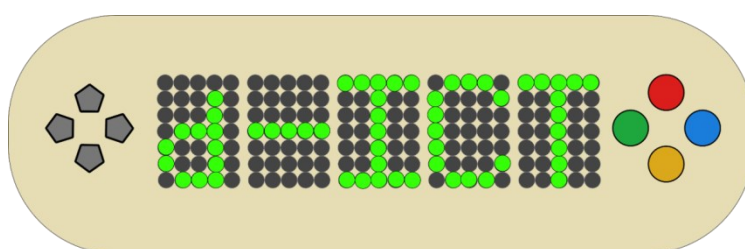




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Improving VET Distance Learning through a Gamified Asynchronous eLearning Methodology (d-ICT)



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National Survey Results Report

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Executive Summary

The following National Survey Results Report summarizes our finding in the framework of the project “d-ICT: Improving VET Distance Learning through a Gamified Asynchronous eLearning Methodology” under the Erasmus+ KA2 programme. The survey is implemented to feed the Project Result 1: “Lessons Learned: Exploring the taken resolution aimed at facilitating distance learning in the COVID-19 era”. This report provides insights from Belgian educators' experiences with distance training/learning before, during and after the COVID-19 pandemic. The aim is to identify the main difficulties and obstacles met by these educators to carry out their and perform their tasks as trainers. The following aspects were addressed during the focus groups' meetings and through the online questionnaires: the used tools before and after covid-19, the interactive digital teaching technologies, the strategies for creating online classrooms and setting up motivating training environment both for educators as well as for learners. This report summarizes the Belgian quantitative (20 questionnaires) and qualitative (2 focus groups, 10 participants) results.

Background and objectives

The d-ICT project aims at creating an innovative gamified asynchronous eLearning experience addressed to VET educators to strengthen their distance teaching skills and enhance the distance learning experience, in order to prevent dropouts. The fast-moving transition the distance learning education during the COVID's lockdown caught the VET educators unprepared as many of them have not built the capacity to provide interactive lessons online so far. For that reason, the current project seeks to deepen its knowledge about the needs of VET educators, through a second-stage bottom-up analysis and address those needs by compiling, developing, and disseminating interactive digital educational experiences and tools.

In particular, through the current project, the consortium partnership aims to achieve the following objectives:

- To meliorate the digital skills and competencies of VET educators in the field of distance learning.
- To create an innovative gamified asynchronous eLearning experience.
- To combine the assets of gamification and distance-learning.
- To boost the interest and curiosity of VET learners and keep them captured in the process of teaching, thus, reducing the phenomena of dropouts due to the boredom that non-interactive distance learning creates.
- To empower interaction and teamwork with classmates under distance learning circumstances.

- To raise awareness about the significance of facilitating the distance learning methodology through interactive approaches like digital gamification.

Survey method

FCB planned three phases to implement the research process:

First phase: translation of the common questionnaire proposed by UOP and agreed by all partners during the 1st TPM in Spain on 19-20 of September. The French version of the questionnaire was sent to more than 50 VET trainers. We targeted our main VET partners, namely Forem, AID, IFAPME, DBAO, 3R, CADTM, CWB, Espace rencontre, COOP, Les Biolles and some VET secondary schools. As soon as we got 20 participants, we closed the survey (online questionnaire).

Second phase: We took contact directly with the participating organisations to thank them and to ask them if some of their trainers would like to testify in a video about the topic (3 questions to answer: 1. Can you describe a great time you had during the distance learning period in the time of covid-19 pandemic? 2. How did you react to distance learning challenges? 3. Would you suggest distance learning and why?). Many trainers were available to give their testimonies but unfortunately, they did not accept to be filmed and published online. At last, we convinced 5 participants to do it:

1. Alain Kleine, Director and trainer at DBAO;
2. Emmanuelle Robertz, Coordinator & trainer at 3R
3. Hassan Akariou, Trainer at COOP
4. **Martine Kerf, Coordinator & trainer at Les Biolles**

Third phase: The focus groups. 2 focus groups were composed: the first one with the ones who accepted to testify in the d-ICT “video storytelling” (4), the second one was composed by the ones who accepted to testify but without making a video (6). Both focus groups were not filmed.

SURVEY

Regarding the survey, data analysis showed that the sample is mainly female (60% of the sample), 70% of the participants are older than 33 years and 60% has less than 10 years teaching experience. More than 90% of the participants has no distance learning/teaching experience before the COVID-19 pandemic.

FOCUS GROUPS

The aim of d-ICT focus groups hold on 24.11.2022 & 09.12.2022 was to have a talk about the following issues/questions:

1. Describe the work conditions during the COVID-19 lockdowns,
2. The difficulties and obstacles encountered by trainers to set up engaging, motivating and effective distance learning

3. A review of the digital tools used, their advantages and limits
4. A general discussion about the lessons learned and the good practices to implement.

THE VIDEOS (STORYTELLING)

Further insights regarding VET trainers' experience came from 5 interviews, which resulted in a 5 videos of +/- 2-minute each. 5 VET trainers with different background and experience answered the 3 questions (see annex below).



Survey Results

All the data collected from the three above mentioned procedures will be here briefly discussed under the following categories:

- Digital resolutions taken (during the distance learning in the time of covid-19 pandemic): more than 90% of trainers answered that they had no experience in distance learning before COVID-19 pandemic. Their distance learning skills were law of inexistent. They made a self-effort to upgrade their skills and to face the (imposed) emergency of remote working and remote teaching. The training programme was designed to be delivered in face-to-face training settings. Online meeting between peers/colleagues made it possible to share digital resources and tools.
- Digital resources: the exchange of digital tools and resources between peers made it possible to almost all trainers to discover the possibilities offered by the theses resources and the potential of remote learning. The resources were basic and most of time free of charge. The following resources/tools were evocated: Teams, ZOOM, Smart School, Learning Lab, LearnWorlds, Intranet, Google Classroom, Moodle...The Pandemic and the emergency circumstances (lockdown, remote working, social distance...) pushed trainers, individually, to find alternatives, to create their own “toolboxes” and to adapt their practices and pedagogy.
- Difficulties (technical, emotional, learning and teaching process): two main difficulties were noticed and discussed, first the lack of digital skills by trainers to quickly set up digital training sessions, second the digital divide by the learners that impede their participation to training process. A transversal difficulty concerns the delivering of “experience-based training” (= learning by doing) in that way that available online learning was not enough developed to meet this specific needs. The physical contact seems to be necessary, it is impossible to replace it totally by remote teaching.
- Obstacles (e.g. lack of equipment, lack of digital tools, lack of skills): A fairly common experience among VET trainers has been the lack of suitable equipment to smoothly meet their educational needs. The free digital tools are basic; the cost of paid versions is high, no specific/planned budget was available in their organisations to cover these extra costs.
- Ways to overcome the obstacles: investment in digital tools and resources, specific training for trainers focusing on digital skills, adaptation of training programmes to take into account new needs, involve all stakeholders inside their organisation (trainers, managers, learners, administrative and support staff...), harmonization and standardization of training processes and practices.
- Digital skills in VET distance learning: despite the improvement of the distance competencies in VET training settings, the emergency and the covid-19 crisis

have upset professional practices; everyone has had to reinvent their “profession” without talking about it with their colleagues and without weighing the ethical and professional consequences, which could be an obstacle in the near future. A critical analysis of these experiences should be done to harmonize the practices and to improve and strengthen them.

- Digital skills in empowering interaction and teamwork with VET learners in distance learning: Non-verbal communication plays an important role in the training process that remote learning could not substitute it. Face-to-face is an integral part of the training process, it is about posture, practice, doing more than listening. The collective dimension and team dynamics are crucial during a training process; remote learning will not replace them totally. Informal and individualized follow-up are of great importance, they could be partly done online but surely not entirely.
- Correlation between gamification and distance learning: More than 60% of participants see a positive correlation between distance learning and gamification; they consider that gamification is a powerful approach to assure more autonomy, autoregulation, deep learnings and motivation to learners.
- Digital skills to integrate gamification in VET distance learning:
- Needs (e.g. for training in digital skills and tools) and points for improvement: promote eLearning platforms (LMS, MOODLE...) and train trainers on technical aspects in order to make them able to deliver their training, to put them online, to evaluate learners using platforms and digital tools.

Appendices

Appendix 1

Questionnaire d-ICT¹ translated from English into French ([see the PDF file uploaded on GDrive](#))

1. Male Female

Use visualizations to show data

2. Please indicate your age:

23-32 years old

33-42 years old

43-52 years old

53-62 years old

63+ years old

3. Please indicate your years of VET teaching experience:

1-5 years

6-10 years

11-15 years

¹ Based on the *European Framework for the Digital Competence of Educators (DIGCOMPEDU FRAMEWORK)*

16-20 years

21-25 years

26-30 years

31+ years

4. Prior to the corona pandemic, did you have any experience with distance learning?

Yes

No

DIGITAL SKILLS

5. From a scale of 1 to 5, what would you say your knowledge of digital skills was before the corona pandemic:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

1 2 3 4 5

6. From a scale of 1 to 5, what would you say your knowledge of digital skills was after the corona pandemic:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

1 2 3 4 5

7. From a scale of 1 to 5, please rate your knowledge of the following digital skills in VET professional engagement now:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)



a. I can use digital technologies to enhance organizational communication with learners, parents and third parties.

1 2 3 4 5

b. I can use digital technologies to engage in collaboration with other educators, sharing and exchanging knowledge and experience, and collaboratively innovating pedagogic practices.

1 2 3 4 5

c. I can individually reflect on, critically assess and actively develop one's own digital pedagogical practice and that of one's educational community.

1 2 3 4 5

8. From a scale of 1 to 5, please rate your knowledge of the following digital skills in VET digital resources *now*:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

a. I can use digital sources and resources for continuous professional development.

1 2 3 4 5

b. I can identify, assess and select digital resources for teaching and learning.

1 2 3 4 5

c. I can modify and build on existing openly-licensed resources and other resources where this is permitted.

1 2 3 4 5

9. From a scale of 1 to 5, please rate your knowledge of the following digital skills in VET teaching and learning *now*:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

a. I can plan for and implement digital devices and resources in the teaching process.

1 2 3 4 5

b. I can use digital technologies and services to enhance the interaction with learners, individually and collectively, within and outside the learning session.

1 2 3 4 5

c. I can enable learners to use digital technologies as part of collaborative assignments.

1 2 3 4 5

d. I can use digital technologies to support learners' self-regulated learning, i.e. I can enable learners to plan, monitor and reflect on their own learning, provide evidence of progress, share insights and come up with creative solutions.

1 2 3 4 5

10. From a scale of 1 to 5, please rate your knowledge of the following digital skills in VET learner assessment *now*:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

a. I can use digital technologies for formative and summative assessment.

1 2 3 4 5

b. I can generate, select, critically analyse and interpret digital evidence on learner activity, performance and progress.

1 2 3 4 5

c. I can use digital technologies to provide targeted and timely feedback to learners.

1 2 3 4 5

11. From a scale of 1 to 5, please rate your knowledge of the following digital skills in empowering VET learners *now*:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

a. I can ensure accessibility to learning resources and activities.

1 2 3 4 5

b. I can use digital technologies to address learners' diverse learning needs, by allowing learners to advance at different levels and speeds, and to follow individual learning pathways and objectives.

1 2 3 4 5

c. I can use digital technologies to foster learners' active and creative engagement with a subject matter.

1 2 3 4 5

12. From a scale of 1 to 5, please rate your knowledge of the following digital skills in facilitating VET learners' digital competence *now*:

(1 = Non-existent, 2 = Weak, 3 = Fairly good, 4 = Very good, 5 = Excellent)

a. I can incorporate learning activities, assignments and assessments which require learners to articulate information needs.

1 2 3 4 5

b. I can incorporate learning activities, assignments and assessments which require learners to effectively and responsibly use digital technologies for communication and collaboration.

1 2 3 4 5

c. I can incorporate learning activities, assignments and assessments which require learners to express themselves through digital means, and to modify and create digital content in different formats.

1 2 3 4 5

d. I can incorporate learning activities, assignments and assessments which require learners to identify and solve technical problems, or to transfer technological knowledge creatively to new situations.

1 2 3 4 5

CORRELATION BETWEEN GAMIFICATION AND DISTANCE LEARNING

13. From a scale of 0 to 5, please rate how much you think the following features of gamification can help distance learning:

(0=I don't know, 1 = Not at all, 2 = A little, 3 = Fairly, 4 = A lot, 5 = Absolutely)

a) **Autonomy and Open decision spaces** i.e. the gamification's environment possibility for different possible decisions by learners, experimentation and different possible outcomes.

0 1 2 3 4 5

b) A **challenge** i.e. a subtle balance between incremental difficulty design of a gamified task on one hand and the learner's ability on the other.

0 1 2 3 4 5

c) **Learning by trial-and-error** i.e. allowing failure (not punishment or prosecution) many times until the learner-player succeeds.

0 1 2 3 4 5

d) **Progress assessment** i.e. feedback to learners-players through statistics, achievements, awards, status, progress.

0 1 2 3 4 5

e) **Immediate feedback** in real-time.

0 1 2 3 4 5

f) **Randomness** i.e. a model based not on strong cause-effect relationships but containing surprises.

0 1 2 3 4 5

g) **Discovery** i.e. new content at an adequate rate based on previous content through various methods e.g. unlocking (i.e. finishing some levels before being able to play new ones).

0 1 2 3 4 5

h) **Emotional entailment** i.e. involving the VET learners emotionally with the use of characters, stories and aesthetics.

0 1 2 3 4 5

i) **Playfulness enabled** i.e. the gamified activity's versatility to be used as a toy without focusing on any specific goal and instead aiming to arouse the VET learner's curiosity and experimentation.

0 1 2 3 4 5

j) **Automation** i.e. the level of human intervention required to produce responses to VET learners' inputs.

0 1 2 3 4 5

k) **Augmented reality** i.e. an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information.

0 1 2 3 4 5

14. From a scale of 0 to 5, please indicate which of the following gamification features are required in boosting the curiosity of learners VET distance learning:

(0=I don't know, 1 = Not important at all, 2 = A little important, 3 = Fairly important, 4 = Very important, 5 = Absolutely/crucially important)

a) Content unlocking

0 1 2 3 4 5

b) Badges-Awards

0 1 2 3 4 5

c) Points

0 1 2 3 4 5

d) Leader boards

0 1 2 3 4 5

e) Avatars (characters)

0 1 2 3 4 5

f) Levels

0 1 2 3 4 5

g) Teams

0 1 2 3 4 5

h) Fixed scenarios

0 1 2 3 4 5

i) Open scenarios

0 1 2 3 4 5

j) Play/Demo mode

0 1 2 3 4 5

15. From a scale of 0 to 5, please indicate which of the following gamification features facilitate interactive approaches in VET distance learning:

(0=I don't know, 1 = Not important at all, 2 = A little important, 3 = Fairly important, 4 = Very important, 5 = Absolutely/crucially important)

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a) Content unlocking

0 1 2 3 4 5

b) Badges-Awards

0 1 2 3 4 5

c) Points

0 1 2 3 4 5

d) Leader boards

0 1 2 3 4 5

e) Avatars

0 1 2 3 4 5

f) Levels

0 1 2 3 4 5

g) Teams

0 1 2 3 4 5

Appendix 2

Focus Group Questions

Welcome the Focus Group

i. **Engagement questions** [16 minutes]

- Tell us a bit about yourself.
- How many years do you work as a VET?
- What do you generally think about distance learning VET?
- Have you ever had any experience in distance learning VET before Covid-19?

(These questions will take approximately 2 minutes for each educator)

ii. **Exploration questions** [30 minutes]

- During the pandemic, what kind of difficulties did you face as a VET educator?
- Did you overcome them? How?
- Are you a fan of distance learning VET? Why?

(These questions will take approximately 3 minutes for each educator and the group will have 6 minutes to comment on others' responses)

Break [15 minutes]

iii. **Follow-up questions** [80 minutes]

- Look at List A (a list of digital skills will be given). Which of the following digital skills do you believe that a VET educator would need in distance learning? Why? Which of them do you have?
- What kind of digital tools do you think that you need in order to empower interaction and teamwork between classmates under distance learning circumstances?
- Do you think that introducing gamification (i.e. digital tool which educators apply game design elements to an educational setting) would reduce the drop-out rate in distance learning? How?
- Look at List B (a list of gamification features will be given). Pick one or two of the following features of gamification that in your opinion can help distance learning. Why?
- Look at List A (a list of digital skills will be given). According to DigiCompEdu, which of the following digital skills should a VET educator have in order to use gamification in distance learning?

(These questions should take approximately 9 minutes for each educator and the group will have 8 minutes to comment on others' responses)

iv. **Exit questions** [0-4 minutes]

- Is there anything else on this topic you would like to add?

(This question is addressed to the whole group and should take 0-4 minutes)

Thank the Focus Group

List A

DigiCompEdu

➤ **Professional Engagement**

- i. *Organizational communication* (To use digital technologies to enhance organizational communication with learners, parents and third parties)
- ii. *Professional collaboration* (To use digital technologies to engage in collaboration with other educators, sharing and exchanging knowledge and experience)
- iii. *Reflective practice* (To individually and collectively reflect on, critically assess and actively develop one's educational community)

➤ **Digital resources**

- i. *Selecting digital resources* (To identify, assess and select digital resources for teaching and learning)
- ii. *Creating and modifying digital resources* (To modify and build on existing openly-licensed resources where this is permitted)
- iii. *Managing, protecting and sharing digital resources* (To organize and to protect digital content and make it available to learners, parents and other educators)

➤ **Teaching and Learning**

- i. *Teaching* (To plan for and implement digital devices and resources in the teaching progress)
- ii. *Guidance* (To use digital technologies and services to enhance the interaction with learners, individually and collectively)
- iii. *Collaborative Learning* (To use digital technologies to foster and enhance learner collaboration)
- iv. *Self-regulated learning* (To use digital technologies to support learners' self-regulated learning)

➤ **Assessment**

- i. *Assessment Strategies* (To use digital strategies for formative and summative assessment)
- ii. *Analyzing evidence* (To generate, select, critically analyze and interpret digital evidence on learner activity, performance and progress)
- iii. *Feedback and planning* (To use digital technologies to provide targeted and timely feedback to learners)

➤ **Empowering Learners**

- i. *Accessibility and Inclusion* (To ensure accessibility to learning resources and activities for all learners)
- ii. *Differentiation and personalization* (To use digital technologies to address learners' diverse learning needs)
- iii. *Actively engaging learners* (To use digital technologies to foster learners' active and creative engagement with a subject matter)

➤ **Facilitating Learners' Digital Competence**

- i. *Information and media literacy* (To incorporate learning activities, assignments and assessments which require learners to articulate information needs)
- ii. *Digital communication and collaboration* (To incorporate learning activities, assignments and assessments which require learners to use digital technologies for communication, collaboration and civic participation)
- iii. *Digital content creation* (To incorporate learning activities, assignments and assessments which require learners to express themselves through digital means)
- iv. *Responsible Use* (To empower learners to manage risks and use digital technologies safely and responsibly)
- v. *Digital Problem Solving* (To incorporate learning activities, assignments and assessments which require learners to identify and solve technical problems)

List B

Features of Gamification

1. **Autonomy and open decision spaces** i.e. the gamification's environment possibility for different possible decisions by learners, experimentation and different possible outcomes,
2. **A challenge** i.e. a subtle balance between incremental difficulty design of a gamified task on one hand and the learner's ability on the other.
3. **Learning by trial-and-error** i.e. allowing failure (not punishment or prosecution) many times until the learner-player succeeds.
4. **Progress assessment** i.e. feedback to learners-players through statistics, achievements, awards, status, progress.
5. **Immediate feedback** in real time
6. **Randomness** i.e. a model based not on strong cause-effect relationships but containing surprises.
7. **Discovery** i.e. new content at an adequate rate based on previous content through various methods e.g. unlocking (i.e. finishing some levels before being able to play ones)
8. **Emotional entailment** i.e. involving the VET learners emotionally with the use of characters, stories and aesthetics.
9. **Playfulness enabled** i.e. the gamified activity's versatility to be used as a toy without focusing on any specific goal and instead aiming to arouse the VET learner's curiosity and experimentation.
10. **Automation** i.e. the level of human intervention required to produce responses to VET learners' inputs.
11. **Augmented reality (AR)** i.e. the integration of digital information with the user's environment in real time.

Appendix 3

Digital Interview Questions

1. Can you describe a great time you had during the distance learning in the time of covid-19 pandemic?
2. How did you react to distance learning challenges?
3. Would you suggest distance learning and why?

(These questions should take approximately 2 minutes for each educator)