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Methodology of the training material

Intellectual Output 2

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The aim of the methodology to create a professional base for the blended-learning platform. After the country research consortium have the necessary information so methodology as an answer to the needs of the partner's countries. Methodology is also very important because only a good methodology can guarantee the successful course, so it can cause the sustainability of the project.

1. Result of country research – analyse the needs in the partner countries

Consortium received information from the deep interviews which was the part of IO1 Country research. Further on every partner made a research on the current educational background in their counties.

As a conclusion we can say that all partner countries have great potential in ecotourism, every country have sites where there are good initiatives. Consortium agrees that ecotourism a very important and growing sector of tourism. Levels of current stage/development are different, but it is common that comprehensive legislation background, education, promotion is missing. Also it is a problem that average people do not have the knowledge on ecotourism - If someone just "use" the nature, visit ecotourism attractions but do not have the knowledge how to protect these areas and how not ruin them than we cannot call it ecotourism, because it is not sustainable.

A lot of development is needed in connection eco- and green tourism, specially marketing and promotion activities, educational background and ethical codex knowledge.

The aim of STEFAN project to create a complex training material in green, ecotourism to improve the knowledge of the partner countries. The target group is quite wide as ecotourism can be interesting to a lot of people regardless of age, gender.

1.1 Educational background in North Macedonia

Formal education on tourism and management is well represented in North Macedonia and available already at high school level, followed by appropriate studying programmes in many state and private Faculties in the country. In the current educational system, VET high schools are offering technical education (4 years), in the following directions:

Catering technician

Service and catering technician for rural tourism

Technician for events and animations

In the first school year of all above listed profiles of the 4-years technical education, there is special subject on "Hygiene and ecology" which covers mainly topics related to hygiene and sanitation (instead of ecology) particularly, how to implement Health&Safety standards for the workers but also for the guests. It is given with total 72 hours during 2 semesters.

In the final (fourth) school year of all profiles in VET touristic high schools, there will be newly introduced special subject on *"Sustainable development of tourism"* which represents the only real education on "green tourism". It is given with total 66 hours during 2 semesters. This subject was formally approved only recently, under the process for reforming the VET high schools, starting with implementation from the school year 2022/23.

There are 3 vocational education high schools which offer 4-years formal education for the profile *"Service and catering technician for rural tourism"*.

Formal education at university level on tourism and management is well represented and available in many state and private Faculties in the country. There are 4 Universities who provide faculties, subjects which are connected rural tourism.

Currently, in the education system of North Macedonia there are no forms of non-formal education that provide training for individuals or groups interested in engaging in activities related to eco-tourism and related forms. Although skills such as preparation of traditional dishes, hospitality, ability for presentations and ability to tell traditional stories are deeply rooted in the Macedonian tradition, offering them in an organized form requires the need to know the standards in hospitality, knowledge of multiple languages (depending on selected segment guests), knowledge of the history and culture of the region and other knowledge and skills for which there are currently no trainings or defined criteria.

1.2. Educational background in Spain

In Spain, formal education around tourism is totally absent from schools, addressed to professional training and universities. These options are divided into three possibilities:

Higher Cycles of Vocational Training - There are official training cycles linked to tourism in general, and to specific tourism activities (travel agencies, accommodation management, tourist guide and information ...), but not a higher training cycle typical of ecotourism, or clearly linked to ecotourism. The presence of ecotourism is reduced to non-compulsory subjects, which can be configured according to the region of Spain, and sometimes even according to the center.

University Degree in Tourism - The official degree does not have any specific official subject on ecotourism, as well as a specific optional subject common to all of Spain. Only in those optional additional subjects that each university can freely configure can we find some individual cases of

content related to ecotourism; but always in the perspective of a general qualification, which tries to cover the entire tourist horizon, and where the possibility of specialization tends to be limited to traditional specialties.

University Masters and other postgraduate studies - In Spain there are an important number of possibilities to participate in an official University Master, or in postgraduate studies; and among them, based on the freedom that each university has to configure them, we find several options to acquire an education in green tourism. These tend to be courses lasting approximately one year, and may have a practical part linked to a company in the sector.

The main problem is It should be noted that university masters and other postgraduate studies are the only ones that specifically affect ecotourism, but, at the same time, they are the ones that pose the most access problems, both due to their requirements and their cost.

In Spain there is a large supply of non-formal training, which has been strongly promoted since the economic crisis of 2008. It is very common for training centers to regularly offer free courses to employed and / or unemployed people, financed by the government. state, the government of the region, or even municipalities. These courses that we can divide into two types:

Freely configured courses are courses designed with total freedom by each center, and proposed to the government that finances them; and the latter are another type of vocational training in specific tasks, and which have an official certificate recognized throughout Spain, although they are not yet legally considered formal training. The most common subjects are: knowing the evolution of tourism, knowing the activities and actors involved in ecotourism, designing a suitable plan for ecotourism management, knowing waste management methods, knowing agrotourism; and others like it.

Certificates of Professionalism - The homogenization and recognition we do find, as has been said, in the Certificates of Professionalism, which even without being formal education have to comply with an official agenda and some rules and requirements of organization, space, and material. Precisely, in the Certificates of Professionalism there is a family of certificates called "Hospitality and Tourism", where there are more than 25 different training specialties related to tourism. One of them, HOTU001PO Ecotourism, recently created, and lasting 60 hours, is the only training specifically linked to ecotourism with a valid official certificate in Spain. This training is available both in face-to-face training and online training. Its official objective is to develop within the Sector and acquire the basic fundamentals about the ecotourism phenomenon, the techniques for its planning and the economic aspects of ecotourism projects.

In general, to access existing ecotourism courses there are no prerequisites: those that are financed by a government may require you to meet certain conditions (employed or unemployed, being a man or a woman, belonging to a specific group), but they are free; and those that are not financed by any government only require that you pay their cost, being between € 100 and € 450, on average.

Regarding the certificates of professionalism, such as this "HOTU001PO Ecotourism", if they are financed by the government, they must meet similar characteristics to the previous ones, and if they are private, their cost must be paid, being between € 500 and € 1000 per middle ground.

1.3. Educational background in Slovenia

University level - In Slovenia there are two colleges for tourism and hospitality (in Bled and Maribor), which offer education within the program of hospitality and tourism and wellness. In addition, three universities offer programs in the field of tourism: the University of Ljubljana, the University of Maribor and the University of Primorska. The offer of programs at the higher education level is not clearly formulated. There is a critical lack of a quality, modern and extremely functional business program in the field of hospitality, which would be intended for the training of middle management according to international standards. [1]

Secondary school level - Eight secondary schools in the field of hospitality and tourism are based in Radovljica, Novo mesto, Ljubljana, Maribor, Radenci, Radovljica, Celje and Izola. Vocational schools offer three-year secondary vocational education, four-year secondary vocational education and two-year vocational education. The system of national vocational qualifications (NPK) enables the acquisition of vocational education through the recognition of non-formal learning. Professional standards are for a range of professions in the field of tourism, but renovations and upgrades are needed as the tourism industry changes very rapidly. According to the profession, it is not difficult to get 3rd and 4th level staff (chef and waiter), it is more difficult to get quality 5th level staff because the programs are too general and do not give the right competencies. [2]

Non-formal education - There is a lack of educational programs in Slovenian tourism that fill gaps in practice,"On job" education at the lower professional level and at the level of middle management. Currently, training programs for tourism companies are implemented by individual educational institutions, the Chamber of Tourism and Hospitality Management (TGZ), the Association of Slovenian Hoteliers and domestic or foreign consulting companies, among which there is no cooperation and synergies. At the same time, the system covers only a small part of the market or mostly larger companies. Slovenia does not have an umbrella or national, unified, integrated education center that would systematically provide on-the-job training for the needs of Slovenian tourism (with an emphasis on the knowledge required to run a hotel business in accordance with international standards). This problem is even more pronounced, as there are only a few hotels in Slovenia (and only in Ljubljana) that are part of international hotel chains and thus operate according to international standards. [3]

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[1] Slovenian Tourism Organization " Sustainable growth strategy of Slovenian tourism 2017–2021" pg 66
[2] Slovenian Tourism Organization " Sustainable growth strategy of Slovenian tourism 2017–2021" pg 66
[3] Slovenian Tourism Organization " Sustainable growth strategy of Slovenian tourism 2017–2021" pg 67

1.4 Educational background in Czech Republic

In general, subjects related to green tourism can be found in university fields focused on tourism (e.g. the field "Tourism" at the University of Economics, where there are subjects such as "Rural tourism") when by definition Pourová (POUROVÁ, M Agrotourism, 2002), rural tourism can be considered a subset of green tourism. The description of the field also says: "The trend of developing sustainable tourism (green tourism), which is environmentally friendly, will expand in future.

The most related higher vocational education is agriculture and forestry. The program prepares for business activities in the field of agrotourism, ecotourism and ecoagrotourism, in the field of ecology, creation and protection of the landscape, in urban planning and building modifications in rural areas buildings and open countryside. The student will get acquainted with the principles of agricultural production and specializations in plant and animal production, technologies of processing plant and animal products also in connection with self-catering guests, principles of market economy, accounting, tax issues.

Non-formal education - It is intended primarily for guides who deal with ecotourism. Features basic information, how to take interest, what to tell, how to prepare an action, techniques, etc. It is not a specific training, but it is a manual in the field of ecotourism, where in addition to case studies and a description of what ecotourism actually is, there is also a "guide" for guides. Courses "Guide to Geotourism", "Guide to Ecotourism" and "Case Studies and Good Examples of practices in ecotourism and geotourism "taught in the Czech language

1.5 Educational background in Hungary

In Hungary tourism is a very important economical segment, so there are around 22 universities/colleague and many VET centers who provide complex tourism course. Mostly these courses related to hotels, management, catering/hospitality. Further on there is no green or ecotourism training provided by educational institutions. Some of the institutions have subject or some kind of specialisation on sustainability or ecotourism, but they do not have a complex course where they deal with green tourism. Previous surveys made by Ecocenter proved that people who are working in tourism would like to improve their competences in the field of green tourism, they would be interested in a complex training. The survey also verified that participants prefer practical elements than theoretical. It can be because in Hungarian education system focus more to the theoretical aspects. STEFAN project's strength is that it will include practical aspect as well which is very important in the frame of tourism and entrepreneurship. Green tourism is a fast-growing area but Hungary is not yet prepared to provide the necessary professional background to serve the needs of the sector.

University level - Currently there is no available specialized training for Green Tourism the previously created courses/specialization in this field were eliminated like in Károly Róbert University College in Gyöngyös. Szent István University also planned to start an Ecotourism education but unfortunately it is never started. Ecotourism and greening tourism courses are available only a subject under Tourism education in some of the Universities like on Edutus College, Kodolányi János College and University of Szeged but these are just subjects and not complex training. In some schools the aim is to educate the interested students, provide them internship possibilities, thesis supervision, nature studies, field trips, possibility to involve them national or international projects, networking…etc. The possibilities that provide by the institutions are really depends on the management and the vocation, activity, network system of teachers or the institution itself.

In the frame of STEFAN project Ecocenter made some deep interviews and research when Ecocenter had the possibility to have a conversation with Dr. Pál Gubán the professor of ecotourism. "The current knowledge of the professionals is extremely week. It does not mean that we do not have good professionals in Hungary, but as ecotourism do not have a clear meaning, do not have national regulations and also do not have uniformed/standardized educational background so the situation is really hard now. Development is necessary and development have to base on the specificity of ecotourism – like long stay, peripheral hosting areas with low or not existing economic power."

Non-formal education - In Hungary we have small 1-2 days courses supported by different funds, institutions, companies. Mostly these trainings have two types the ones, which are quite general (sustainability, environmental friendly behaviour) in a subject and the other type where the courses are specific (waste management in hotels).

1.6. Conclusion

All together we can say that as a result of the country research and for the further analyses partner countries need a complex material based on ecotourism, which is available for everyone, free and contains theoretical and practical tasks as well.

2. Blended-learning course

Blended Learning is a combination of face-to-face teaching and online teaching, assuming that learning occurs both in the classroom and in a virtual environment. It is a mix between the traditional teaching that we all know and distance learning to obtain the best possible result; But it not only implies a change in methodology or communication channel, but also a change in perspective linked to a new potential for use and practical utility.

2.1. Background, concept, development

In the Blended Learning training, the student has classes both in person, with a teacher and other students, as well as in a virtual environment, through digital platforms and other technological resources that allow them to acquire knowledge. However, this requires a series of human, technical and pedagogical resources, when it comes to ensuring the quality of the learning received.

Three distinctive features to categorize hybrid/blended learning:

- **Time**: which can be synchronous (at the same time, also known as "real time") or asynchronous (sequential, at different times) or it can have a bit of both.
- **Space**: which can be in person (also known as face-to-face, sharing the same physical location) or can be remote (two or more people in different physical locations).
- **Interaction**: which can be unpacked in terms of the direction of the communication (one-way; bi-directional or multi-directional) or type of engagement, from no-participation (an individual is learning alone without interaction with others), limited participation (where the interaction with others is limited, structured or controlled) and high participation (active and dynamic exchange with others is regular and essential).

There are several hybrid learning combinations based on these dimensions and their sub-components. Finding the right combination that covers what is being taught, where it is being taught, by whom, and to whom is difficult. Different technologies can be mixed into each of these combinations. Both of these factors would have a significant impact on the type of hybrid learning offered.

When considering what subjects, topics, and approaches should be considered for teaching and learning in person and remotely, time, space, and interaction should all be carefully considered. The majority of our learning experiences can be classified as blended learning. Indeed, during the learning process, we mix different uses and intensities of these three dimensions. It's difficult to evaluate the cost efficiency of blended learning because there are so many different ways and methodologies for delivering and assessing it.

In almost all types of blended learning, there are a few constant variables. When planning and valuating different forms of hybrid learning policymakers can take into account:

- Effective use of the time: In hybrid settings, the amount of time spent on face-to-face learning can differ. Some tasks can take longer to complete, while others can be completed more quickly.
- Basic skills for hybrid learners: Not all students do enjoy or are proficient in and of the hybrid learning combinations in the same way. It's important to give students the tools they need to learn on their own, to be inspired, adaptive, and empowered.

- Level of support that learners receive: Different frameworks and tools for hybrid learning would necessitate various forms of assistance. A crucial aspect is the monitoring and support of well-being.
- Basic skills for hybrid teaching: Teachers must develop digital skills, pedagogical efficiency, and the ability to recognize the suitability of various types of hybrid learning depending on the context.
- Content's adaptation: The same volume and variety of content covered in face-to-face instruction might not be transferable to hybrid learning. In terms of the volume and type of content chosen, adjustments would be necessary.
- Pedagogical coherence: Education programs should ensure that lessons learned online can be presented in person or translated into project-based learning with students to ensure learning continuity.
- Technology: The problem to overcome here would be the importance of the resources chosen, rather than the lack of access to technology. The best technologies will not depend on absolute synchronous multi-directional interaction ("Zoom fatigue" has been discussed extensively).[4]

As a results of blended learning changes, teachers' and students' roles change considerably: students need to learn to be responsible for their own learning process and teachers ought to take on roles as material designers, producers of media resources, managers of the learning environment, and online tutors. In fact, one of the great challenges is methodology courses design (Osguthorpe and Graham, 2003). These authors suggest that teachers must address various pedagogical and logistical aspects, such as: how often do teachers and students meet face-to-face compared to how often they will complete tasks online, what purposes each meeting will have and the results that they will be achieved during face-to-face versus during online meetings, etc.-

It should be considered that in the case of teachers being online tutors implies a quantitative increase in the number of hours dedicated to learners and to the learning of new skills, but most importantly, a change in identity as there are new roles and pedagogical perspectives that have to be taken into consideration (Comas-Quinn, 2011). Due to all these implications, it is clear that online learning and teaching challenge not only the conventional roles of students, but also of those of teachers and materials. In this sense, it is necessary that teachers ensure that the

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[4] Barron, M., Cobo, C., Sanchez Ciarrusta, I. and Munoz-Najar, A., 2021. *What is Hybrid Learning? How can countries get it right?*. [online] World Bank Blogs. Available at: <https://blogs.worldbank.org/education/what-hybrid-learning-how-can-countries-get-it-right> [Accessed 19 May 2021].

pedagogy to be implemented and the material are appropriate for each modality so that learning is enriched. If pedagogy fails, it can be very frustrating for both, students and teachers.

2.2. Structure

Although considered as innovative approach, blended learning lessons follow a traditional instructional format. The difference is where the instructor chooses to place technology elements. Basic elements of a class as a 45-minute session of instruction could be:

- Getting Started (5 Minutes)
- Core Content (20 Minutes)
- Reinforcement or Exploration (15 Minutes)
- Closure (5 Minutes)

Following a basic lesson template helps automate the lesson planning process. This means no more wondering for teachers what are they going to do daily. This doesn't mean deviation from this plan is not possible; it just gives a starting point. Special days that involve labs, projects and long-term assessments may have individual schedules as envisaged by each teacher. The following describes the basic lesson structure:

Getting Started: This is meant to engage the students when they walk into the classroom. It answers the basics question "what are we going to do today?" By providing a stimulating activity at the beginning of class, students become engaged in the content right away. These activities can be a variety of different things, from questions to pictures, or videos to interactive websites. The goal is to connect the content to the students.

Core Content: This is the key instructional material which is developed previously by the teacher. Core content is the essential learning that will take place. The easiest approach here is a standard presentation with a note taking outline. However, with blended learning there are some options. Aside from face-to-face lecture, these lessons can be "bended". For example, a teacher can prerecord him/herself giving the lecture, then have students watch on their devices. In the "flipped learning" students watch videos at home, here, high-school students watch the instruction in class. In addition, readings with study guides can be used here also. A good engagement tool is face-to-face discussion, as opportunity to (briefly) share views for the topic with the students.

Reinforcement or exploration: The goal of this session is to allow students to extend what was discussed or learned in class. Students need to be exposed to content multiple times to facilitate learning. So immediately after learning a concept, they should be asked to "do something with it". Google Interactives are the most commonly used tool for this session. Interactives require students to sort, identify and understand new concepts. Most importantly, while students are working, this provides important dialogue for the instructor to assess understanding.

Closure: This is the last chance to review and reinforce core learning. Students remember the first and last moments of class. This provides a great opportunity to move new learning into long term storage. The key to closure questions is that all students participate. The instructor can decide if they are looking for simple recall or want to reach for a higher level of synthesis.

Examples of Blended Learning:

- Students doing face-to-face group work in a classroom, then going home to analyze that work and turn in a video as an assessment form;
- Taking a course online, then receiving face-to-face tutoring between online lessons.
- Taking short content instructions on-line, than reading lessons from targeted e-books and reviewing a video with practical instructions, than attending on-job learning in a business/public company to practice the skills and wrap-up with a peer-to-peer exchange of learned experiences via Zoom platform.

It is important to stress that all of these areas are flexible. The key is providing a structure that students can use technology with a purpose. The teacher can help provide direction on a sliding scale. Younger students will need more structure and goals while advanced older learners can work towards self direction. As a conclusion, blended learning is the engine that can power personalized and competency-based learning for each individual student.

2.3. Types

While generally seen as a 'trend' in 'progressive learning, Blended Learning can also be viewed as a kind of relic symbolic of the gap between 'traditional education' (for the last century or so in brick-and-mortar schools and classrooms) and connected and digital learning. This, of course, implies that digital-only is the future and the ultimate incarnation of learning, which is a short-sighted view. The point, though, is that blended learning is a mix of old and new as much as it is a mix of physical and digital learning.

Overall, there are few types of tools that are used in blended learning:

- **Cloud learning platform** - Learning management systems (LMSs) are used to house training materials, deliver them to learners, and generate reports that help instructor to see if training is successful. Some LMSs can only provide learners with assigned e-courses (so-called asynchronous learning); other solutions are capable of conducting live online training sessions, like webinars for example (so-called synchronous learning).
- **Collection of learning assets** - This tool requires making an inventory and figuring out what's possible to (re)use, and what is needed to create from zero. It means creation of a collection of learning materials that effectively complements the live training. For example, with the

iSpring Suite authoring toolkit, an instructor can easily turn existing presentations into e-courses with quizzes and other interactive elements.

- **Authoring tool** - For effective blended learning, it's essential to have an authoring tool. Given the flexible and customizable nature of blended learning, the tool should enable instructors to quickly create and update digital learning items with quizzes, video, and interactive simulations without adding too much extra work.
- **Collaboration tools** - Working, communicating, and networking with others accelerate the sharing of good practices and fosters a culture of collaboration. Blended learning allows learners to cooperate beyond the classroom. There are plenty of free services that will help instructors to build a strong learning community, such as: social networks, Google Docs, Spreadsheets & Presentations, and Chats.

2.4. Models

There is little consensus on the definition of blended learning at global level. Some academic studies have suggested it is a redundant term. However, there are distinct blended learning models suggested by some researchers and educational think-tanks. The overall consensus on these models proposes:

- **Face-to-face driver** – where the teacher drives the instruction and augments with digital tools. This model allows each student to work at their own pace, able to lean on elements of online learning if they are taking longer than the rest of the class to master a subject. Some students may never interact with online learning, but under the face-to-face driver model they can proceed at a rapid pace without being held back by other participants.
- **Rotation** – students cycle through a schedule of independent online study and face-to-face classroom time; The rotation model becomes a blended learning experience when at least one of the stations makes use of technology. Traditional stations might include teacher-led instruction, group activity or experiments. Technology-based stations might include online instruction, interactive games or quizzes, or informational videos.
- **Flex** – Most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support. In this model teachers act more as facilitators, providing supplementary support rather than dedicated instruction. Their role does involve some offline activity, including face-to-face support, small group instruction or individual tutoring. Within the flex model, pupils can move flexibly through a subject at their pace, independent from other pupils in the class. This allows for a tailored approach that targets the needs of each pupil. That's why we often see the flex model adopted in classes where pupils are considered at-risk.
- **Labs** – All of the curriculum is delivered via a digital platform but in a consistent physical location. Students usually take traditional classes in this model as well.

- **Self-blend** – Students choose to augment their traditional learning with online course work. This is done at the discretion of the individual student, which is why it's more likely to be done by older, independent and motived students/adults.
- **Online driver** – Students complete an entire course through an online platform with possible teacher check-ins. All curriculum and teaching are delivered via a digital platform and face-to-face meetings are scheduled or made available if necessary.

It is important to note that even blended learning models can be blended together and many implementations use some, many, or even all of these as dimensions of larger blended learning strategy. These models, for the most part, are not mutually exclusive. There are many components that can comprise a blended learning model: the level of use of the various types of tools and resources is actually defining the model of the blended learning.

Another classification is proposed by Purnima Valiathan who divides blended learning models into three types :

- Skill-driven, aimed at the acquisition of specific knowledge and skills, where the instructor gives feedback and support;
- Attitude-driven, aimed at the development of new attitudes and behaviors, where peer-to-peer interaction and group work are central; and
- Competency-driven, aimed at capturing tacit knowledge, where learners must observe experts at work.

The specific structure and types of learning processes proposed by Valiathan are clearly presented in his paper. Once the model is selected, it is important that professors/teachers design the structure of the learning course with most effective types of learning elements for the given topic.

2.5. Literature review

Due to the fact that this mixed teaching methodology is incipient, there is still not enough qualitative research to allow a deep analysis of the impact of this modality in face-to-face-virtual classrooms and specifically evaluate the learning effectiveness of students as well as the capacity of teachers in being able to impart this type of mixed education. However, some reviews begin to emerge through academy articles that outline partial analyzes regarding the impact of blended learning.

One study says that education systems adapt to social, political and economic problems and processes to respond to their needs and the challenges they face (Kelly, 2009). This adaptation requires adjustments in the planning and implementation of national curricular reforms and locally planned pedagogical innovations. This is how it can be seen that in the last two decades the use of information communication technologies -ICTs- has started to permeate curricular programs worldwide (Smith & O'Day, 2008).

It is interesting to consider the literature review that Yiran Zhao (HGSE) and Lori Breslow (MIT Teaching & Learning Laboratory) conducted considering 42 studies of hybrid or blended learning. We can see below some specific cases:

- During an Introduction of Biology course at the University of Massachusetts (2002) it was implemented the following blended methodology: "Students did work online before coming to class. In class, "clickers" and small-group problem solving were used. Peer tutors also used online resources to answer students' questions". The result was: "Students' exam scores in the redesign format were 73% in comparison to 61% for the traditional students. A pre/post-test specifically focused on 'generalized problem-solving skills' was administered to see if students learned to 'solve novel problems involving content not specifically covered in the course'. Students' post-test scores were one standard deviation higher that the pre-test scores. The percentage of students receiving Cs and above was 68.1% in the full redesign compared to 63.2& in the traditions format. Students attendance was also higher than in the traditional format".
- In a general Chemistry course of Wisconsin University, students had one lecture per week and online homework (2001). The result was there that there was not significant difference in student performance between the traditional and redesign groups.
- The students of Introduction to Astronomy course at the University of Colorado (2001) used online materials but met in in teams with an undergrad learning assistant as their team coach. The result was that "A final exam with identical multiple choice questions was administered. In the first semester, students in the traditional format performed better, but in the second semester, students in the redesign format performed better".
- The students of a General Psychology course at the University of New Mexico (2003) had a reduction of lectures to once per week and received online instructional materials that were provided on a 24/7 schedule. The result was that "more students in the redesign format received Cs or better compared to students in the traditional course".

However, the result of all literature review (considering the 42 studies) outlined that "the literature presents mixed evidence regarding whether hybrid/blended learning is more or less effective than traditional formats". It's important to consider that these studies cover the period from 1999 to 2012 and the impact of technology evolution, a better access to technology tools and the improvement of digital resources that has been included in blended learning during the last decade was considerably increased.

2.6. Benefits

One of the most obvious benefits that blended learning modality allows to students (and also teachers) is a greater geographical scope in access to education, since the virtual modality allows to overcome some geographical or other barriers / limitations, such as the current COVID-19, economic costs of transfer limitations, compatibility with work or family commitments, etc.- Another great

benefit to students is allowing more autonomy in the management of study time which goes with a greater responsibility in self-management. Blended learning allows to enjoy this benefits while a certain frequency in face-to-face encounters in order to maintain social contact.

It could say that the success of blended learning model is "in the hands of teachers" which means their capacity on how well they can make the transition from their role in the face-to-face classroom to the complex roles that online learning demands: "The success of any innovation in education, such as the introduction of online teaching and online technologies (what is commonly referred to as e-learning), is in great part due to how well teachers deal with the new ideas and implement them with their learners" (Comas-Quinn, 2011). Teachers' understanding and use of ICT modes greatly impact students' acceptance of online learning as well as their perceptions of how useful online tools are.

As a conclusion, we can say that "findings revealed both positive comments and criticism" as Mendieta Aguilar mentioned in their literature review conclusion (2012): The convenience of access, the learner-centered approach and the communicative practice that the blended courses generated were valued positively by teachers as learners were able to work consistently and independently. Nevertheless, the lack of face-to-face contact was reported as the most negative factor, as there were students who always needed more assistance and guidance with their tasks. Teachers also saw students' lack of motivation to participate in the virtual forums and chats as something problematic. According to the authors, teachers valued those aspects of blended learning which were related to students' autonomous learning, while those aspects of blended learning which focused on the input of the teacher were regarded as questionable. They provide two explanations for this: On the one hand, these findings may show that while acclaiming the factor of independence and autonomy in blended learning, the teachers still prefer the traditional face to-face interaction for a teacher-learner contact. On the other hand, the teachers might feel [a] lack of competence and experience in e-communication and therefore be rather unsure about the usefulness of this form of contact with their students.

2.7. Actuality – COVID-19

Countries have been experimenting with a number of hybrid learning modalities as they re-open schools after the global school lockdown due to the COVID-19 pandemic. The strategy has been used in education for years, particularly in light of the increased use of digital technologies in education.

World Economic Forum global survey reveald that seven out of ten adults worldwide (72%) think that, in five years, higher education will be done online at least as much as on-site. Specifically, almost a quarter of adults worldwide (23%) believe that in five years, higher education in their country will be carried out entirely or mostly, online. The other half (49%) believe it will take place both online and on-site. After the pandemic priorities will change: while a year ago the main challenge was to guarantee the continuity of learning processes through different "non-classroom" methodologies,

today there is the additional challenge of implementing a hybrid model (blended) that includes a combination of face-to-face and non-face-to-face learning (eLearning) schemes. The pandemic saw as many as 1.3 billion learners affected this year, as schools and universities were forced to close, and adopt 'blended' learning strategies, which mixes online with face-to-face teaching.

The COVID-19 pandemic has brought changes and disruptions in wide areas of human activity. Education and Training has been one of the most affected due to the administrative imposition of the total or partial closure of educational centers in most of the countries of the world. The modality of distance education, fundamentally in digital support, on-line and blended-learning, was able to offer emergency solutions to this crisis. However, from now on, if any product, proposal or blended-learning system is to truly meet your needs in the new context, and result in a productive teaching with immediate practical application, it must take into account the possibility of facing some challenges and some totally necessary requirements.

While it is still too early to see the extent to which hybrid learning will become a permanent feature of education post-COVID19, but there are enough trends to say that countries should plan and prepare for hybrid learning to be part of education delivery for the near future.

Among many others, we can highlight the most current types of blended-learning due to their application during the pandemic, and their high potential for usability and performance:

- **Rotation by station** - In this model, students can rotate through the stations at a fixed time, as long as at least one offers online learning.
- **Rotation Lab** - In this model, as in the previous one, students can rotate through the stations on a predetermined schedule. However, online learning takes place in a fixed location, usually a computer lab.
- **Individual rotation** - On the other hand, it allows participants to rotate through stations at times previously established by teachers or tutors. Unlike other models, students do not have to rotate through all stations. They only rotate through the activities scheduled in their individually created teaching plans.
- **Inverted classroom** - This classroom model reverses the traditional logic between face-to-face study time and activities to do at home. Participants study content through online classes and courses, while teachers and tutors use face-to-face classes for hands-on activities and projects that require supervision.
- **Flex** - Here participants can move at more flexible times between various learning activities, according to their needs and time availability. In the flex model, online teaching acts as the backbone and teachers offer support and guidance based on individual needs. It is one of the models that guarantees participants greater autonomy and control over their own learning.
- **To the letter** - The a la carte model allows participants to take non-face-to-face courses with an online teacher, in addition to face-to-face classes. This guarantees them greater flexibility in study schedules.
- **Enriched virtual** - The enriched virtual model allows participants to complete most of the course online, outside of the educational institution. However, they have to attend

face-to-face classes with a teacher or tutor. But, unlike the flipped classroom, the enriched virtual model does not require daily presence, it involves less frequent face-to-face classes.

It is necessary that the final blended-learning plan clearly materialize the following steps:

- **Choose learning objectives** - As with any strategy, it is very important to identify what the main goals and objectives are in order to gather the necessary resources to achieve them. Thus, it is necessary to define what knowledge educators, trainers, or training participants should have, and what skills all of them should develop at the end of the process.
- **Define means, technologies and methodologies** - With specific goals in mind, the next step is to determine what resources, both online and in person, will be needed. Because blended-learning allows knowledge to be transmitted through a variety of formats and techniques, care must be taken when choosing the most appropriate methodologies, with the participants as well as teachers and trainers in mind. It is essential to think well about the results that the participants must achieve in each activity before defining in which medium it will be offered. For example, an evaluation exercise may be better suited to the online format, while a focus group will have better results if done in person.
- **Encourage interaction** - The interaction between participants and teachers or trainers is one of the greatest advantages of blended learning. When participants communicate with each other, they can share experiences and apply the content they are learning more easily. Therefore, this interaction should always be encouraged, thinking of methodologies and techniques that favour the exchange between the participants and the discussion of everything that is being learned.
- **Monitor performance** - It does not matter if the content available is online or in person. A clear and consistent strategy must be previously designed to evaluate the progress and performance of each participant and each group throughout the process. This is very important so that participants feel that they have a support system, in addition to allowing feedback to be received on the effectiveness of the course or training.
- **Maintain consistency** - A very common mistake among blended-learning training actions since the pandemic began is to fundamentally attend to a correct application of digital tools, or classical face-to-face methodologies, and not to worry about the coherence between the content delivery methods in online and in person. When this happens, the effectiveness of the course or training is greatly impaired.

3. STEFAN blended learning course

However, for this strategy to work, it is important to do detailed planning, clearly defining the objectives and the techniques that will be used during the STEFAN course. The aim is that participants receive a complex knowledge for the end of the course.

The aim of the learning modules to create a complex material on ecotourism, help the target group to identify the importance of cooperation, motivate participants to be creative with their marketing ideas and also to provide them good practices on different subjects.

Blended learning is very flexible, the components can be mixed due to the needs of the target group. In STEFAN project the target group contains adults so individual learning will be significant to ensure the participants flexible schedule and efficient progress. Although consortium agreed that next to the individual learning a tutor is needed to ensure the effective learning and tutors are also helpful if learners need any help or have question in connection with the learning material, platform or the learning path.

Tourism is a complex industry so STEFAN's course aim is not just to provide a theoretical educational material, but also to show examples and good practices from the real life, and to raise interest in some subject where learners have the possibility to make extra researches and reach further knowledge or show them some actual trends from the tourism sector. Learners have to improve their knowledge and their competences – creative thinking, working in team, interactive learning, differentiate relevant information from irrelevant pieces, improve communication techniques, sharing ideas and experiences, open thinking, ethical behaviour...etc. During the modules participants will learn about responsibility and about environmental values at their own and others' places, they become aware of the concept of ecotourism, they can also develop responsible behaviours for environment and they will also develop their digital competence through the use of digital tools. Learners will get a comprehensive picture of the basics of ecotourism, and will be able to distinguish it from other touristic attractions. Case studies, self assessment and special tasks will help them make it easier to understand the main objectives.

The project's target group includes entrepreneurs, future entrepreneurs, local development promoters/agents, municipality technicians, young interested people and also professionals of tourism sector. STEFAN blended learning model was chosen based on the target group's needs. Consortium analysed the three most important features of a blended learning course – time, space and interaction. For adult learners clearly the flex model suits the most, so consortium unanimously agreed on it.

Flex – Most of the curriculum is delivered via a digital platform and teachers are available for face-to-face consultation and support. In this model teachers act more as facilitators, providing supplementary support rather than dedicated instruction. Their role does involve some offline activity, including face-to-face support, small group instruction or individual tutoring. Within the flex model, pupils can move flexibly through a subject at their pace, independent from other pupils in the class. This allows for a tailored approach that targets the needs of each pupil.

This model is excellent for knowledge and also for practical elements. It allows for self-paced flexibility, collaborative work and synthesis. It is easy and straightforward to develop.

Consortium also agreed that face-to-face sessions will not be a part of STEFAN project, because the project is implemented in the first wave of COVID, so be on the safe side instead small group activities with all involved participant and the tutor we decided to have online session individually with the participants. The advantage of this decision that tutors attention is more focused to each participants, and tasks and individual sessions can be much more flexible based on the learners needs and knowledge level.

3.1. Structure of the STEFAN project

1. Introductory ONLINE SESSION between tutor and participant
   The session includes tutor's and participant's introduction and the short presentation of the project. Learners get to know the structure of the course, receive information of the learning path and the platform itself.
2. ONLINE COURSE – Module 1-3
   Learners go through individually the first three module of the learning material. Each learning module contains three part:
   - Competence Validation Tool – multiple choice questions to measure the knowledge level of the participants
   - The module itself
   - Self-evaluation questions – the same questions appear as in the Competence Validation Tool to provide feedback to the learners about the improvement on their knowledge

3. Middle ONLINE SESSION between tutor and participant
   Tutor and learner discuss about the first 3 modules, problems that may occurred. Tutor have the possibility to give special task to the participant due to their profile and knowledge level.
4. ONLINE COURSE – Module 4-6
   Learners go through individually the last three module of the learning material.
5. Final ONLINE SESSION between tutor and participant including evaluation of STEFAN project
   Tutor and learner discuss about the last 3 modules, problems that may occurred. Tutor have the possibility to give special task to the participant due to their profile and knowledge level. Participant evaluate the online course, the platform, the content of the learning material and the tutor itself. Evaluation is based on questionnaires.

3.2. Competence Validation Tool

Competence Validation Tool's aim is to evaluate the initial know-how of the learners and to give information about the modules that each learner can undertake. By using the Competence Validation Tool learners can evaluate their competences. This Tool is one of the training materials which will

contain multiple choice questions of the developed learning modules. Competence Validation Tool is the first part of the training material within which participants will receive information immediately after finishing fulfilling the Tool. The aim is to measure the participant's knowledge in connection with the modules of the project. The tool will show the specific fields where the participant has to develop and improve their knowledge. After receiving the results of the Competences Validation Tool the participant can use the e-learning platform to improve his/her skills and competences.

In STEFAN Blended learning platform the consortium decided to add the Competence Validation Tool's question not just before the training module, but after it as well. If participants have the same questions before and after the module it provide a good possibility to them to see their improvement. With this development participant can measure not just input competences/knowledge but also output ones.

3.3. STEFAN modules

The learning course include 6 modules related to ecotourism. The learners can read through the theoretical part, they will see different good practices, in some cases they can learn about complex case studies. All the modules have specific learning goals which are the following:

1. INTRODUCTION TO ECOTOURISM AND SUSTAINABLE TOURISM
   After reading this module, the learners will have sufficient conceptual and historical knowledge to differentiate between sustainable tourism and ecotourism. The students will be introduced to practical cases as well as good practices to understand the concepts better. They will be able to understand the term tourism product without highly spread confusion. The learners will be given recommendations to develop an eco-sustainable tourism product without causing a negative impact on the environment.

2. ETHICAL ISSUES
   After completing this module, the learners will be aware of the importance of ethics in ecotourism through concepts, history, and the most important documents of ethics. They will have deep knowledge of the documents by covering all the articles they contain. Apart from the theoretical part, the students will get practical recommendations on how to travel in an ethical way by knowing what to consider and what to avoid. Furthermore, the learners will find a link between ethical behaviour and the pandemic situation based on the covid-19 example.

3. SAFETY AND QUALITY IN ECOTOURISM
   With this module the students will learn how to ensure safety and security while providing high-quality service in ecotourism. They will be introduced to the guide for developing a Safety Action Plan and will understand the importance of risk management. Furthermore, the learners will be able to undertake specific actions to satisfy the needs of ecotourists and comply with the existing international standards to guarantee both safety and security in tourism services.

4. PROMOTION OF ECOTOURISM

After reading this module, the learners will be introduced to the basics of Ecotourism Marketing to be able to develop a marketing plan for tourism businesses. They will get theoretical knowledge as well as some tips and recommendations on how to target international customers and people from different cultures. The students will learn the importance of digital marketing for promoting a business and will acquire basic skills on how to use and combine diverse tools and strategies for managing social media platforms.

5. ECOTOURISM MANAGEMENT

In this module the learners will gain knowledge of the characteristics of the management of a business that are the most relevant to the ecotourism sector. They will know the difference between managing a conventional tourism business and an ecotourism activity. The students will be able to develop a vision of ecotourism management considering the environment and surrounding communities to establish a feasible ecotourism business. Apart from the theoretical knowledge, the learners will be introduced to the case study to see the practical examples of the environment being an asset for generating a potentially successful tourism business.

6. TOURISM FOR INDIVIDUALS WITH DISABILITIES

After completing this module, the learners will be able to provide accessible services to individuals with disabilities by understanding their special needs. They will learn the definition of disability as well as the ways of creating a favorable environment for persons with disabilities following the formula Availability + Accessibility + Affordability combined with quality and choice of the services. The main goal of this module is to raise awareness of the hospitality sector, become more inclusive, and eventually make a social impact.

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