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Evaluating a Finnish web-based platform to nurture a sense of initiative and entrepreneurship in three Italian upper secondary schools during COVID-19 pandemic

Valutazione di una piattaforma web finlandese per sviluppare un senso d'iniziativa e d'imprenditorialità in tre scuole secondarie superiori in tempi di COVID-19

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Abstract
This contribution provides preliminary results relating to the evaluation of a web-based platform for cultivating a sense of initiative and entrepreneurship in compulsory education. This platform is used in Finland and abroad, and it was experimented for the first time in three Italian upper secondary schools as substitute of work experience during the COVID-19 pandemic. The article presents entrepreneurship education in Europe, and it explores the educational policies related to entrepreneurship in Italy. Next, it shows the model the platform is based on, and presents this evaluative study as multiple embedded case study: Focus groups were organized in the three classes with students and teachers, who performed a SWOT analysis on the use of platform as work experience. The analyses were subsequently validated through interviews to teachers. The explorative research questions concern: the first evaluation of the web platform; the extent this platform can be used for work experience; and possible differences of the application of the platform in the three contexts. Preliminary results suggest that the use of the platform as cross curricular subject during work experience nurtures a sense of initiative and entrepreneurship taken as key competence for lifelong learning.

Keywords: program evaluation; sense of initiative and entrepreneurship; qualitative research; SWOT; work experience.

Riassunto
Questo contributo mostra i risultati preliminari relativi alla valutazione di una piattaforma web finlandese per lo sviluppo di un senso d'iniziativa e d'imprenditorialità in studenti della scuola secondaria superiore. Questa piattaforma è stata testata per la prima volta in tre scuole italiane in tempo di pandemia come Percorso per le Competenze Trasversali e l'Orientamento (PCTO). Si inizia introducendo l'educazione all'imprenditorialità in Europa, e si continua con le politiche educative nazionali in materia di imprenditorialità, mostrando poi il modello di competenza su cui la piattaforma si basa. Successivamente si presenta questo studio come valutazione di uno studio di caso incorporato e multiplo: nelle tre classi coinvolte si sono organizzati focus-group con studenti e insegnanti, che hanno effettuato un'analisi SWOT sull'utilizzo della piattaforma durante il PCTO; le analisi sono state successivamente validate grazie a interviste agli insegnanti. Le domande esplorative riguardano: la valutazione della piattaforma; la possibilità di utilizzarla come PCTO; e possibili differenze di applicazione emerse nei tre contesti. I primi risultati suggeriscono che l'utilizzo della piattaforma attraverso un progetto interdisciplinare sviluppa un senso d'iniziativa e d'imprenditorialità inteso come competenza chiave per l'apprendimento permanente.

Parole chiave: valutazione; senso d'iniziativa e d'imprenditorialità; ricerca qualitativa; analisi SWOT; Percorsi per le Competenze Trasversali e l'Orientamento (PCTO).

Credit author statement

Seikkula-Leino wrote section 2.0, while 1. and 2.2 were written together. Morselli wrote section 2.1 and the whole 3, 4, 5, 6. Data analysis was carried out jointly.

1. Introduction

Over the past years, there has been a clear shift to promote enterprising societies and developing entrepreneurial competence, as suggested in the EU, UN, and OECD strategies (Bosma et al., 2020; Lackeus et al., 2020). There are, however, challenges when delivering entrepreneurship education informed by pedagogy (Devici & Seikkula-Leino, 2018; Seikkula-Leino & Saloma, 2010). There is also a lack of understanding of the role of schools and education in the digital era, and consequently there is a need to develop digital solutions as in many aspects of modern education (Fayolle, Rashid, 2019; Chen, Ifenthaler & Yau, 2021). As the integration of entrepreneurship education into upper secondary education is still challenging, due perhaps to a disciplinary tradition, there is a need to focus on this level of education (Devici & Seikkula-Leino, 2018; Seikkula-Leino et al., 2010) by understanding how a sense of initiative and entrepreneurship can be nurtured through web-based digital concepts.

This contribution evaluates a web-platform to develop a sense of initiative and entrepreneurship in times of COVID-19 pandemic; this platform is based on Seikkula-Leino and Salomaa's (2020) model. From January to April 2021, it was experimented for the first time in three Italian state upper secondary schools as substitute of work experience, (from 2018 called PCTO, *Percorsi per le Competenze Trasversali e l'Orientamento*, in English paths to promote transversal competencies and guidance): a lyceum, a professional institute, and a technical institute. The article firstly reviews the literature on entrepreneurship education and describes the model the platform is based on. Subsequently it presents the methodology used for this evaluative research, that is multiple embedded case studies. In each of the three schools, the researchers arranged a focus group where teachers and students performed a joint SWOT analysis on the experience. Such analysis was subsequently validated by means of interviews to teachers. The explorative research questions relate to a) the evaluation of the web platform made by students and teachers; b) the extent this platform can be used for work experience to promote transversal competences and guidance; c) possible differences in the application of the platform in the three upper secondary school contexts.

2. Literature Review

According to the European Commission (2019), individuals need the capabilities to support their personal fulfillment and employment, as well as active citizenship and inclusion. These key competences for lifelong learning include not only curricular subjects such as foreign languages, science, literacy and numeracy, but also transversal competences like digital skills, a cultural awareness and expression, personal and social learning to learn, and finally entrepreneurship. A sense of initiative and entrepreneurship prepares individuals to take responsibility for themselves and learn how to turn ideas into actions (European Commission, 2007); it includes establishing and achieving goals, creativity, and innovation, discovering existing opportunities, and thriving in a complex society. Another aim of entrepreneurship education is supporting students to take an active role in discovering their profession and regard entrepreneurship as a possible career choice. A sense of initiative and entrepreneurship entails, therefore, the development of knowledge, behavior, skills, and attitudes that can be applied both at the individual and collective level (Gibb, 2005; Pittaway & Cope, 2007; Seikkula-Leino et al., 2019).

Entrepreneurship education has an impact (European Commission, 2015), and research indicates that it increases the learners' entrepreneurial knowledge and intentions; it also stimulates their creativity, collaborative skills, and self-confidence, and in so doing it enhances learning in diverse subjects. All European students should therefore undertake at least one hands-on entrepreneurial experience during compulsory education (European Commission, 2013). Over the years, the European Commission has sought to define a common strategy for entrepreneurship education in Europe, tough the Member States have taken up these policies in diverse ways. Finland, for example, distinguishes between an internal and an external entrepreneurship, the former being related to entrepreneurship as an open-aims competence useful in every life context, and the latter being more targeted towards business creation (European Commission, EACEA, & Eurydice, 2016).

Concerning educational policies, Entrepreneurship education has been included in the Finnish national curriculum for general education for over twenty years, and few years ago the Finnish Ministry of Educa-

tion and Culture (2017) launched a National Strategy to steer entrepreneurship education. This Strategy is targeted to all education providers at all educational levels, thus supporting regional and local policy makers, stakeholders, and practitioners in the field. Furthermore, national core curricula at all education levels, vocational and general education, involve entrepreneurship education. Even though it could be argued that efforts have been high in Finland, the concrete entrepreneurial actions in classrooms and related pedagogy could be strengthened (Huusko et al., 2018; Seikkula-Leino et al., 2019).

2.1 The policy strategy for cultivating an entrepreneurship competence in Italy

Concerning Italy, the national definition of entrepreneurship comes from the European key competencies for lifelong learning (see European Commission et al., 2016). The seventh key competence was initially named "a sense of initiative and entrepreneurship" (European Commission, 2007), but then became "entrepreneurship competence" (European Commission, 2019). This paper, however, uses the former definition to underline that the outcomes of this type of education are more far reaching than business creation, as they gesture towards a competence useful in many contexts throughout the lifespan (Dozza, 2016).

Furthermore, from the policy documents it is possible to trace an implicit strategy for Italy. First, an entrepreneurship competence appears only in upper secondary education, and no difference is made in the school type, either general or vocational education. In 2018 the Ministry of Education, University and Research (MIUR, 2018a) released a syllabus for entrepreneurship education in upper secondary schools; this syllabus is based on entrepreneurship as key competence and on the EntreComp Framework. The learning outcomes are presented as knowledge and "hands-on" activities revolving around five areas: Forms and opportunities to do enterprise; Idea generation, the context and the social needs; From idea to enterprise: resources and competencies; The enterprise in action: how to deal with the market; Economic citizenship. Second, from the topics listed, entrepreneurship is conceived of as business creation and education to financial literacy. Third, entrepreneurship is mostly covered by work experience, as pointed out by the ISFOL (Consolini et al., 2013); It can hence be hypothesised that entrepreneurship in Italy is perceived as a possible means to connect the school with the world of work.

Moreover, since 2018 work experience has changed name from a*lternanza scuola lavoro* (school and work alternance) to PCTO to underline that it should not only prepare students for their future job, but it should also provide guidance and transversal competencies useful in diverse life situations. The guidelines on how to deliver work experience according to the PCTO logic (MIUR, 2018b) mention the simulated enterprise and enterprise in action as possible options, pointing out again entrepreneurship as business creation.

2.2. Skilloon, a web platform for cultivating a sense of initiative and entrepreneurship

Although cultivating a sense of initiative and entrepreneurship has been gaining momentum, and the need for this key competence has been noticed by policy makers, yet educators and trainers find it difficult to identify contents and methods to nurture an entrepreneurship competence in their practice (Devici & Seikkula-Leino, 2018; Seikkula-Leino et al., 2010). This is because policies on entrepreneurship are seldom supported by wider measures, such as useful tools and training. Moreover, traditional school solutions such as classroom teaching and lectures prove sometimes unsuitable to strengthen this key competence, given the lack of appropriate pedagogical solutions. It is also uncertain what a suitable solution in the digital era could be like, since there have been limited analyses or reviews on the effectiveness of educational technologies (Fayolle, 2013; Rashid, 2019; Chen et al., 2021).

To respond to these needs, a digital learning environment named Skilloon (www.skilloon.com) was created to cultivate a sense of initiative and entrepreneurship. This digital concept involves assessment tools, activities, a mentoring system for educators to develop this key competence with middle and high school students. This web platform has been devised in international research cooperation involving testing groups besides Finland such as Sweden, the United Arab Emirates, Brazil, and Estonia. Skilloon is an official education concept of Education Finland supported by the Finnish National Board of Education and

is also part of the education strategy of the Finnish Ministry of Education and Culture (2017). The theoretical basis grounded on entrepreneurship education research emphasises the role of self-efficacy and self-esteem (Seikkula-Leino & Salomaa, 2020). The digitalised pedagogical concept is based on six areas, which are: 1) strengthening trust; 2) accepting each person as an individual; 3) collaboration; 4) goal setting; 5) strengthening a sense of feeling competent; and 6) widening personal network, exploring work and study possibilities up to starting a business. These areas are detailed in Table 1, which lists the skills and the description. Furthermore, the increasing number of activities from one skill to the following suggests that the activities concerning the skills on the top of the list are more basic and entry level (such as "Trust and Respect"), while the activities related with the skills at the bottom of the list, especially "Networks, Working Life, and Entrepreneurship" are the most qualifying to nurture a sense of initiative and entrepreneurship.

Competence Area	Description
Trust and Respect (10 activities)	Reach trust between the students, staff and in the organisation (university or school) as a whole. Reach enough trust to allow mistakes, which might in turn bring to new ideas or solutions.
Everyone is Special (11 activities)	Students develop mutual understanding and respect. They develop the opportunities to act, and learn openness to express their thoughts and ideas, which calls for novel ways to work and study.
Open Collaboration (14 activities)	Students develop a collaborative approach, with staff and students being proud of the team spirit. Ideas are shared, and collaboration is fostered inside and outside the organisation, with individuals developing their networks.
Towards Goals (16 activities)	Students are supported to achieve personal and group goals. Staff and students are solicited to search for novel ways and opportunities to carry out tasks and reach goals. The whole community takes part in decision making.
The pleasure of feeling competent (18 activities)	Students are supported not only to acknowledge their competences, but also to leverage their strengths within the organisation. Staff and students feel they can positively influence each other, and through continuing to monitor learning, to evaluate if their objectives led to the expected results.
Networks, Working Life, and Entrepreneurship (33 activities)	This area supports the progressive understanding of the different fields and professions, as well as the value of networking and partnerships in working life and society. It also encourages the development of ideas, services, solutions for customers or target groups. Eventually it rises interest in pursuing entrepreneurship.

Table 1. The framework of Skilloon entrepreneurial competencies. Adapted from Seikkula-Leino and Salomaa (2020); and Nevalainen, Salomaa, & Seikkula-Leino (submitted for publication)

Given the vast number of activities (up to 102) that the students can undertake, a choice must be made before hand. The teacher selects the activities that are mandatory and the ones that are complementary, as well as their order. The students enrol in the platform through a link and can take an initial self-evaluation test based on the 6 skills to establish a base line, and the same post-test can be done at the end of the course. When the students enter the platform, they can see their overall situation by means of the illustration of a balloon that is flying at a certain altitude. For each activity performed the students receive a certain number of meters, so the more activities they complete, the higher the balloon floats. On the platform the students visualise the activity they are supposed to perform with its relative explanation. Sometimes the instructions also provide a downloadable word file that the students use as a trace for the activity. The activity asks them to perform a task and then to reflect on the process and result by means of writing. Once the students finished the writing task, they can proceed to upload the file on the platform and then gain meters for their balloon, and teachers can provide comments.

The study presented in the next section follows the Skilloon development design study conducted in Finland (Gomes Di Sciascio, 2020), in which both teachers and students collaboratively participated in the design research process.

3. Methodology

The evaluation of didactics, especially at the university level, is a widespread practice in many countries (Viganò, 2020). Survey is the widespread tool to gather data, which are then processed through quantitative analyses. The limits of this practice in terms of validity are well known. Surveys are often considered mere routines, and consequently their impact on improvement is limited; to overcome this setback students should be trained to express appropriate feedback and be involved in the evaluation process, thus regarding evaluation as shared responsibility (Golding & Adam, 2016). Hence, there is the need for an innovative approach to evaluation beyond indirect or direct evaluations, and such approach should be characterised as following (Mortari and Silva, 2020). Firstly, it should have dynamic objectives, thus being able to interact with the context. Second, it should promote performance improvement by involving diverse stakeholders in an integrated perspective. Third, it should make use of the epistemic and methodological tools of research to ensure quality and rigor. The authors suggest that such approach would call for qualitative research methods. Evaluation is an example of contested, interactive, and socially embedded practice that puts qualitative research methods into action (Dahler-Larsen, 2018). Qualitative inquiry analyses the "world out there" to comprehend and, when possible, explain a social phenomenon from the inside (Flick, 2018), which is performed by analysing the following elements: the participants' experience, their communications and interactions in the making, and the documents or similar traces produced because of these interactions. The goal is to understand how individuals construct the world around them, what they are doing and why, thus providing meaningful and reach insights.

There are four conceptual dimensions that need to be taken into consideration in qualitative evaluation research (Dahler-Larsen, 2018): a) an evaluand, that is the object of evaluation; b) values such as justifiable criteria or "deeper" source of standards; c) how evaluation is used; and d) similarly to other research, the methodological approach deployed to generate knowledge, the most typical being documentary studies, focus groups, observation, interviews, and ethnography. To do so, qualitative evaluators have developed a range of modalities, generally named as evaluation models, such as a responsive evaluation, user-oriented evaluation, and pragmatic-participatory evaluation. In this latter model, for example, Mortari and Silva (2020) made use of the developmental evaluation; This is a type of analysis based on multiple perspectives that aims at designing a path of dynamic and continuous improvement, which is particularly suitable to study contexts characterized by complexity and change (Patton, 1994; in Mortari & Silva, 2020, p. 139). Another example of evaluative research in the Italian context is Viganò (2020), who evaluated a university course in a faculty of education as a case study.

Similarly, this research takes the case study methodology entailing the study of real-life, contemporary case studies that are circumscribed in space and time (Yin, 2009). Evaluative research based on case studies suggests that programs were often undermined by heavy implementation flows such as shortage of resources, coordination, and expertise (Dahler-Larsen, 2018). In realistic evaluation (Pawson & Tilley, 1997), for example, researchers assume that a program does not unfold according to a general law, and only the specific configuration of context, outcomes and underlying mechanisms can render how specific programs have an effect for certain individuals in specific situations. For Yin (2009) case studies are particularly useful in evaluation research to try to explain causation in real life interventions which seem to be far too complicated to be dealt with experiments. Evaluative case studies can be useful in whose situations where the intervention or program has a fuzzy and possibly wide set of outcomes. Within a single case, case studies can be embedded when a subunit is selected as a unit of analysis. Multiple case studies deploy multiple sources of evidence, and results would be regarded as more compelling since the overall study is more robust; nonetheless, each case should be selected carefully, so that appropriate comparisons could subsequently be carried out.

3.1 Description of the field research

This research was carried out through multiple embedded case studies, and Table 2 shows the three classes where the web-based platform was experimented with.

Type of school	*Technical Institute*	*Professional Institute*	*Lyceum*
Course in	Informatics	Agriculture and Rural Development, specialisation food transformations	Human Sciences, specialisation Economics and Society
Class involved	4 Grade	3 Grade	3 Grade
Number of students participating	20 of which 0 females	17 of which 3 females, 1 student dropped the course	17 of which 10 females

Table 2. The three contexts of application of the web-based platform

The schools were chosen to cover the Italian diverse secondary school types: a lyceum delivering general education, a technical institute and a professional institute delivering vocational education. The schools were in small cities in Lombardy and Veneto. The field research unfolded as follows. Firstly, in December 2020, the researchers contacted the school directors, who identified the most suitable class for this experimentation. In all contexts it was decided that the students of Grades 3 and 4 would benefit the most from this program, since they were close to the end of compulsory education, and the use of the platform could help them reflect on their future study or work path. For each context, the teacher coordinating the project contacted the field researchers to be introduced to the features of Skilloon, so that they would be able to present it to the class council. It was agreed to use the platform as work experience (PCTO), with the aim of cultivating transversal competences and provide guidance.

This experience would equate to roughly 40 hours' work experience, and given the lockdown situation, experimenting with this web platform was welcomed by teachers and students. While the teacher councils where left free to select the activities they deemed appropriate in their context, they were suggested to turn this experimentation into a multidisciplinary project, so that diverse teachers would deploy the platform during the teaching hours. Teachers were also advised to assess these activities not only as work experience, but also (when possible), in their subject matter such as Literature and English. The delivery of the Skilloon activities spanned from January to April 2021 and involved overall 54 students aged between 17 and 18 years' old.

The web platform activities implied mostly written reflections. In one exercise, for example, students described their daily routine since they wake up (activity "Make a plan for the next day"). In other exercises, however, students could perform the task in the modality they wanted, for example drawing or taking a picture when they describe themselves (task "Who I am?"). In other activities they had to arrange an interview, for example with an adult doing their favourite job or a university student studying in the field of interest (Exercise: "An interesting interview"). In the three contexts, these tasks were first presented and explained during the lessons to make sure that the students understood what they were supposed to deliver. This is because the activities look different from the regular curricular activities, and because the platform was in English, so it was expected that some students would need support to understand the instructions in their second language. Students were left free to write their reflections, in Italian or English, and in all contexts diverse students used English to express themselves. These exercises were mostly carried out asynchronously as home assignments. Subsequently, they were uploaded on the platform, where they could eventually receive formative feedback from teachers.

The description of this study was completed with the meetings with the researchers and the evaluation of the program. The researchers met the classes at the beginning of the experimentation, to introduce the web platform; In the middle of the experience, to share the first impressions about the platform activities; At the end of the experience, to evaluate the program. All these tasks were performed online; Weekly emails were sent to the teachers to ask for feedback, and when there was a technical problem (which very seldom happened) the researcher bridged the teacher with the team in Finland. The last meeting was carried out as focus-group with the whole class and the teachers that could join. The object was to carry out an evaluation of the program by using the SWOT analysis as stimulus.

3.2 The SWOT analysis with students and teachers

This tool has been utilised since the 1960s in strategic management for decision making and planning (Gürel & Tat, 2017). Besides being a tool for planning purposes, SWOT can be thought of as a teaching instrument for educators, trainers, and consultants (Helms & Nixon, 2010). When deployed in higher education, it can be used for quality management and program evaluation (Leiber, Stensaker, & Harvey, 2018); as did recently Mortari & Silva (2020) to evaluate a program based on inquiry learning with university students undertaking work experience. In essence, the tool is a 2*2 grid with 4 headings (Strengths and Weaknesses in the top row, these are considered the internal factors; Opportunities and Threats in the bottom row, which are the external factors). The product or service is then analysed and described in the light of these four elements, thus encouraging the person or group to consider diverse perspectives.

In this study the analysis was used as following. First, the researchers explained the SWOT matrix and how to perform the analysis. Second, with the help of a shared web whiteboard (made through Padlet), each student performed their own SWOT analysis. This means that for each element of the SWOT grid, individual students thought about and wrote at least one bullet point concerning their experience of experimenting with Skilloon. This initial individual work on Padlet was made as an ice breaker, that is a funny and energizing activity for team building (Morselli, 2020). The intention, however, was also to make sure that each student could express their opinion, since research often shows that only few students end by participating in class discussions (Calvani & Trinchero, 2019). Third, based on the hints being collected on Padlet, the trace of the focus-groups followed to identify "shared" strengths, weaknesses, opportunities, and threats, and this "collective" SWOT matrix was shared on the screen. The attention was on the students' answers (they were sometimes helped by teachers to clarify their point of view), subsequently also the teachers made their analysis.

The data so collected were subsequently validated through an interview with the teacher that in each school had coordinated the project and who had also participated in the "collective" SWOT analysis, and consequently had followed the discussion and understood very well the students and the colleagues' point of view. The interview was performed online by sharing the SWOT analysis on the screen; for each bullet point, the teacher had to confirm, rephrase, or reject the analysis. In qualitative research, validity refers to the strategies with which it is possible to claim that the research findings are in line with the participants' experience. The aim of the interview was then to ensure validity by using research participants, this strategy being known as member checks (Ravitch & Carl, 2019). The three validated SWOT analyses were subsequently translated into English and edited by a professional proof-reader. Following each author made an independent analysis of the three SWOT to find possible communalities. A discussion subsequently followed to find a common ground, hence ensuring dialogic engagement in data analysis, that is a dialogue-based and collaborative approach with thought partners, which is key to assure a critical approach and rigor (Ravitch & Carl, 2019).

4. Results

Table 3 details the number of activities that the students performed on the web platform and how they related to the areas the Skilloon model is based on.

Type of school	*Technical Institute*	*Professional Institute*	*Lyceum*
Practice how to achieve the trust of others	6	2	3
Learn to know yourself – everyone is special	2	4	4
Practice open collaboration	7	4	3
Learn to set goals	5	4	3
Learn to succeed – experience the joy of being competent	2	2	2

Establish your path to further studies and work	2	2	3
Total number of exercises	24	18	18

Table 3. Schema of the program delivery

Eventually, while the students at the technical institute performed 24 tasks, the students at the other schools did 18. Table 4 takes again a comparative perspective and illustrates the number of teachers participating in the project and how they pursued formative and summative assessment.

Type of school	*Technical Institute*	*Professional Institute*	*Lyceum*
Number of teachers and subjects) participating in the program	Only the referent of the project	6 teachers	10 teachers
Formative assessment	Some feedback through the platform	Systematic through Google Drive shared folder	Some feedback through the platform related
Summative assessment	Only as work experience	As work experience and in related subjects (English, Agronomy)	As work experience and in related subjects (English, Literature)

Table 4. The arrangements taken in the school for the delivery of the web-based platform

In the technical institute, the project coordinator was left alone to deliver the tasks, and the project was only assessed as work experience. By way of contrast, in the lyceum and in the professional institute, teachers' participation was wider, and students could use web platform in several subjects; the tasks were assessed not only as work experience, but also as part of the curriculum in selected subjects. Furthermore, the experience in the professional institute is particularly interesting concerning the continuous formative feedback that students received. Instead of having the students uploading the file directly on the web platform, the coordinator created a shared Google Drive folder. The students had to upload first there their assignments to receive and consider feedback, only then could they upload the assignments on the Skilloon platform. Since the teachers were already confident with using Google Drive, it was easier for them to provide feedback, and this in turn promoted timely feedback for each assignment. Table 5. reports the outcomes of the analysis made by the authors on the three SWOT in the respective schools.

Strengths	Weaknesses
Some exercises help reflect about the past and better know oneself. Some exercises facilitate reflections on own future. The platform helps the students speak of themselves to the others (for example schoolmates and teachers). Some exercises are engaging. Some exercises allow for creativity. *The platform helps students develop their transversal skills, for example setting goals.*	Some exercises look boring, tedious, or repetitive. Some exercises can make the students feel uncomfortable since they ask personal questions. *The platform accessibility for teachers should be improved.* *A careful choice of the exercises is important at the beginning to find a right balance between reflection on the past and on the future, yet not easy.*
Legend: Normal: student's voice. In *Italics:* teachers' voice. Underlined: three out three classes. Not underlined: two out of three classes.	

Table 5. Upper part of the SWOT matrix: strengths, and weaknesses of the program

The strengths of the web-platform in all three schools are that the tasks help students reflect about their past and, in so doing, to better know oneself; Other exercises help reflect on their future, that is to reflect on what is the best choice to undertake after school completion: either work or study. Additionally, the platform helps students (especially shy students) speak of themselves to others such as schoolmates

and teachers. In two out of the three schools, students also stressed that the activities are generally engaging; Others allow for creativity, such as in instances where students can choose which form they would like to answer with: written text, picture, or drawing. From the teachers' point of view, in two schools the analysis reports that this platform supports the development of students' transversal skills, such as the ability to set goals.

Among the weaknesses, in all classes some activities looked boring, tedious or repetitive, while others can make the students feel uncomfortable, since they look a bit too personal. This latest remark is perceived by the teachers as simply taking students out of their comfort zone and this is not a shortcoming. Furthermore, from the teachers' point of view in all classes, the platform accessibility for teachers could be improved, for example it was not immediate to provide students with formative feedback through the platform. This is also demonstrated by the strategy of the shared Google Drive folder developed in the professional school. Another weakness in two classes is the difficulty to choose among the right balance of exercises between dealing with the "past" (that is, on who students are) and the "future" (that is, on what students what to be). When the choice of the activities to be undertaken is unbalanced, there is the risk that the students feel the platform being boring or repetitive. Yet, this selection is not easy, given the wide choice of activities and the fact that the platform was experimented with for the first time. On the top of that, time to choose was short. The last weakness came only from the technical students specialising in informatics, who reported that the web platform does not comply with the regulation regarding the cookies. Table 6 shows the results of the analysis concerning opportunities and threats.

Opportunities	Threats
The platform can be used in times of online teaching to substitute work experience with future oriented exercises. When used in class, especially in times of online teaching, the platform helps the sharing of experiences between students. The platform could be used at the beginning of the upper secondary schooling to know oneself better: The platform can be used at the end of the upper secondary schooling for guidance. When used since the beginning of the school year: a) the choice of the exercises can be done better; b) the delivery can be better programmed, also thanks to c) a wide participation of the teachers with their subjects.	Since some exercises are time consuming, if the use of the platform is limited to three months, the risk is that they are performed superficially.
Legend: Underlined: three out three classes. Not underlined: two out of three classes.	

Table 6. Lower part of the SWOT matrix: opportunities and threats of the program

Students and teachers evaluate the platform in the interaction with external factors, thus finding opportunities and threats. Among the opportunities in all three contexts, the platform could be fruitfully used in times of online teaching as a substitute of work experience, provided that the tasks are oriented towards the future, particularly the activities related to the skill named "establish your path to further studies and work". At the same time, if used in synchronous activities during pandemics, the platform helps sharing the students' experience, and in doing so it betters the class climate. In two out of the three settings, another opportunity would be to split the use of the platform in two school years, which from one perspective would allow Grade 1 or Grade 2 students to reflect on who they are. When carried out closer to school completion, the platform could be used fruitfully for guidance purposes. Further, it could even better explore the opportunity of entrepreneurship as self-employment. Another opportunity would be using the web platform during the whole school year, so that from one angle there would be sufficient time for the teachers to select the appropriate activities and make this an interdisciplinary project. From these foundations, the students could carry out the activities in a thorough fashion. Conversely, a factor that could threaten the use of web platform would be to plan its use for a restricted period such as three months: since the activities take time, they would be executed without the necessary involvement.

5. Preliminary findings

Digital concepts and educational practices are constantly evolving, and this paper sought to evaluate to what extent a Finnish web-based platform nurtures a sense of initiative and entrepreneurship in three Italian state upper secondary schools chosen between a lyceum, a technical institute, and a professional institute. This section will answer to the explorative research questions bearing in mind that this is a qualitative study; It was conducted on a limited number of participants; The SWOT analyses provide a limited amount of data.

The first explorative research question inspects about a preliminary evaluation of the web platform made by students and teachers in the three schools. Overall, the application of the web platform seems to have led to positive results in all schools. The exercises are help the sharing of experiences, thus improving the class climate. The platform asks to students to be creative and to challenge themselves with different modalities (written graphic, pictures). In so doing, it may take the students out of their comfort zone, especially whose shy students who find it difficult to express themselves in school settings that are usually characterised by curricular subjects. Connected to the students' discomfort (especially males) to reflect and write about themselves, however, during the presentation of the research results one technical male student said: "This platform was particularly good for us, since we normally deal with technical subjects, and we miss opportunities to reflect on who we are".

Ideally, the web-platform should be used over the whole school year, so that the teachers could have enough time to select the activities. In doing so, they could better distribute the activities in the diverse school subjects, and students could approach the tasks appropriately. Furthermore, the SWOT analysis suggests that the web platform is perceived as an opportunity in times of pandemics, with lessons at the secondary level delivered mostly online (Lucisano, 2020). From one angle, the lockdown facilitated the introduction of the web platform, which was perceived as a tool for fulfilling work experience. From another angle, when results are shared during the lessons, students and teachers could know themselves better, and this, say students and teachers, could improve the class climate. The same SWOT analysis is a formative tool (Helms & Nixon, 2010) useful in students' working life, and this study confirms the utility of this instrument for program evaluations in line with the literature (Leiber et al., 2018; Mortari & Silva, 2020).

The second explorative question concerns the extent this platform can be used for work experience. At least at the policy level, the strategy for developing an entrepreneurship competence in Italy seems to revolve around a stand-alone subject dealing with business and connecting school to work, that at its best can be dealt with through work experience. This "adaptation" partially contradicts entrepreneurship as a key competence; Nonetheless, this may also be due to the lack of preparation and specific training for teachers who find it difficult to nurture it as cross curricular subject.

By way of contrast, the SWOT analysis carried out by students and teachers characterizes the web platform for having past or future oriented activities. As such, the activities seem to develop mostly the subskills of the platform related to knowing themselves better, setting goals, and establishing the path towards future work and studies. This seems to match a vision of work experience characterized by developing transversal competencies and for promoting guidance in line with the recent MIUR's (2018b) guidelines on PCTO. Additionally, the platform can be used by teachers rather than external experts, who can set an interdisciplinary project, which aligns with the vision of a key competence as cross curricular subject. These initial considerations suggest that this web-platform could nurture a sense of initiative and entrepreneurship useful in a life wide and lifelong learning perspective.

The third explorative question focuses on preliminary differences of the application of the platform in the three schools. From a first look to the students' production, it seems that the quality of the reflections varied hugely among students and classes. In the technical institute they were shorter and more "rushed", while in the lyceum and in the professional institute they were longer and deeper. Following evaluative research based on case studies (Dahler-Larsen, 2018), this study suggests that these results are due to contextual situations of implementation related to how students perceived the web-platform and the overall project. The way students perceive the situation is connected to their deep or surface approach to learning (Biggs & Tang, 2011). Firstly, the more the delivery of the platform was felt as an interdisciplinary project, the more the students were happy to participate, given that the activities were perceived as part of the cur-

riculum. Similarly, the teachers could better split the workload given by explaining and giving feedback, which underlies the important role of collegiality in the delivery of the curriculum as suggested by Lucisano (2020). Second, concerning the role of formative assessment, assessing the students' reflections as subject related (not only as work experience) contributed to shape the students' perspective of the web-platform as important since embedded in the curriculum. This is because for the students the curriculum is what is assessed (Biggs & Tang, 2011).

Third, regarding the role of formative feedback, research suggests that only timely and consistent formative feedback can orient and improve students' learning (Calvani &Trinchero, 2020; Wisniewski, Zierer, & Hattie, 2020). In the professional institute, for example, the students would upload their reflections first on a shared Google Drive folder. Instead of learning how to use the new web platform, the teachers where already used to this technology, and consequently it was easier for them to provide timely and consistent feedback. As a result, the students' reflections are the deepest despite the observation that these students generally considered these components the most "hands on".

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