step-by-step model of how different types of user experience the programme. A journey map represents a sequence of events, the interaction between the user and the programme, the user's mood in each of the events delivered by the programme and the 'touchpoints' – the moments or spaces in which the user and programme interact - that support the interaction between the user and the services provided by the programme. This step-by-step description is based on the user's point of view. A journey map is a powerful tool for visualising the user experience. It helps the programme designer to understand the context of users, to identify possible gaps in the services the programme intends to provide, and a clear perspective on what potential programme users are looking for and what they want to achieve.

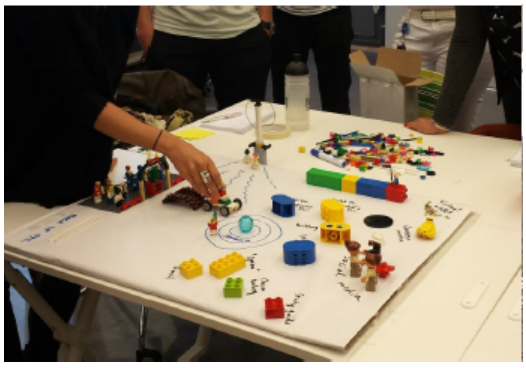


Source: DesignscapesToolkit

The customer journey can be used in developing a new or adapting an existing programme to ensure that different user needs are built into the programme from a user perspective and identify possible opportunities for innovation of the programme. In the example shown above, the journey map represents the student journey through a semester of a Masters course, including indications about the timing of each phase, the milestones and the characteristics of the activities. In FLEXICOMP, this journey map could model a user journey through the training programme.

Service Walk-through

Before publicising/Launching the training it's worth getting a small number of users involved in the final validation of the training and programme by running a 'service walk through' with them. The service walk-through is a tool that provides programme designers with a way to understand the experience of a service from the user point of view. The technique uses the 'journey' through the service as a way of getting users to understand how they will experience it. You can use various ways of representing this journey. One way is using 'lego blocks' to show how the various components of the service fit together. Another way is to literally accompany users through a tour of the physical space in which the FLEXICOMP digital inclusion training programme will be delivered.



In this example lego blocks are used to simulate how the programme uses physical spaces to deliver its services and how they connect with each other.

Users are 'walked through' the service using the blocks and their observations – including potential issues raised – are recorded to feed into future service revisions.

Source: Boletsis, 2018/Designscapes Toolbox

Pitfalls and how to survive them

- Don't venture into the land of FLEXICOMP without being prepared. Make sure everyone involved in delivering the training are familiar with the FLEXICOMP digital inclusion training programme and the Game.
- Avoid not seeing the trees for the wood. Use FLEXICOMP to narrow down your searching to projects that broadly fit your project objectives and target groups
- Avoid over-ambition.
- Don't do it alone. Use your stakeholder analysis results to engage in meaningful conversations with other people working in the field and share ideas and experiences.
- Underestimating the implementation costs. Setting up a training programme inevitably entails costs. These come in a number of forms. Start-up and set-up financial costs; operational costs; etc.

Resources

- Project planning video https://www.youtube.com/watch?v=K-NuhlmvTxE
- How to sell your project to stakeholders - https://www.pmi.org/learning/library/selling-project-proposal-art-science-persuasion-6028

STEP 6: PROGRAMME DELIVERY

Primary Task of this Step

The Primary Task of Step 6 is to empower yourself and VET educators with the necessary skills and knowledge to effectively engage with and support disadvantaged learners and digitally excluded individuals, including those with diverse learning needs.

Guiding Principles

- **Inclusivity:** Ensure that all content and interactions are accessible to a diverse range of participants, including those with cognitive disabilities or other particular needs.
- **Collaboration:** Foster a sense of community and collaboration among participants to facilitate peer learning and support, ensuring that everyone's contributions are valued.
- **Flexibility:** Adapt the delivery methods and content based on the evolving needs and feedback of participants with specific requirements.
- **Reflective Practice:** Encourage VET educators to reflect on their experiences and adjust their approaches based on ongoing assessment and self-evaluation.

Checklist of Actions

1 - Preparing the Learning Environment

Develop an inclusive recruitment strategy that actively seeks out participants with diverse needs and abilities.	❑
Collaborate with disability support organisations to ensure a smooth onboarding process for participants with cognitive disabilities.	❑
Customize the registration process to gather information about any accommodations or support needed.	❑

2 - Designing Engaging Content

Distribute access keys with clear instructions on accessing accessibility features, such as screen readers or subtitles.	❑
Ensure that all content is designed with universal design principles, making it accessible to participants with a variety of needs.	❑
Offer alternative formats for learning materials, such as text transcripts or audio versions, to cater to different learning preferences.	❑

3 - Facilitating Interactive Learning

Provide captioning and transcripts for all recorded content to accommodate participants with hearing impairments.	❑
Train facilitators to moderate discussions and assist participants with specific needs, creating a safe and supportive environment.	❑
Organize virtual meetups and check-ins in ways that are accessible and welcoming for all participants.	❑

4 - Supporting Digital Inclusion

Offer resources and tutorials specifically tailored to participants with diverse needs, ensuring they can confidently navigate the platform.	❑
Collaborate with accessibility experts to create accessible learning materials, ensuring all participants can engage with the content.	❑
Establish a dedicated support channel for participants to request specific accommodations or assistance.	❑

Tools to Help You Deliver a Digital Inclusion Project:

- **Recruitment Channels: *"Community Outreach Hub" tool***
  - Description: Utilize an online platform that allows you to connect with diverse communities, interest groups, and organizations. Examples include social media groups, community forums, and niche websites dedicated to particular needs, such as disability advocacy forums.
- **Access Key Distribution: *"Access Key Portal" tool***
  - Description: Set up a dedicated online portal where participants can retrieve their access keys. Ensure that this portal includes step-by-step instructions on accessing accessibility features, such as screen readers, text-to-speech options, or alternative formats for visual content.
- **Orientation Resources: *"Inclusive Orientation Toolkit" tool***
  - Description: Develop a comprehensive toolkit that introduces participants to the programme's commitment to inclusion and accessibility. This toolkit can include videos with closed captions, downloadable guides in various formats (PDF, Word, HTML), and interactive modules that showcase the accessibility features of the platform.
- **Diverse Communication Channels: *"Universal Communication Hub" tool***
  - Description: Employ a communication hub that integrates multiple channels to ensure accessibility. Include options for video conferencing with real-time captions, discussion forums with screen reader compatibility, and instant messaging platforms that support text-to-speech features.
- **Peer Mentorship Platforms: *"Inclusive Peer Mentorship Forum"***
  - Description: Create a dedicated online forum where participants can join mentorship groups based on specific needs, such as cognitive disabilities. Facilitate mentor-mentee connections, encourage participants to share resources, and provide guidance on accessible tools and techniques.

Pitfalls and how to survive them

- **Creating a Trustworthy and Supportive Environment:** Establish a secure and all-embracing digital space that fosters participants' comfort in sharing their unique experiences and concerns. Encourage a culture of open dialogue and mutual respect, fostering connections not only among participants but also between participants and instructors. This is especially vital for individuals with cognitive disabilities or other particular needs, as creating a safe space is essential for their active participation and engagement.
- **Balancing Online and Face-to-Face Training:** While recognizing the online programme's pivotal role, it's imperative not to underestimate the significance of in-person interactions. Organize occasional in-person sessions or workshops to complement the online learning experience. This becomes particularly relevant when catering to participants with cognitive disabilities who might benefit from different modes of engagement to facilitate their comprehension and retention of the material.
- **Catering to Diverse Needs:** Acknowledge the diverse range of learning needs that participants, including those with cognitive disabilities or specific requirements, may bring to the programme. Design the training curriculum with inherent flexibility, enabling trainees to customize their learning journey according to their individual pace, preferences, and capabilities.
- **Avoiding Isolation:** Counter feelings of isolation by cultivating a robust sense of community. Regular virtual meetups, peer study groups, and discussion forums serve as avenues for participants to interact, exchange experiences, and seek solace. This is particularly crucial for individuals with cognitive disabilities, who might face additional challenges in seeking assistance.
- **Addressing Varying Levels of Technology Literacy:** Recognize that participants possess varying degrees of tech-savviness, including those with cognitive disabilities who might experience unique digital challenges. Offer comprehensive technical support that spans a broad spectrum of IT and digital issues. This assistance should encompass basic troubleshooting as well as more advanced technological hurdles.
- **Continuous Support Availability:** Empower participants with the knowledge of available support channels tailored to their specific needs. Clearly outline how they can access help for not only technical difficulties but also content-related inquiries and personal concerns. This targeted support approach is particularly crucial for individuals with cognitive disabilities, who might require extra guidance.
- **Monitoring and Evaluation:** Regularly oversee participants' progress throughout the training journey. Gather pertinent data on engagement levels, completion rates, and participant feedback, with a heightened focus on individuals with cognitive disabilities and other particular needs. This data-driven approach informs the evaluation phase, ensuring that the programme continually evolves to better serve its diverse audience.

By proactively addressing these potential pitfalls, you'll cultivate an environment within the FLEXICOMP programme that is not only inclusive and accessible to all but is also attuned to the specific needs and requirements of participants, including those with cognitive disabilities or other particular needs.

Resources

- ETF Mentoring Guidelines 2017
- The Digital Mentors Handbook – 8 principles of effective digital mentoring 2018-2019

STEP 7: MENTORING AND SUPPORT

Primary Task of this Step

The Primary Task of Step 4.1 is to familiarize yourself with how to offer mentoring and support to the FLEXICOMP course users. In particular it focuses on the support services required to help teachers acquire the skills they need.

Guiding Principles

- Understand that teachers require additional guidance and support to that offered through the online training programme and interactive game – particularly pastoral support to help them overcome any sense of inadequacy regarding their digital skills level and the quality of their teaching
- Ensure staff providing mentoring and support to teachers in the FLEXICOMP programme themselves have appropriate inter-personal and collaboration skills
- Explore solutions to problems that emerge and are identified by the participants and relate to their lifeworld and lived work experience related to digital teaching
- Evaluation is part of the process - for example by observing what happens in practice and recording the outcomes (practical and useful information on evaluation is provided in Step 9 of this Toolkit).

Checklist of Actions

Identify the training support needs of teachers	❑
Identify the need and scope for face-to-face training and/or synchronous online training via webinar or videoconferencing platforms to complement the online FLEXICOMP training programme	❑
Explore problems and solutions with the participants that happen in their practice and encourage the use of the game scenario editor to represent them and share them with their peers.	❑
Plan optional lesson planning or assignment planning workshops that complement the scenarios covered in the interactive game and the new ones created by the participants.	❑
Plan continuing pastoral support for participating teachers	❑
Plan continuing technical support on the use of the FLEXICOMP platform and tools	❑
Monitor the training process and the participants' results	❑

Tools to help you provide mentoring and support

Understanding the needs of the target group

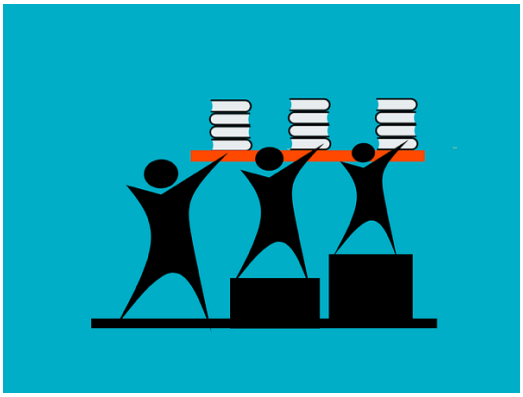
This target group – educators - is characterised by common training support needs.

- They need help to manage and deal with the changes brought about by the shift from face to face teaching to online teaching, and from analogic to digital teaching tools.
- They need help that doesn't impact excessively in terms of time and energy into additional training they can't afford.
- They need help in connecting the training to real situations they experience in their teaching practice.
- They need a space to exchange experiences with and receive support from their peers in addition to external support.

In general we found that educators require three types of support:

- **Learning and developmental support:** providing help to enable participating educators to tailor the FLEXICOMP training programme to suit their background, profile and needs, and to develop at their own pace
- **Technical support:** providing help regarding technical aspects such as accessing the training platform, navigating the course, playing the game, developing new scenarios with the scenario editor, etc.
- **Pastoral Support:** providing personal and social help to participating educators as well as providing information, advice and guidance on how to apply digital tools in their real-life teaching practice according to the profiles of their students and the digital equipment available in their school / VET centre.

Providing learning support



Most of the difficulties educators experience with digital technology comes from the sudden shift many of them had to make from analogic, face-to-face teaching to digital, online teaching caused by the Covid-19 pandemic. This was so sudden it didn't allow time for reflection or self-training, and those who were not already used to incorporating digital tools in their teaching had to shift to digital learning mainly in "on-the-job" mode and/or "trial-and-error" mode, with no time available for exploring tools and technologies and choosing the most suitable to their needs and those of their learners.

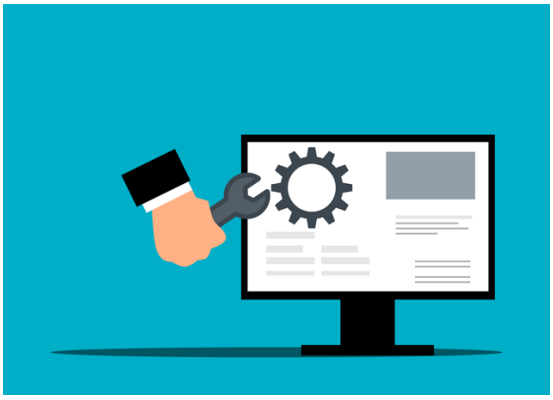
This implies that educators may need support in their own learning to familiarise with digital tools and constructively apply their digital skills in their teaching practice.

An example of how educators could be supported to apply their digital skills constructively and effectively is a workshop on digital lesson planning where educators work in small groups, assisted by a mentor, to develop a plan for a flipped learning class on a given topic, or an assignment for students where they have to use a number of digital tools decided by the teacher. These workshops could be held in face-to-face mode or online via Zoom rooms, with an ending plenary session where the groups share their work with the other participants and reflect on the experience.

In addition to workshops, other support activities could be:

- a dedicated chat channel for peer support
- scheduled Skype/Zoom calls for individual support by a mentor

Providing technical support



Research in FLEXICOMP and similar projects shows there is significant variation across the teaching profession in the knowledge of devices and digital and media tools, as well as social media.
Older educators , and those who have been in the same job for a number of years, tend to have a lower level of digital skills and to prefer more traditional ways of learning.

'Digital exclusion' is typically expressed in three main – and inter-connected – ways: access (e.g. limited access to high speed broadband and digital technologies); usage (e.g. limited digital and media competences to use digital technologies); quality of use (e.g. limited opportunities to apply digital tools and competences in teaching practice).

Technical support is therefore likely to be needed in situations involving:

- lack of access by educators to digital devices;
- lack of familiarity with platforms and tools (e.g. using Moodle accounts and access codes);
- insufficient digital competences to use the learning platform effectively;
- anxieties about lack of digital skills.

In practice, technical support needs to be provided in the following ways:

- Support for accessing the FLEXICOMP platform and tools provided by an external help-desk available via e-mail (with no need to log into the platform);
- Support/Peer support Forum within the platform for solving navigation or game play difficulties.
- Peer support chat channel

Technical support in using the platform and its digitools could be complemented by offering the training contents also in analogic format (e.g., downloadable and printable graphics and.pdf documents) as tangible training materials to give a feeling of security to participants who feel anxious about using the platform for learning. This may sound like a contradiction as we are talking about digital skills, but it is important to find a way to make even users who have low digital skills feel at home in FLEXICOMP: reading a document on digital tools for teaching with a call

could be an alternative way to become more digitalized – a first step towards feeling curious about digital tools and wishing to try one or more of them.

Providing pastoral support

Providing educators with pastoral support in FLEXICOMP means providing help, guidance and support with personal and emotional issues that may arise during the training, such as anxiety due to lack of time, lack of digital skills, low motivation, sense of loneliness caused by the asynchronous training mode, etc.
It is also important to create an environment that encourages peer support and social interaction between participants – e.g., a dedicated chat space.

Pitfalls and how to survive them

- Make sure to create a trustworthy, supportive and safe environment for all participants, where they feel they can share and be heard.
- Don't prioritise the technical dimension of training – the online programme – at the expense face-to-face training if the latter is needed or requested by the participants
- Remember that different educators have different needs so make sure you allow flexibility in the training programme for personalised learning and learning at the trainee's own pace
- Don't leave trainees feeling they're on their own and isolated. Ensure there is sufficient support from a mentor available and trainees know how to access it, and encourage the use of peer support tools such as chats and forums
- Don't assume all educators have the same level of digital skills. Provide technical support that can cover a range of IT and digital challenges regarding tools and their application to teaching.
- Don't forget to monitor the training process - you will need this information for the evaluation step (Step 5).

Resources

- ETF Mentoring Guidelines 2017 - https://www.et-foundation.co.uk/wp-content/uploads/2021/09/ETF-Mentoring-Framework-Guide-for-Leaders-and-Managers-in-Further-Education.pdf
- The Digital Mentors Handbook – 8 principles of effective digital mentoring 2018-2019 - https://auspost.com.au/content/dam/auspost_corp/media/documents/digital-mentors-handbook.pdf

STEP 8: ASSESSMENT AND CERTIFICATION

Primary Task of this Step

This section of the toolkit invites you to think about and make decisions on the best way of recognizing and rewarding people's participation when training and acknowledging their contribution.

Guiding Principles

Assessment is not about measuring success or punishing participants for failing to meet their targets, because we do not want participants to see assessment as negative. The issues of development and learning outcomes and accreditation are very complex and need to reflect the diversity of the project target groups as well as the relative diversity of the different implementation contexts. For these reasons, assessment and accreditation needs to be shaped by the objectives of the training programme and its expected outcomes.

Firstly, we need to consider at least four reasons (goals) for doing assessment, and make participants aware of any of them we chose:

- **Accountability**: Assessment can help gather and demonstrate to stakeholders how they perform.
- **Evidence:** Evaluation gathers and analyses information that can then be used to demonstrate success. It helps stakeholders understand who has benefited from their tasks, in what ways, and under what circumstances.
- **Effectiveness**: By monitoring progress, stakeholders can identify problems and issues that need to resolve it, and understand the actions needed to correct them.
- **Sustainability:** Assessment is critical to enabling continuous review and reflection for adapting to changing circumstances. By providing evidence of what works, assessment supports project sustainability for other contexts and stakeholders.

Assessment should not only be used as a retrospective tool to evaluate performance at the end of a training programme, but should be embedded in the activities carried out. This means that assessment should have a developmental purpose in supporting trainees as they progress through the training; an operational purpose, to track of how they are progressing; a summative purpose, to measure what benefits trainees have gained – particularly in terms of increased competences and practices –and a review and reflection, to help trainees think about how they can apply what they have learned going forward.

Assessment design should consider not only the purpose of the assessment, but also the resources available to carry it out, what assessment skills are available in the program, or how long the assessment will take and what it is likely to cost.

The assessment should not only reflect the "expert" view, but should take a "participatory" approach - trying to ensure that trainees have an active involvement in assessing their progress. In this sense, results from the assessment should be drawn from different sources and perspectives and compared through triangulation so that the data reflects a balanced view. For

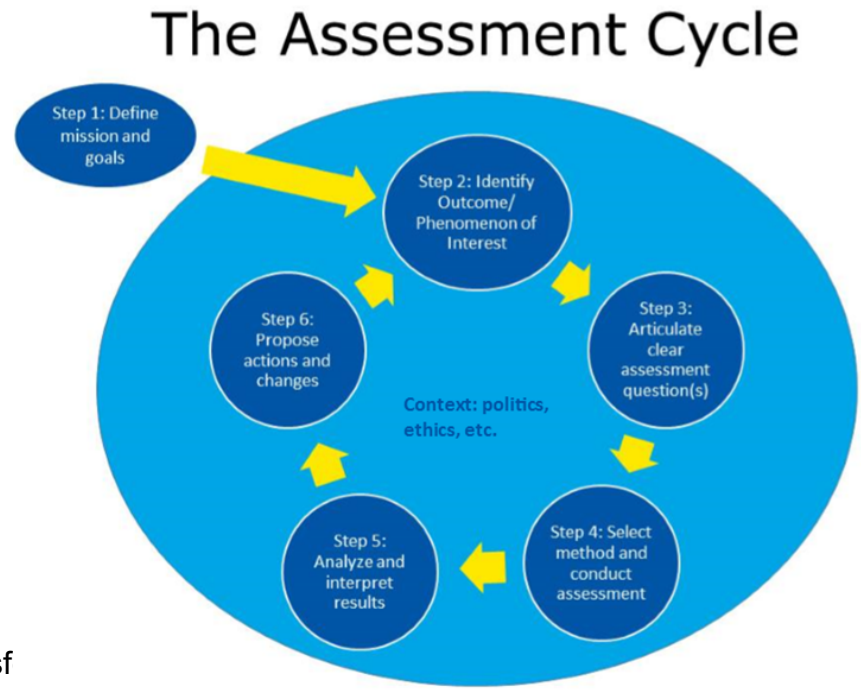
example, an ‘e-portfolio’ can help trainees put together a record of their progress through a training programme, highlighting the things that went well and the things that went less well. This portfolio can subsequently form part of their c.v.

The same for the ways of accreditation, considering the diversity of expectations and needs. Accreditation can be quite ‘formal’. For example, digital skills training projects are often linked to formal recognised standards and qualifications – like the EU Digital Competence Framework for Citizens – DigComp – or the European Computer Driving Licence (ECDL). In the education and training field there are a number of instruments intended to support certification and accreditation – particularly for programmes that include informal and non-formal training. The European credit system for vocational education and training (ECVET) is an example of one of these. ECVET allows learners to accumulate, transfer and use their learning in units as these units are achieved. This enables building a qualification at learners’ own pace from learning outcomes acquired in formal, non-formal and informal contexts, in their own country and abroad. The system is based on units of learning outcomes as part of qualifications that can be assessed and validated.

, Other projects may have more informal and more flexible objectives. Rather than providing strictly formal training – or even informal learning –some projects can be defined primarily as ‘empowerment’ interventions, whose main purpose is to provide a safe and nurturing environment in which vulnerable people can broaden their digital horizons.

For these more informal interventions, assessment of development and learning should involve self-assessment, based on guided self-reflection of participants, rather than external or ‘objective’ assessment based on ‘testing’ procedures. For self-assessment to be effective, project participants need to be involved in decisions about how this definition is operationalized in practice within the project, for example through "self-evaluation" and "self-assessment". Similarly, accreditation of progress and achievements needs to be flexible, reflecting the context of project implementation and the needs and wishes of project participants.

The assessment cycle with its main phases is suggested below and should be adapted according to the training programme, the context, time aspects and other issues.



Source: UCLA

Checklist of Actions

Review the project's objectives and expected outcomes and decide the assessment purpose, timeframe, and stages for action.	❑
Work with the target group to establish their expectations of development and/or learning outcomes, using a 'co-creation' workshop approach.	❑
Collaboratively explore innovative ways in which individual and group achievements can be captured and recognised.	❑
Produce a plan to make sure progress and achievement is regularly monitored and reflected on as the project progresses. Decide on indicators to measure results and plan methods for collecting and analysing data.	❑
Determine the resources you will need to conduct the assessment. Create a plan for carrying out the assessment and assign tasks and roles.	❑
Establish whether a more formal recognition of participation and achievement – such as a certificate of attendance - would be welcomed by project participants at the end of the project	❑
Put procedures in place to implement any certification that has been agreed with participants	❑

Tools for Assessment and Accreditation

1. Self-assessment: is the adoption of shared ownership of and shared responsibility for designing the assessment process and carrying it out. This means that learning, mentoring and support teams need to work with participants to develop and deliver a common approach
2. Peer Feedback is essential to ensure that the participant voice is reflected in how the project is implemented, and how it adjusts in its implementation plan if there are problems and challenges that need to be addressed. One useful tool for Peer Feedback is Group Discussions. These provide space for participants to regularly review and reflect on how the project is progressing, issues and problems that need to be addressed and what changes need to be made. These groups need to be highly interactive and democratic, with steps taken to ensure that everyone has a voice.
3. Using a simple Self-assessment Tool is another tool used by different projects, by providing an overview of their learning outcomes. The answer could be 'Yes' or 'No' or a more elaborated version could include Likert-type scales as measures of outcomes to replace the simple 'Yes/No' dichotomy – e.g. a scale of 1 to 5 where 1 is 'strongly disagree' and 5 is 'strongly agree'.
4. There are a range of collaborative assessment tools available that are managed by the participant and can be used to show progress and outcomes.
    - Personal blogs –online blogs help participants to share their experiences of the project and how they are developing, as well as contributing to improving digital confidence
    - 'Quiz Tools' – like 'Kahoot' or 'Socrative' are a fun way of exploring together what has been learned
    - Interactive Game –gamification can increase motivation to use digital tools as well as indicate progress
    - Learning portfolios – help participants to put together a history of their involvement and showcase their achievements.
5. As noted above, more formal projects should review existing accreditation routes for digital inclusion – like ECDL and ECVET. For more informal projects certification can be tailored to the specific project context.

Pitfalls and how to survive them

- Giving the impression that assessment is a form of punishment. People – especially those who are vulnerable – get anxious about doing 'tests' and can sometimes feel they are being punished. Assessment should be communicated to participants as a valuable tool for learning, rather than an 'examination'.
- Choosing the appropriate form of assessment and accreditation to suit the needs of the target group and the project objectives. If the main objective is to improve the target group's employment opportunities, then a more formal assessment and accreditation approach – leading to a recognized qualification – is desirable. If the main objective is to improve access to online public services, then the focus of the assessment should be on helping the target group to understand where their strengths are and what gaps need to be addressed.
- Not taking account of the presenting needs of vulnerable people. Assessments should be geared to the circumstances and characteristics of vulnerable people. For example, assessment for migrants needs to consider language difficulties that may compromise participants' ability to understand what is required from an assessment.
- When using self-assessment, a participant's inability to be realistic about own their achievements can lead to overestimation or underestimation of achievements. It is the job of support teams to provide guidance to participants, so they become aware of how they are doing in relation to their personal development goals.
- Not recording achievements over time. Especially when digital inclusion projects are the focal point for a broader aim of increasing the social inclusion of vulnerable people, getting participants to develop their own way of capturing their participation – for example through a blog or a portfolio – is not only a good way of doing self-assessment but is a good platform for helping excluded people to transition to further education or employment.

Resources

- Reinholz, D. (2016). The assessment cycle: A model for learning through peer assessment. *Assessment & Evaluation in Higher Education*, *41*(2), 301-315.
- Wride, M. (2017). Guide to Self-Assessment Academic Practice, University of Dublin Trinity College.UCLA. SAIRO: research and assessment office within UCLA's Student Affairs organization. https://sairo.ucla.edu/assessment/assessment-overview-resources
- ECVET - https://www.cedefop.europa.eu/en/projects/european-credit-system-vocational-education-and-training-ecvet

STEP 9: EVALUATING THE PROGRAMME

Primary Task of this Step

The Primary Task of this Step is to design and implement an evaluation plan for your training programme which will support progress monitoring and the collection of evidence of whether and in what ways the programme works, for whom and under what circumstances.

Guiding Principles

- Evaluation should be used not just as a retrospective tool to assess performance at the end of the programme, but should be embedded within the programme process from the start to support a cycle of continuous learning and improvement
- This means that evaluation should be used for four main purposes: a *developmental* purpose - to support the programme design and implementation plan (ex-ante evaluation); an *operational* purpose - to help the programme keep track of how it is progressing (on-going or 'formative' evaluation); a *summative* purpose - to help the programme measure what is has achieved (ex-post evaluation); a *sustainability* purpose - to help key actors in the programme learn from their experience
- There are many different methods and tools for collecting and analysing evaluation data. Each has different purposes and different resource and skills requirements. The evaluation design and plan should take into account 'pragmatic' considerations: the 'object' of the evaluation; the purposes of the evaluation; the resources available to carry it out; who the evaluation audience is and what are their expectations; what evaluation skills are available in the programme, or can be brought in from outside; how long is the timeframe for the evaluation and what is it likely to cost
- The evaluation should not just reflect the 'expert' view but should take a 'participatory' approach - trying to ensure that the voices of different stakeholders and their perspectives are represented – particularly those who have less power and whose voices are not often heard
- This means that as far as possible evaluation data should be drawn from different sources and from different perspectives, and compared against each other, through 'triangulation', so that the evaluation reflects a balanced viewpoint
- FLEXICOMP is an attempt to address an existing educational problem – that is, to create some level of change in the education system. The focus of evaluation should therefore be on assessing whether and how this change has occurred.
- FLEXICOMP works – or not - by enabling participants to make different choices, so a key objective of evaluation is to capture how and why these choices are made

Checklist of Actions

Identify the evaluation purposes, timeframe and modes of operation	❑
Decide on who the audiences are and what are their expectations	❑
List the evaluation questions the evaluation will answer	❑
Decide on the methods to collect and analyse the data	❑
Decide on the indicators to measure results	❑
Work out what resources you need to do the evaluation	❑
Produce a plan to carry out the evaluation and assign tasks and roles	❑

Tools to help you evaluate your programme

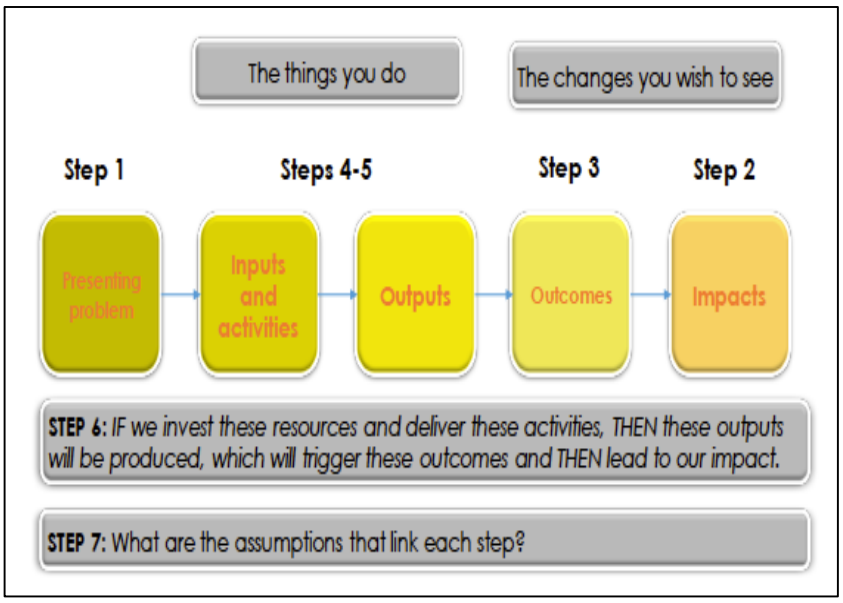
Theory of Change

In the Introduction we said that FLEXICOMP has a 'Theory of Change'. Theory of Change helps convert the project vision into a roadmap for delivering that vision. It's a way of presenting the project 'journey' – from the challenge it is presented with at the start of the journey to where it hopes to be at the end. Connecting the presenting challenge to the journey's end- the impacts and changes the programme hopes to make to the existing problem - are: inputs (the resources available to deliver the training programme); activities (the actions carried out by the programme); outputs (things produced by these activities); immediate outcomes, (changes in awareness and knowledge); intermediate outcomes (changes in behavior and structures). Underlying this 'change journey' are 'theories' (assumptions and hypotheses), for example a theory of what is causing the 'presenting problem'; a theory of what is needed to bring about the desired solution; assumptions that if we take Action 'X', this will produce Output 'Y', which will then lead to Outcome 'Z'.

Theory of change is also one of the most powerful tools to evaluate the training programme because:

- It shows the expected change journey from the challenge the programme is presented with at the start of the journey to where it hopes to be at the end
- It sets out the programme inputs, outputs, outcomes and impacts and the connections between them
- It specifies the hypotheses and assumptions of the programme – in particular its expected 'causal chains' - if we take Action 'X', this will produce Output 'Y', which will then lead to Outcome 'Z'.

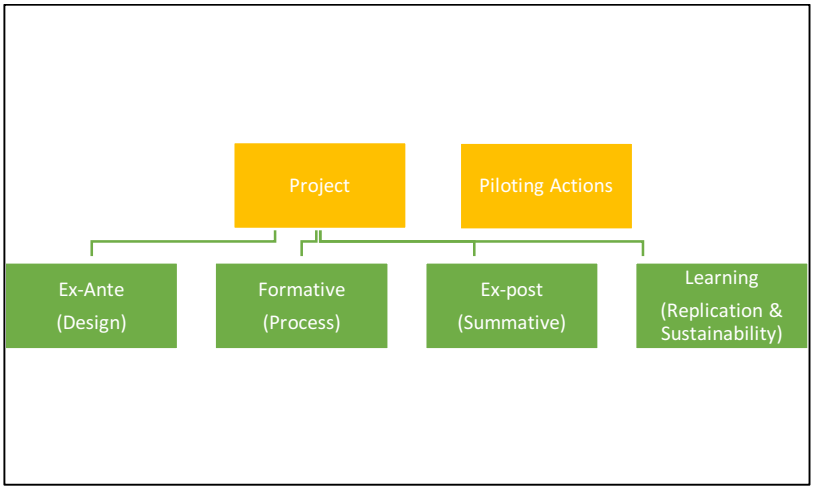
Essentially, what evaluation does is to test this Theory of Change by gathering evaluation data over the life cycle of the programme, to see whether these expected hypotheses and assumptions work, and are supported by the evidence.



Using the **Theory of Change**, you can:
Work out which 'modes' of evaluation you need to apply and when (developmental, process, summative)
Identify which activities are critical for evaluation
Work out how you will measure outputs, outcomes and impacts
Periodically use the Theory of Change to monitor how far your programme is progressing in its 'change journey'
Review the Theory of change at programme end to assess how far the programme has progressed

Evaluation Design Template

Evaluation has four main purposes. These correspond to different evaluation 'modes' and need to be applied at different stages in the programme. They are: a *developmental* purpose - to support the programme design and implementation plan (ex-ante evaluation mode); an *operational* purpose - to help the programme keep track of how it is progressing (on-going or 'formative' evaluation mode); a *summative* purpose - to help the programme measure what is has achieved (ex-post evaluation mode); a *sustainability* purpose - to help key actors in the programme learn from their experience (learning mode). These need to shape the evaluation design.



Just as the programme being evaluated has a life cycle and progresses through different stages, so does its evaluation, and the methods and tools appropriate for each stage of the evaluation differ. The key stages of the life cycle of an evaluation are:

Stage 1: Mapping and planning
Stage 2: Implementation
Stage 3: Reporting and dissemination

Stage 1: Mapping and planning

At the outset, the evaluation needs to identify: what are the purposes of the evaluation, who are the audience, and what kinds of things need to be focused on. It also needs to consider the logistics of carrying out the evaluation: what are the settings in which evaluation will be carried out; what people are available to implement it and what skills are available; what communications channels need to be put into place. Following this initial assessment, and evaluation plan should be drawn up which will outline the evaluator's decisions on the choices available.

Sage 2: Implementation

Having developed an evaluation plan, the next stage of the evaluation will inevitably focus on carrying that plan out. The main stages involved in implementation are:

- Establishing the evaluation criteria that need to be assessed
- Deciding on what methods and techniques are to be used for data capture
- Managing and co-ordinating data collection, including analysing the results

Stage 3: Reporting and Dissemination

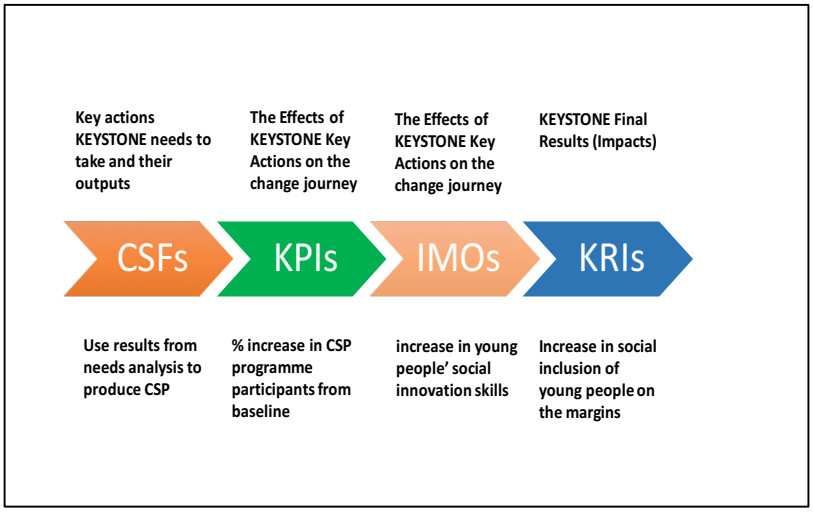
Dissemination should not be restricted to the circulation of a final report - especially in the case of 'developmental' evaluations. Different stakeholders may require different communication approaches. These might include:

- Short summaries of the evaluation, tailored to different audiences
- Journal articles for other researchers
- Topical articles in the trade press/social media/blogs
- Workshops for specific audiences
- Feedback seminars for key decision-makers.

Developing Indicators

Measures to evaluate impact require the careful creation of indicators. There are four main types of indicator:

- Critical Success Factors (CSFs);
- Key Results Indicators (KRIs)
- Immediate and Intermediate Outcomes (IMOs) and
- Key Performance Indicators (KPIs)



CSFs are the critical areas whose success is important and also the steps taken to succeed

KRIs measure the effects of these steps at the end of the programme (impacts)

IMOs measure the outcomes along the way

KPIs make the connection between the CSF's and the IMOs. They track the ***actions*** between the CSF's and the IMOs and assess progress towards final results

The FLEXICOMP training programme evaluation needs to combine all four elements in order to assess the success of the project - looking at the big 'wins' at project end; the critical success factors that are needed to make these happen and the key performance indicators that can tell us how we are progressing on the journey towards achieving the desired project results. In between we need to measure two kinds of outcomes:

- Immediate Outcomes – changes in awareness, attitudes and knowledge
- Intermediate Outcomes – changes in behaviours and structures.

The CSFs, KPIs, IMOs and KRIs need to be aligned with the project 'Theory of Change'. An illustrative example of these indicators is shown below.

CSFs (activities & outputs)	Research on VET training programmes and LWA feeds into competence and pedagogic framework and curriculum. Needs assessment identifies competence gaps
CSF indicators	No. of VET competence frameworks and training programmes in Europe reviewed and analysed
Immediate Outcomes	Increase in partner awareness of VET drivers, barriers and training needs
IMO Indicators	Level of digital competence training provided in EU VET institutions
Intermediate Outcomes	Stakeholders seek more information about digital training needs and opportunities
INO Indicators	No. stakeholders receiving information on FLEXICOMP research results
KPIs	Progress towards review and LWA targets
KRIs (Impacts)	Increase in digital awareness across EU VET institutions

Process dashboard

The Process Dashboard has four purposes: i) to enable monitoring of programme progress set against key progress indicators, or baselines ii) to provide a picture of where the programme is in relation to the 'change journey' specified in the 'Theory of Change' (and also to review whether the underlying assumptions and hypotheses embedded in the project ToC hold true or need revision) iii) to feed data into the overall summative (outcomes) evaluation of the programme iv) to stimulate review and learning as the programme develops.

The Dashboard is composed of Key Progress Monitoring Indicators – a list of baseline core outputs defined as 'evidence of success', that together build up a snapshot at a point in time of the extent to which the programme is meeting its planned operational objectives. The dashboard and associated indicators are regularly monitored and updated in line with the programme and evaluation life cycle. An integrated spreadsheet containing the process monitoring data can be uploaded to a sharing platform like Google Docs. Data entry and updating enables a 'snapshot analysis' of progress to be carried out, which provides a set of time series assessments that ultimately feed into the overall summative evaluation of the programme. In addition it should include the KPIs developed for the evaluation.

An example of a Process Dashboard is shown in the Table below.

Dimension	Indicators	Status at: (date)	Programme target
Research	No. educators involved in needs analysis		
	No. Stakeholders mapped		
Development	No. of training units completed in programme		
	No. of face-to-face workshops developed		
Piloting	No. Educators recruited to training programme		
	Dropout rate of educators from training programme		
Dissemination	No. visits to programme website		
	No. brochures/leaflets distributed		
	No. contacts on social media		
	No. attendees signed up for seminar programme		
KPIs	% educator survey target reached		NA
	% target educators reached in training programme		NA
	Change in website visits		NA
	Change in social media contacts		NA
	Growth in partnerships and networks		NA

NA = Not applicable. KPIs do not have targets. They measure progress towards a specified target from a particular baseline.

Pitfalls and how to avoid them

- Try not to be too 'scientific'. Everyone likes 'numbers' – particularly programme funders who typically require evidence that their investment shows value for money. However, FLEXICOMP is not a new anti-inflammatory drug. It's a complex educational and social intervention. 'Experimental' evaluation methods – like randomized control trials – won't work with FLEXICOMP. Be pragmatic and realist. Use Theory of Change.
- Know your limitations – make sure you have included in your evaluation design and plan estimates of the resources and skills required to carry out the evaluation. Be aware that some evaluation techniques – like ethnographic work and case studies – are more resource-intensive than 'cheap and cheerful' methods like surveys.
- Avoid evaluation suspicion and resentment – many educators and stakeholders could see evaluation and performance assessment as the same thing. Make sure you explain to all involved that evaluation is about learning, not performance. Get people on board by using a 'participatory evaluation' approach so all teachers and stakeholders 'own' the evaluation.
- Don't be afraid to measure shortcomings and to report on where the training programme objectives fall short. Learning from failure is as important as learning from success.
- Choose data collection tools and design data collection instruments that will appeal to your evaluation participants. For example, if you survey young educators, do it through a social media platform they're familiar with.
- Be SMART – design indicators that are Specific, Measurable, Achievable, Relevant and Time-bound.
- Produce results that are relevant and usable – the main objective of evaluation is to learn. Make sure the learning from the evaluation feeds into ongoing training programme monitoring – so you can take remedial steps if necessary – and into the sustainability plan for the programme.

Resources

- A presentation explaining the use and design of theories of change for different contexts: https://www.cecan.ac.uk/news/cecan-seminar-theory-of-change
- Stame, N. (2004). Theory-based evaluation and varieties of complexity. Evaluation, 10(1), 58-76.
- Weiss, C. H. (2000). Which links in which theories shall we evaluate? New Directions for Evaluation, 87, 35–45.
- Chen, H.-T. (1990). Theory-driven evaluations. Newbury Park, CA: Sage Publications Inc.
- JISC- Effective Assessment in a digital age: https://www.jisc.ac.uk/guides/designinglearning-ndassessment...digital.../assessment
- Pawson, R., & Tilley, N. (1997). Realistic evaluation. Thousands Oaks, CA: Sage Publications Inc.

STEP 10: SETTING UP DIGITAL SKILLS LABS FOR VET TEACHERS AND EDUCATORS

Primary Task of this Step

The Primary Task of Step 10 is to plan the organisational and financial sustainability of the transferred programme. In particular, it focuses on how to plan Digital Skills Labs for VET teachers and educators.

Guiding Principles

- Ensure to involve vocational schools, VET centres and teachers themselves in the planning of the Lab
- Apply a business planning approach in this phase even though your Lab will be a not-for-profit structure. This will be helpful during the implementation phase.

Checklist of Actions

Organise a participatory planning survey and/or interviews with teachers, school managers and VET centres directors to investigate their views on setting up a Digital Skills Lab in their school/VET centre	❑
Adopt and adapt one or more business planning tools	❑
Identify funding opportunities for the Lab	❑

Tools to help you plan the set-up of Digital Skills Labs

Developing a business plan for a Digital Skills Lab

Despite its not-for-profit nature, the sustainability of a project such as that of a FLEXICOMP *Digital Skills Lab* needs to be assessed through a business plan to ensure that the main marketing, organisational and financial details are considered. To develop a business plan for the Lab we suggest combining Alex Osterwalder's *Business Model Canvas*[3] and a traditional business plan template to cover in detail the **business definition**, the **overall business model**, the **organisational structure,** a basic **cost estimate** and a list of **funding opportunities**.

Business definition

A useful tool for defining the FLEXICOMP Lab in terms of business is Abell's *Three-Dimensional Business Definition Model* [4] which is based on providing the answers to the following three questions:

i. **Who** are the "customer groups" of the FLEXICOMP project?[5]

[3] https://www.strategyzer.com/canvas/business-model-canvas.
[4] ABELL, D.F. (1980). *Defining the Business: The Starting Point of Strategic Planning.*
[5] In the case of a not-for-profit initiative such as Flexi-Comp it is more appropriate to talk about "users" rather than "customers". Therefore, from now on we will refer to "users" and not to "customers" throughout this document.

ii. **What** are their needs?

iii. **How** will the FLEXICOMP Lab deliver its products/services to them?

The above questions constitute the three **business dimensions** in Abell's model:

i. The **user groups** served
ii. The **user needs**
iii. The **technologies** used to respond to the users' needs

The answers to the three questions above can be graphically represented by a three-dimensional figure built on three axes, each of which corresponds to one dimension of the FLEXICOMP Labs "business" as in Figure 1 below.

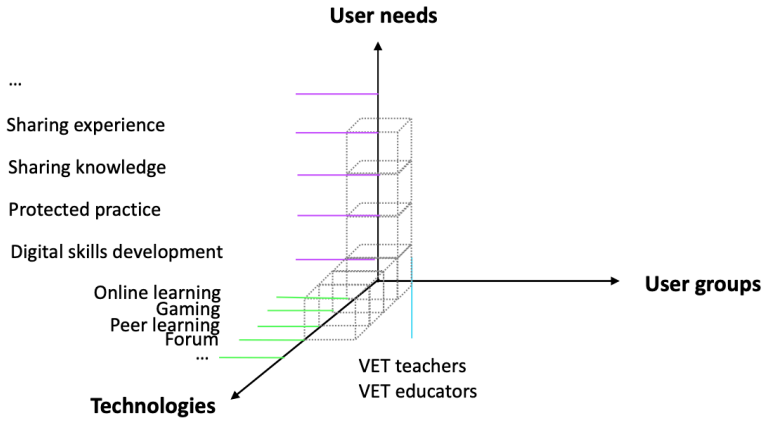


Fig. 1. The three dimensions for the Digital Skills Labs project built on the Abell model.

User groups (Who?)

The one user group for the FLEXICOMP Labs is that of **VET teachers and educators**. This aligns with the FLEXICOMP project, which was designed to respond to VET teachers and educators' needs.

User needs (What?)

The user needs related to digital skills[6] that the FLEXICOMP Lab satisfies are the following:

- Digital skills development for teaching
- Protected practice, i.e., the possibility of practising one's responses to situations when one feels inadequate or anxious (e.g., because of their lack of digital skills, or because one realizes that their teaching method is not suitable to the needs of their students) in a simulated environment.
- Sharing experiences with peers
- Sharing knowledge with peers
- …

[6] Information collected through the Life World Analysis on 52 VET teachers and educators.

Technologies (How?)

The technologies the FLEXICOMP Lab makes available to satisfy the users' needs are the following:

- Online learning
- Gaming
- Face-to-face learning
- Forums
- …

The business model shows that the four use functions identified (the users' needs) can be served by as many technologies as per table below.

WHO? User groups	WHAT? Users' needs	HOW? Technologies
VET Teachers and educators	To develop one's digital skills	Online course
		Peer learning
	To practice critical incidents in a simulated environment	Gaming
	To share knowledge with peers	Peer learning
	To share experiences with peers	Forum

In addition, a FLEXICOMP Lab to be set up by individual schools/VET centres or groups of schools/VET centres could comprise both the online learning and the face-to-face learning components and thus would offer a wide range of services to cover all the user needs identified.

Business model

Below is the Business model for FLEXICOMP Labs developed on Osterwalder's *Canvas*.[7]

[7] Word implementation by: Neos Chronos Limited (https://neoschronos.com). License: CC BY-SA 3.0

Key Partners	Key Activities	Value Propositions	User Relationships	User Segments
The Labs are one of the possible options for transferring, replicating and further developing the FLEXICOMP project results. Just as the FLEXICOMP project was designed with VET teachers and educators in mind, the Labs are seen as the concrete transfer of the FLEXICOMP concept within either individual schools/VET centres or groups of school/VET centres, in order for teachers and educators to benefit from continuous professional development within the school/VET centre environment. Within this transfer/replication approach the key partners of the Labs are teachers and educators, vocational schools, VET centres. The Labs have a not-for-profit nature and the objective of making continuous professional development available to teachers and educators. In this model of training Lab internal to a school or VET centres, the "suppliers" are teachers and educators themselves along with experienced external experts. The choice for this organisational scheme lies in the aim of	The Labs' main activity is to offer VET teachers and educators the opportunity to receive quality training in the digital skills necessary for successful, engaging and motivating teaching. Within this main activity, the specific activities of the Labs consist in: • enriching and constantly updating the contents of the FLEXICOMP training programme by producing and sharing new learning resources and enlarging the nature and the composition of the online platform as necessary; • designing, developing and delivering in-presence teacher training sessions, online forums and peer learning sessions to complement the training programme.	The value the Labs offer is for teachers to improve their digital skills to guarantee students engaging and effective teaching. The Labs respond to the teachers' needs to: ● share knowledge and experience, ● being protagonists of their training thanks to peer learning activities ● receive personalised face-to-face training to complement online learning. The essence of the Labs is their collaborative nature.	The Labs are not-for-profit initiatives developed within schools/VET centres or groups of schools/VET centres and aimed at enriching teachers' digital skills to help them offer better learning experience to their students. The relationship of users with the Labs is a cooperative/collaborative relationship aimed at mutual learning and professional development to improve teaching quality and effectiveness.	VET teachers and educators

<table>
<tr>
<td rowspan="2">creating a place where the key principles are collaboration, sharing and mutual learning by and from those who know and live every day the world of VET and its complexity.</td>
<td>Key Resources</td>
<td rowspan="2"></td>
<td>Channels</td>
<td rowspan="2"></td>
</tr>
<tr>
<td>Physical resources:
1 classroom to accommodate at least 20 people.
IT and digital resources (minimum equipment):
● 1 personal computer
● 5 devices (e.g., tablets) available to users
● Fast internet connection
● 1 IWB with video-projector
Human resources (minimum staff):
• 1 Manager
• 2 external experts
• n teachers
Financial resources
● Funds to remunerate Lab Manager and external experts
● Funds to remunerate the extra work by VET teachers and educators who choose to participate in the Lab.</td>
<td>The users will be reached mainly through their school / VET centres internal channels such as presentation of the Labs during Teaching Staff meetings and periodical calls for participation issued by the VET centre.
Applicants' selection may be set up according to the school's/VET centres' staff training strategy (e.g., in order of application; based on previous training history; based on needs assessment; etc.)</td>
</tr>
<tr>
<td colspan="3">Cost Structure</td>
<td colspan="2">Revenue Streams</td>
</tr>
<tr>
<td colspan="3">Investments (minimum equipment)
1 personal computer
1 video-projector
1 IWB
5 tablets
General costs (utilities and services)
● classroom use
● electricity costs
● heating costs
● cleaning costs
● internet connection
● consumables
Staff costs
● Lab manager's fees
● Participants' (teachers) fees
● External expert(s) fees</td>
<td colspan="2">Investments
social crowdfunding
donations by Labdoo.org or similar organisations
National or regional funding opportunities such as National or Regional Operating Programmes
General costs (utilities and services)
Covered by the school's / VET centre's General Costs budget.
Staff costs
School Supplementary Funds - where available
Donations by foundations
Donations by sponsors (e.g., local businesses who are interested in improving education)</td>
</tr>
</table>

Organisational structure

As can be seen in the Business Model, the FLEXICOMP Labs would require spaces, equipment, and human resources. The most significant organisational requirements are those of human resources and IT equipment as further described below.

A detailed description of each item that composes the Labs organisational structure follows.

- ***Spaces and furniture***

For the Labs to deliver both online and face-to-face training a spacious room is necessary, with desks and seats to accommodate at least 20 people and an area for peer learning and circle activities.

It can be assumed that if not all schools/VET centres may have the possibility to designate a space exclusively reserved to the Labs activities, all may arrange a sufficiently large space – a classroom or lecture hall – available for "ordinary" Labs activities (autonomous online learning) at least 2 hours a day outside the teaching hours. More complex activities such as face-to-face training and workshops would need to be scheduled, to make sure the premises are available.

- ***IT/digital equipment***

During the first implementation year the following minimum equipment would be necessary to allow simultaneous autonomous online training for at least 6 users, and the scheduled face-to-face training sessions:

- 1 personal computer
- 5 devices (e.g., tablets) available to users
- Fast internet connection
- 1 interactive whiteboard with video-projector

The number of devices may be increased in the following years as the Labs develop and attract more users.

- ***Human resources***

Lab Management

To function properly the Labs will need a Manager/Coordinator selected among the teaching staff – ideally, the teacher in charge of staff professional development, or an expressly trained member of the teaching staff.

Training design and delivery

Face-to-face training could combine interventions by external experts with others given by the teachers themselves, based on their research activities or experiences that are relevant to the theme of digital teaching. This approach goes in the desired direction of encouraging teachers' peer learning and developing their self-directed educational design skills.

The minimum Lab staffing for the first implementation year would be the following:

External staff (trainers)

- 1 senior trainer/consultant with proven expertise in VET education
- 1 senior trainer/consultant with proven expertise in online education and digital tools for teaching/learning

Internal staff

- 5 teachers

The vocational school or VET centre could explore the possibility to remunerate teachers for their participation in the Labs – both as trainers and as learners, as an acknowledgement for their commitment.

Cost planning

Start-up investments

Setting up a Digital Skills Lab in a school or VET centre requires some investments. The table below presents a tentative investment plan for the first implementation year, with the description of the items, their estimated unit cost[8] and total cost.

Description	Estimated unit cost (EUR)	Estimated total cost (EUR)
Laptop computer (1)	700	700
Tablets (5)	200	1.000
IWB with projector (1)	1.800	1.800
Total estimated investment costs		**3.500**

Below is the detailed explanation of the estimated investments. The costs are the average costs for a mid-range item/device.

1. **Laptop computer** – this is necessary to support face-to-face training and can be used as additional device for online training.
2. **Tablets** – these are necessary for delivering the online training programme to users and for performing research, collaboration and other online activities during face-to-face sessions.
3. **Interactive whiteboard with projector** – this complements the laptop computer for performing face-to-face training.

An important note regarding investments is that the purchase of each of the items listed above could be postponed to a later moment and be replaced by equipment already in use at the school / VET centre during the startup phase (e.g., the computers in the IT classroom could replace the laptop and tablets for online training, and every school probably has at least one IWB).

Basic estimated operating costs

[8] Average prices calculated based on an internet search on mid-range IT equipment prices for the year 2022.

The table below shows the ***minimum*** **estimated yearly costs** for maintaining a Lab with 5 participants – including remuneration for the participating teachers. This table is to be considered as a starting point for detail financial planning. It reports the essential expenses to run a Lab.

Item of expenditure		Estimated cost per year (EUR)		
		YEAR 1	**YEAR 2**	**YEAR 3**
A. Staff costs		**6.630**	**7.430**	**8.630**
1.	*Lab Manager*	*1.750*	*1.750*	*1.750*
2.	*External experts*	*2.880*	*2.880*	*2.880*
3.	*Teachers participating in the Lab*	*2.000*	*2.800*	*4.000*
B. General costs (utilities and services)		**0**	**0**	**0**
1.	classroom use	*0*	*0*	*0*
2.	electricity costs	*0*	*0*	*0*
3.	heating costs	*0*	*0*	*0*
4.	cleaning costs	*0*	*0*	*0*
5.	internet connection	*0*	*0*	*0*
6.	consumables	*0*	*0*	*0*
7.	webinar/meeting tool	*0*	*0*	*0*
	TOTAL ESTIMATED COSTS PER YEAR	**7.330**	**8.130**	**9.330**

Below is the detailed explanation of the estimated yearly costs.

STAFF COSTS

1. **Lab Manager** - The calculation is based on a scenario where 1 person is appointed to manage the Lab by performing the relevant activities, e.g., to plan, design and schedule the Lab activities, to collect participation requests from teachers, to select external experts, to organise the face-to-face training sessions and to perform any other organisational task that is necessary for the smooth running of the Lab. It has been foreseen that the selected person should have a teacher profile. The hourly rate for the Lab Manager has been estimated at EUR 25. The estimated effort is 2 hours a week for 35 weeks/year (= 70 hours per year), amounting to a yearly cost of EUR 1.750.
2. **External experts** – The calculation is based on 2 senior experts with hourly rate of EUR 90, each of them providing 16 training hours/year amounting to a yearly cost of EUR 2.880.
3. **Teachers participating in the Lab** – The calculation starts from a number of 5 teachers participating in the Lab during Year 1, which increases to 7 in Year 2 and 10 in Year 3, each of them receiving a Lab participation fee of EUR 400, amounting to a cost of EUR 2.000 In Year 1, EUR 2.800 in Year 2, and EUR 4.000 in Year 3.

GENERAL COSTS

The general costs listed in the table have been valorised at EUR 0 since all of them are likely to be covered by the school's / VET centre's General Costs budget.

Within this framework, the only costs for starting a Digital Skills Lab are those for the equipment (see investment table) and for the staff remuneration.

Funding opportunities

The most challenging task in planning a 100% not-for-profit initiative as that of the Digital Skills Labs in schools or VET centres is that of identifying suitable sources of funding, as school and VET centres often do not have the financial resources to purchase equipment or hire external experts.

Below is a list of possible funding opportunities to be explored.

- *Social crowdfunding* - Platforms such as Donate My School, Crowdfunder, Rocketfund, Invest My School may be helpful for raising funds by collecting small amounts from a large number of individuals who believe in the project.
- *Donation of used equipment* - Portals such as Labdoo, Computers 4 Charity, Equality Action collect used computers for donating them to schools in need.
- *School supplementary funding* - This is additional funding yearly allocated to schools by the Government.
- *Fundraising from Foundations* - One more funding opportunity could be to apply for a grant at a community foundation that has programmes on education. This would be a suitable source of funding for VET centres, most of which are owned by private organisations such as social cooperatives, employers' associations or workers' unions.
- *Fundraising from local businesses* - Small local businesses - especially those which are interested in education, or which operate in an industry relevant to education (e.g., bookshops, training and consulting businesses, etc.) may be another source of funding for vocational schools. Businesses which are members of employers' associations owning a VET centre may be a source of funding for their own VET centres or could provide IT equipment.

SECTION 3: POLICY RECOMMENDATIONS

This concluding section sketches out the policy environment that could support the development and implementation of the 'Digital Skills Labs' outlined in Step 10 of the Transferability Toolkit. In order to effectively equip VET (Vocational Education and Training) teachers and educators in Europe with essential digital skills, the establishment of Digital Skills Labs is crucial. These labs will serve as dedicated spaces for continuous learning, experimentation, and collaboration. Here are some policy recommendations to consider in order to prepare the ground for planning and implementing Digital Skills Labs for VET teachers and educators in Europe. These recommendations are aimed at decision-makers with responsibility for supporting in particular the continuing professional development of VET educators.

1. Needs Assessment and Curriculum Design:

- Conduct a comprehensive needs assessment to understand the specific digital skills gaps among VET teachers and educators.
- Develop a flexible and adaptive curriculum that covers a wide range of digital skills, from basic digital literacy to advanced technology integration.

2. Collaborative Partnerships:

- Foster partnerships with local educational institutions, industry stakeholders, and technology companies to provide diverse expertise and resources.
- Collaborate with European organizations and networks dedicated to digital skills development to leverage best practices and share resources.

3. Resource Allocation:

- Allocate sufficient funding for the establishment, maintenance, and continuous improvement of the Digital Skills Labs.
- Provide resources for updating technology, software, and learning materials to keep pace with technological advancements.

4. Trainer Development:

- Provide specialized training programs for lab facilitators to ensure they possess both technical expertise and effective pedagogical skills.
- Incorporate train-the-trainer models to multiply the impact of the lab's training efforts.

5. Blended Learning Approaches:

- Implement a blend of online and offline learning experiences to cater to diverse learning preferences and accessibility needs.
- Offer self-paced online modules, virtual workshops, and in-person training sessions to accommodate various schedules.

6. Practical Application and Real-World Projects:

- Design learning experiences that focus on practical application, including project-based learning and real-world simulations.
- Encourage teachers to collaborate on projects that address real challenges in their VET settings.

7. Continuous Assessment and Feedback:

- Establish regular assessment mechanisms to track participants' progress and identify areas for improvement.
- Collect feedback from both participants and facilitators to make iterative enhancements to the curriculum and lab activities.

8. Recognition and Certification:

- Offer certificates or badges for completing various levels of digital skills training to motivate participation and acknowledge achievement.
- Align the certifications with relevant European digital competence frameworks.

9. Inclusive Access and Equity:

- Ensure the labs are accessible to all educators, including those from underserved or remote areas, by offering online options and considering mobile-friendly resources.
- Address potential barriers, such as language diversity, to ensure equal access for all.

10. Research and Innovation:

- Encourage the Digital Skills Labs to engage in research and innovation related to digital education, leading to the development of cutting-edge practices.
- Establish mechanisms to share findings and innovative approaches with the wider education community.

By incorporating these policy recommendations, European countries can establish robust and effective Digital Skills Labs that empower VET teachers and educators to confidently integrate digital tools and technologies into their teaching practices, ultimately enhancing the quality of vocational education across the continent.