Addressing the challenges of DMOs in the Italian Alps through CBL in a time of pandemic
A 2020-2021 online workshop at the University of Bergamo

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ABSTRACT
As the International Organization for Standardization (ISO) has stated in their original definition of quality (ISO 8402:1994), quality is "the totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs." The authors consequently believe that not only learning from challenges – the relevant entity – should be intended as a task aimed to satisfy the needs of both challenged learners and challenged businesses, but also that not all the entity's needs are stated from the beginning of the process.
These were the methodological assumptions of a workshop on destination management held from October 2020 to February 2021 in the frame of tourism studies at the University of Bergamo. Though the workshop was entirely run through digital channels in a time of pandemic, it successfully provided five Destination Management Organizations (DMOs) and an association among hosts in the Bergamo Alps with a variety of digital communication products.
The workshop was special in terms of satisfaction expressed by participants as well as the involved DMOs. The participants' deliveries became active components of the destinations' policies. A professional video came as a welcome addition.
Implied needs which the workshop came across – namely doubts on the reliability of tourism data, cooperation among local actors, prerequisites in building a new website, the role of food and recipes in promoting a destination identity, best practices in guiding guests through planned itineraries, and the role of a city administration in controlling overtourism – were identified while researching and producing.

Keywords: Tourism, Destination, Pandemic, Digital, Data, Workshop, Group, Bergamo.

TOURISM, HIGHER EDUCATION AND CBL

Tourism plays a crucial role in the world economy – in Italy, it reportedly accounts for one eighth of the GDP – and higher education (HE) in tourism has developed accordingly for decades (Cooper, 2002). CBL, however, is very seldom associated with tourism HE. Recent literature reviews (Gallagher & Savage, 2020; Portuguez Castro & Gómez Zermeño, 2020) do not mention the field. A welcome exception (Vilalta-Perdomo et al., 2020) includes tourism in its analysis, though only as a potential result of development in rural areas.
As reported for instance by Marinakou (2012) and Clausen & Andersson (2018), traditional teaching in tourism is often complemented by Problem-Based Learning (PBL). On the other hand, leading universities apply CBL-like experiences to fields close to tourism (Contamination Lab, 2021). These are good reasons to start a discussion about the potentialities of an

interaction between tourism HE and CBL, as well as offer a contribution to clarify the difference between PBL and CBL (Johnson et al., 2009; Soltan, 2015).

The opportunity arises from a HE tourism workshop held at the University of Bergamo (UniBg) between 2020 and 2021, which this chapter reports about. Detailing the workshop's process and discussing its methodology may bring about more CBL experiences in tourism HE. One of the reference points used – i.e. the original definition of quality released by the International Organization for Standardization (ISO) – may provide food for thought in differentiating PBL from CBL.

TOURISM MANAGEMENT AND CBL IN THE DIGITAL AGE

This chapter contemplates both literature on CBL as a method to move "beyond the traditional hierarchy of the school and classroom" (Nichols et al., 2016; Pérez-Sánchez et al., 2020) and the vocabulary of research on e-Tourism. For instance, destination is a word used to indicate a tourist destination (UN, 2010:13), the DMO acronym is intended to mean Destination Management Organization (UNWTO, 2019), and the notion of web presence includes a consideration of how a destination is present in the Web with the DMO's official website, the pages managed by the DMO on social networking platforms and all the User-Generated Content (UGC) published about said destination (Mich & Kiyavitskaya, 2011; Mich & Hull, 2012). The emphasis laid on the digital side of tourism management is justified in a general sense by the role of digital in 21st-century life (Floridi, 2014) as well as, more specifically, by the workshop's role in the Master Course in Planning and Management of Tourism Systems (PMTS) at the UniBg. The workshop was designed within the frame of the PMTS course in IT for Tourism Services. Besides, CBL in HE is invariably associated with IT (Nichols et al., 2016; Conde et al., 2017; Vilalta-Perdomo et al., 2020; Leijon et al., 2021).

Two recent contributions in e-Tourism stand out for their relevance: one (Xiang et al., 2020) for the broadness of its scope; the other (Gretzel et al., 2020) for its call to renew the scholars' approach in a pandemic. The first contribution includes analyses on tourism as a digital ecosystem and e-Tourism curriculum design, among others. The second points out that criteria used to evaluate whether an e-Tourism research challenges the existing paradigms must include – along with historicity, reflexivity, equity, and plurality – transparency and creativity. Though referred here in short, these contributions must be mentioned because they have been crucial for the authors' approach, particularly as far as the pandemic and creativity are concerned.

CURRICULUM PLANNING FOR TOURISM HE

Curriculum planning has been an issue in tourism HE since the very beginning (Cooper, 2002; Fuchs & Höpken, 2020). Independently from the involved disciplines – economics, languages, geography, sociology, anthropology, cultural studies, heritage conservation, accommodation management, territorial management, digital governance etc., whose mix varies among HE institutions and is not the topic on our agenda – a general issue can be identified. The fundamental question is a methodological one. Can tourism be learnt in class?

The authors' answer is only to some extent, as tourism is a spatial activity. Basic notions introduced through traditional teaching must obviously be shared at the root, as only classes can provide the initial "building blocks" needed early on. But metaphorical "building blocks" cannot provide metaphorical "windows", "roof", "garden" and "swimming pool" for hosts and guests to enjoy.

A distinction among the learning stages in tourism HE may be introduced here, based on two decades of experience acquired in tourism HE at the UniBg. Traditional teaching (university classes) should be completed not only through Problem-Based Learning (tests and reports) but also through Challenge-Based Learning (to be organized in territorial workshops).

An example follows (Table 1), based on the notion of a destination's web presence.

Table 1. Learning stages in tourism management: an example in terms of web presence.

	Traditional teaching	**Problem-Based Learning**	**Challenge-Based Learning**
Who	Teacher vs Learners	Learners supervised by the teacher	Learners with DMOs
What	State what the web presence is supposed to be according to pre-existing literature, and provide a model to evaluate its quality	Evaluate the quality of the web presence of a destination by using a model, searching the Web, and quantifying results	Identify and implement solutions to improve the web presence of a destination whose DMOs the learners are working with
When	Early on	Later	Now
Where	In class, at the university	At home, possibly in groups	On site, in groups
Why	Understand what the web presence is, referring to pre-existing literature	Test the learners' skills in identifying the web presence of a destination and provide an evaluation of its quality	Test the learners' skills in terms of web presence as they become aware of the DMOs' actual needs and tasks

Learners who took part in the workshop which this chapter reports about managed to deliver a variety of digital products to five DMOs and an association among hosts in the Bergamo Alps. All participants were in their final academic year, having gathered the relevant basic knowledge from the course on IT for Tourism Services – during which they took tests and delivered reports, successfully passing the assessment – the year before. This granted that the needed "building blocks" had been put in place in advance. Nonetheless, all participants had to start nearly from scratch when addressing the actual challenges that the DMOs required them to deal with: data analysis, local actors' involvement, web content management, social communication, guests' guidance, and overtourism management.

The crucial point in the process was a continuous cooperation among the teacher who designed the workshop, the learners and local organizations. Had not the UniBg been building a network of territorial relationships throughout the Bergamo Alps for years, a cooperation like this would not have been possible. Challenges in tourism management in the area would not have been identified as potential learning issues, even less considered within the same frame, and faced together. In the end, the learners' deliveries were recognized as professional outcomes which the organizations adopted. In a word, the learners learnt by challenges.

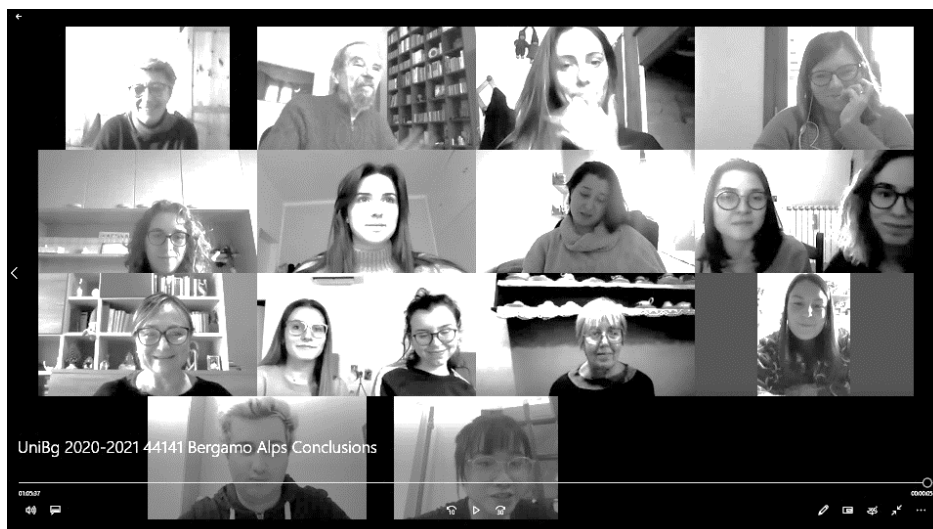## A TOURISM HE WORKSHOP IN A TIME OF PANDEMIC

As for the workshop itself, it should be noted that the Covid-19 pandemic hit the Bergamo area – where the authors' university is located – the hardest in the country since March 2020. Paradoxically, masses of tourists flocked to the Alps north of Bergamo the following summer. This placed several problems to DMOs and tourism stakeholders in the area: they had to face the challenges of informing tourists about the local pandemic conditions without driving them away, assisting guests on the spot as best as possible, and managing cases of overtourism. The title of the 2020-2021 PMTS04 workshop (number 4 among those organized by the Master Course in PMTS at the UniBg during the academic year 2020-2021) was "Hosts & Tourists in the Bergamo Alps in a time of pandemic: Web Strategies and Sharing Guidelines." It had been scheduled in June 2020 to take place from October 2020 to February 2021. In view of the

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possible persistence of the pandemic, it was designed to run on digital channels only. And in the end, this proved to be the case. Table 2 summarizes the teacher's and the learners' needs that were originally stated, those newly triggered by the pandemic, and the solutions adopted.

Table 2. Challenges to be met, needs stated, newly emerged needs, and solutions for a workshop in a pandemic.

Function	Challenge to be met	Need stated	Newly emerged need	Solution
Teacher	Understand the DMOs' and the participants' satisfaction, in compliance with the university's norms	Manage a HE tourism workshop	Manage a HE tourism workshop while in lockdown	Zoom meetings and Facebook posts
Learners	Learn beyond the traditional hierarchy, and gain the relevant credits	Take part in a HE tourism workshop	Take part in a HE tourism workshop while in lockdown	Zoom meetings and Facebook posts

The pandemic slowed down during the summer of 2020 but peaked once again in the fall. The workshop's original task was to analyse what had happened in the summer – and explore what issues the pandemic might potentially provide in the following seasons – with no restrictions. In practice, the workshop was entirely held in lockdown.

It was a group work (Table 3). Although each group developed specific skills, parallel results were collectively discussed in weekly Zoom meetings (Figure 1) and kept within the frame of the tourism challenges throughout the Bergamo Alps. Day-by-day communication was managed in a private Facebook group, to which representatives of the DMOs contributed. One of the case studies saw the involvement of a renowned Italian data agency, Data Appeal, whose platform was adopted – and even optimized – thanks to the participants' contribution.

Figure 1. The University of Bergamo 2020-2021 PMTS04 workshop's public conclusions on February 12, 2021

Table 3. "Hosts & tourists in the Bergamo Alps in a time of pandemic. Web Strategies and Sharing Guidelines." The 2020-2021 PMTS04 workshop's groups and stated challenges.

Common tasks		
Description of the relevant area Tourism development, policies, and Web strategies	Tourism data 2020 vs. 2019 Expectations for 2021	B2C digital communication during the pandemic
Connected DMO or association among hosts	**Participants**	**Challenges stated**
Val Seriana, Val di Scalve, Promoserio	Group A (two participants)	Analysis of tourism data, as provided by and retrieved from the Data Appeal specialized platform
GAL (Gruppo di Azione Locale) Valle Seriana	Group B (two participants)	Research on the residents' needs, with an accent on tourism actors
Alto Brembo	Group C (two participants)	Development of the new Altobrembo B2C website
VisitBrembo	Group D (two participants)	Social communication to improve the web reputation. Analysis of performance in the village of Piazzatorre
Bergamo B&B and Co	Group E (two participants)	Communication materials for the Bergamo B&B and Co. association, taking itineraries as the keyword
Val Vertova	Group F (two participants)	Research and proposals for overtourism management

The intended skills, all based on what the learners had learned by attending at the Master Course's first year, were different for each group according to each DMO's requests. Group A had to learn how to manage a specialized platform intended to gather tourism data and make them available to the DMO staff. Group B had to learn how to design and manage an official questionnaire, complaint to the relevant EU policies, to know about the residents' needs towards tourism. Group C had to learn how to catalogue, normalize, rearrange, and tag a large repository of digital pictures to be used in a new tourism website. Group D had to learn how to feed social communication in a time of pandemic as well as analyse the reasons why a village performed better than others in the area. Group E had to learn how to identify itineraries for guests and deliver them through a popular tourism app. Group F had to learn how to cooperate with a city to implement measures against overtourism.

The assessment was the responsibility of both the teacher who designed the workshop – in charge of the course on IT for Tourism Services – and the DMOs involved. Their satisfaction was openly stated during the workshop's public conclusions on February 2, 2021.

QUALITY, AND IMPLIED NEEDS

As summarized in Table 2, the challenges to be addressed were reasonably clear in advance – they were outlined from the beginning –, but some of the related needs were not. An initial "surprise" – a colloquial word to mean unexpected finding – came from the new burst of the pandemic, which compelled the participants to work in lockdown. More similar "surprises", however, were in store throughout the process. Indeed, some of the needs that the learners realized they had to meet came to the surface in the making of the workshop, out of the blue. When faced with these "surprises", the participants could not help recalling the ISO standard definition of quality, a definition that has long lied at the core of the course in IT for Tourism Services which the learners had attended the year before. As stated in the ISO 8402 definition, "quality is the totality of characteristics of an entity that bear on its ability to satisfy stated and implied needs" (ISO, 1994). Although the ISO 8402 standard was later withdrawn and revised within the ISO 9000:2000 family of standards, the authors believe that its ontological significance still lies in the concepts of "totality" (never focus only on what you think you will probably come across) and "implied" (admit that what you are involved in is a process: it may develop in unpredictable ways).

These are the reasons why the template used for Table 2 above – which points out challenges, needs stated, newly emerged needs, and solutions – is referred to in the following paragraphs to grasp each of the workshop's groups vs. the involved functions, that is the DMOs and the learners. This approach is useful to identify

- the main needs of the DMOs and the learners that were stated from the beginning,
- the main needs of the DMOs and the learners that were new, unexpected, or implied,
- the solutions consequently adopted by the DMOs and the learners.

IMPLIED NEEDS FOR GROUP A: TOURISM DATA SHARING, AND RELIABILITY.

Group A dealt with was perhaps the most challenging among the challenges to be met. In fact, the need originally stated was to test "the Data Appeal platform [which the Promoserio DMO subscribed to for 2021] to retrieve data about tourism in the area and share them at staff level". In the background, the general issue was that "big data analytics not only enables us to better understand the consumer market, but also propels collaboration, open innovation and value co-creation in the tourism industry" (Xiang & Fesenmaier, 2017).

Table 4. Challenge, needs, and solutions for Promoserio.

Function	Challenge	Main need stated	Main need implied	Solution
DMO	Retrieve data about tourism in the area, beyond those gathered through local information points	Test the Data Appeal platform to retrieve data about tourism in the area and share them at staff level	Normalize procedures to process the Data Appeal data and share them at staff level. Verify whether sources are fully declared, hence reliable	Accept the learners' proposals for normalization, and make use of a handbook produced by the learners for the purpose
Learners	Collect data from the Data Appeal platform and identify the DMO's needs	Lack of a normalized procedure to retrieve and analyse the collected data	Data readability (learners suggested improvements to the platform)	Creation of a handbook for data analysis, available to the DMO staff

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Promoserio is a publicly funded agency aimed at promoting tourism and culture in the territories of Val Seriana and Val di Scalve – two valleys north of Bergamo – in cooperation with local business. It currently involves forty-four municipalities, two Comunità Montane (statutory territorial associations of mountain municipalities), a regional nature park, some two hundred tourism actors and some eighty firms, two banks included. The urge to establish Promoserio was prompted in 2010 by the need to enhance and develop the potential that Val Seriana has enjoyed since time immemorial (starting from its industrial traditions) as well as a nature, art, culture, and good food destination.

The learners were asked to develop a method that Promoserio could adopt in the future to monitor the ongoing tourism situation from data collected and made available by the Data Appeal platform. The observation would be particularly useful when comparing seasons in a time of pandemic with those in previous years.

According to the Promoserio requirements, the learners organized the data they were retrieving in a series of spreadsheet files, and accordingly proposed normalized procedures to share the results at staff level. Following the learners' recommendations, Data Appeal added a new "export" function to the platform's interface. Finally, Promoserio asked the learners to write a handbook detailing instructions for the staff to carry on the job under the same procedures after the workshop would be over. The task of writing a handbook was itself a "surprise": a DMO's need that was not stated from the beginning. A newly emerged need, however – absolutely hidden before the learners got their hands on the job – emerged when it became clear that data gathered from the Promoserio staff at tourist information points throughout the territory did not match those made available by the Data Appeal platform. What was going on?

Data Appeal was asked to reveal their sources, but their answer was considered incomplete. The provisional conclusion was reached that the platform's reliability could not be taken for granted. Thanks to the learners' work, the main implied need came to light.

IMPLIED NEEDS FOR GROUP B: LOCAL ACTORS' INVOLVEMENT

Group B dealt with an online questionnaire to be designed, developed, and submitted with a view to involving local actors throughout the territories where the GAL (Gruppo di Azione Locale) Valle Seriana e dei Laghi Bergamaschi operates.

Table 5. Challenge, needs, and solutions for the GAL (Gruppo di Azione Locale) Valle Seriana.

Function	Challenge	Main need stated	Main need implied	Solution
DMO	Involve the GAL's actors	Deliver an online questionnaire to involve actors	Respect the strict GAL's policies vs. the learners' enthusiasm	Laborious cooperation with the learners
Learners	Identify the GAL's role by analysing their documents	Provide an online questionnaire to involve the GAL's actors	Harmonize the questionnaire with the GAL's policies	Respect bureaucratic requirements to the GAL's satisfaction

The GAL Valle Seriana e dei Laghi Bergamaschi is a local development agency co-funded by the European Union in the frame of the LEADER development method, with responsibilities on Val Seriana and the territories around Lakes Iseo and Endine in the province of Bergamo (hence the co-naming Laghi Bergamaschi). The GAL acronym stands for Gruppo di Azione

Locale, or Local Action Group (LAG). Hundreds of LAGs operate in Europe. The LEADER method's aim is to engage local actors in the design and delivery of strategies, decision-making and resource allocation for the development of their rural areas, tourism included.

The purpose of the questionnaire – drafted in Italian – was to investigate the actual needs of local actors and encourage development and growth processes in line with the needs and perceptions of those who live, inhabit, and operate in the area. The questionnaire was also meant to analyse the degree of involvement of the community regarding the initiatives and the projects of the GAL. Its overall content had to include the following: category, operating field, strong/weak points, opportunities for growth/development, future threats, free text answers, and communication strategies.

Another questionnaire was designed by the learners, targeting beneficiaries of previous GAL measures and their degree of appreciation. Both questionnaires were intended as parts of a broader GAL project called "Ascolto attivo del territorio" (or Active listen to the territory) which follows a bottom-up approach.

The learners started enthusiastically but very soon came across a substantial underlying need. As an agency depending on European funds, the GAL must comply with strict policies which also have an impact on apparently free tools like questionnaires. Harmonizing the questionnaires with the GAL policies proved to be a difficult task, nonetheless very instructive for university students. Bureaucracy must be learned, after all, to be successfully managed. The questionnaires were later shared among the GAL's digital initiatives and their results analysed, contributing to the agency's enquiries and activities.

IMPLIED NEEDS FOR GROUP C: WEB CONTENT MANAGEMENT

Group C addressed the northernmost destination in the valleys north of Bergamo and its web communication. In 2020 the Alto Brembo DMO decided to rebuild their official B2C website from scratch, whose original release was deemed old-fashioned. An ad hoc professional photographic campaign was organized. The learners were asked to contribute to the website development and cooperate in a WordPress environment.

Table 6. Challenge, needs, and solutions for Alto Brembo.

Function	Challenge	Main need stated	Main need implied	Solution
DMO	Develop a new B2C DMO website	Identify the most urgent gaps in the new B2C website's development	Normalize and organize heterogeneous and disorganized pictures	Establish norms for the pictures' quality and retrievability
Learners	Cooperate in building the new local website	Identify the relevant skills and acquire them	Normalize non-web-compliant pictures, and organize all pictures in the website's repository	Comply with the norms, rely on GIMP software, and tag all pictures

Alto Brembo is an association across eleven municipalities in the northern section of Val Brembana, a valley just east of Val Seriana. It also involves dozens of local tourism actors. The most urgent gaps in the development of the new website included an efficient reorganization of the pictures' repository in the back office. The photographs resulting from the ad hoc campaign had to be added to a chaos of previously gathered ones, different in size,

quality and resolution as inevitably happens when content from various sources builds up over time. The learners were asked to take care of the reorganization.

Two sorts of issues had to be resolved. One was the pictures' normalization. Standards were agreed with the webmaster, and the learners relied on a specialized application to optimize hundreds of pictures accordingly. The second issue was about retrievability. Organizing pictures in a tree, as in a file manager, or tag them with keywords? The second option was chosen. The website development was later completed, and the current release is online.

IMPLIED NEEDS FOR GROUP D: COOKING AS A COMMUNICATION TRIGGER

Group D dealt with a recently revamped DMO with responsibilities on Val Brembana, a valley just east of Val Seriana. Particularly in a time of pandemic, improving the social communication of VisitBrembo – as the DMO is called – was a priority challenge.

Table 7. Challenge, needs, and solutions for VisitBrembo.

Function	Challenge	Main need stated	Main need implied	Solution
DMO	Improve the DMO's web presence, to attract guests from outside the valley	Identify new topics for the DMO's social communication and deliver new columns, in English, too	Verify whether cooking at home is an issue for potential guests during a pandemic, hence usable as a potential communication driver	Deliver a new social column with recipes from the destination's local cuisine
Learners	Diversify social content both in Italian and English	Consider the insufficient English literacy of the DMO's staff	Gather experience in the destination's local cuisine	Cook, shoot videos, and post them with English subtitles

VisitBrembo, the main association among tourism actors in Val Brembana, involves both public and private organizations, including thirty-seven municipalities, the local Comunità Montana, the Sanpellegrino joint-stock company (owner of the world-famous mineral water brand), the local Pro Loco offices (long-established grass-roots organizations) and tourist information points in the area. Also, VisitBrembo includes VisitBergamo, the DMO for the province, in its board members, and represents the valley in a provincial network where an ancient walking path called Via Mercatorum (Latin for Merchants' Itinerary) connects Val Seriana and Val Brembana. The pandemic conditions drove VisitBrembo to conclude that the tourists' attention would turn to outdoor activities, of which the valley provides plenty. The learners were therefore asked to publish content that promoted local natural attractions. But another issue had to be tackled: potential tourists from cities throughout northern Italy remained locked down in their homes for weeks and weeks. How to consolidate their relationship with Val Brembana in the meantime, so that they would come back to the valley once the lockdown would ease?

One relevant point was keeping tourists updated about the improved pandemic situation in the valley. Another point, however – the need implied in this case – was to encourage temporarily locked down tourists to test typical recipes from Val Brembana in their own urban kitchens. A cooking column was born, regularly posted on social networking platforms. The learners gathered experience in the Brembana local cuisine, cooked in person, shot videos of themselves as if they were master chefs, and provided videos (you never know where tourists

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might come from...) with English subtitles. Satisfaction was openly stated during the workshop's public conclusions on February 2, 2021..

Another task the learners coped with was trying to explain why one of the hotels in the village of Piazzatorre (Hotel Milano) hosted 20% more guests than other local accommodation business in September 2020, while data showed that in other months of 2020 and for other hotels the downfall was invariably considerable. The learners concluded that the uptrend resulted from the village, and the Hotel Milano in particular, addressing the pandemic by implementing projects, strategies and initiatives that actively involved both tourists and residents.

IMPLIED NEEDS FOR GROUP E: GUEST GUIDANCE PLATFORMS

Group E focused on a renowned association of family hosts in the province of Bergamo, named Bergamo B&B and Co. Their challenge was how to provide guests with usable digital products that could guide them in the vicinities of the properties.

Table 8. Challenge, needs, and solutions for Bergamo B&B and Co.

Function	Challenge	Main need stated	Main need implied	Solution
Association among hosts	Provide guests with digital assistance to explore the area	Identify priority advice to guests, and a platform to rely on	Decide whether to stay on a platform previously used	State izi.travel as the association's standard guidance platform
Learners	Identify a guest guidance platform, and provide relevant content	Learn from the association about tourism opportunities in the area, and deliver the relevant content	Identify issues in the acceptance for the current platform's, and its usability for both developers and guests	Overcome usability issues for developers, and provide content despite the lockdown

Bergamo B&B and Co. has brought together extra-hotel accommodations in Bergamo and its province since 2013. Some forty private business are currently members. Many of the owners are not professional hosts, have other regular jobs, and often lack the time to introduce guests to attractions they may enjoy in the area. This is particularly true if it means providing directions and detailed instructions on trails and excursions in the area. Hence the need to offer digital products where such information may be found, downloaded, and relied on by guests.

The learners were informed that a pioneer digital product of the sort had already been delivered for Bergamo B&B and Co.by a slightly older colleague: a student from the previous academic year at the UniBg PMTS Master Course. She had developed an itinerary on izi.travel, an international platform specialized in geo-referenced audio guides, where pictures and videos can also be published. The need implied in this case – beside the stated one to learn about itineraries in the area from the association members (not an easy task itself, in a lockdown) – was to decide whether izi.travel was still going to be the development environment, and why. The teacher accepted the associations' and the learners' decision in favour of izi.travel, because the platform is easily reachable on the Web, is bilingual (national language and English) and particularly efficient on smartphones. Two brand new itineraries were developed, starting from the Adelchè Bed and Breakfast in San Giovanni Bianco (close to the town of San Pellegrino, in

Val Brembana) and guiding along trails to the hamlet of Cornello del Tasso with a riding school nearby, and climbing opportunities, both artificial – for practising on an outdoor climbing wall – and real, at different levels of difficulty.

The learners also produced a three-minutes video on the area, where clips of rock concerts by popular local bands are mixed with landscapes and attractions: young creativity & nature.

IMPLIED NEEDS FOR GROUP F: DEALING WITH OVERTOURISM

Group F did not deal with a proper DMO, as overtourism issues around the village of Vertova, in the mid-Val Seriana, was not properly managed by either an organization or the municipality.

Table 9. Challenge, needs, and solutions for Val Vertova.

Function	Challenge	Main need stated	Main need implied	Solution
DMO	Handle overtourism	Control tourist flow	Improve traffic, parking, and accommodation availability, and promote alternative destinations in the area	Limit car access, provide new parking lots, deal with the building of a new hotel, and publish a map for trails in the area
Learners	Find theoretical solutions and research the current local conditions regarding promotion and management	Few possible solutions. Research from home	Evolving and hardly foreseeable situation next spring and summer	Follow news on a weekly basis, and get in touch with the mayor of Vertova

Val Vertova is a quite small and narrow valley, well-known for its canyons and natural waterfalls or pools; visits take place mainly from spring to fall.

The main challenge for the municipality of Vertova was to handle overtourism, a problem that has been worsening in the last decade: the number of visitors in 2020 doubled vs. 2019. This has caused trouble, as the village was not ready to manage a high number of incoming people who often – particularly over summer weekends – harass residents. The increasing number of same-day visitors has neither provided benefits for the locals nor contributed to the natural environment. This question had not been properly tackled until 2019, when a new town council was elected and began addressing the problems, making a point to inform visitors and residents about new solutions.

As the number of people coming to visit Val Vertova was unsustainable, there was the need to control and especially ease the flow, to inform the people involved in timely fashion and to enhance the awareness of tourists. This is not easy, as Val Vertova does not have a DMO in its own. These stated problems were broken down into circulation and accommodation issues.

After a consultation with the involved parts, in February 2021 the council decided to enforce a controlled access system during the summer season, with a maximum of 1,200 people per day paying between 1 and 2.5 Euros each, with the possibility to buy the access tickets both online and in person; moreover, the accesses would be checked by volunteers. New parking lots and

signs have been added to ease circulation for both residents and visitors. A former industrial furnace was demolished, to provide room for a new building designed to include a hotel. Lastly, a project concerning a map of less visited mountain trails was developed, to promote a longer stay of visitors outside the overcrowded valley. The mayor of Vertova released several interviews, starting from the beginning of 2021, on local television channels and newspapers, to timely inform people.

For the learners, the challenge was to carry out theoretical research, find approved solutions regarding overtourism, and investigate the current and past conditions regarding promotion and management of the destination. The main problems were the scarcity of available resolutions for this kind of problems and the complete impossibility of carrying out any kind of research in person, as a new lockdown was imposed at the beginning of the workshop; this required the learners to rely on the knowledge of a cooperating colleague, Maria Riccardi, who was writing her final dissertation on tourism in the valley. Moreover, the circumstances appeared to be ever evolving and any forecast regarding the next spring and summer seemed hardly possible. The main approach used was to follow the news regarding Vertova every week, also with Riccardi's help; towards the end of the laboratory, a direct contact was established with the municipality and the mayor, who kindly accepted to personally explain the summer plans in detail via telephone calls.

CHALLENGES AND NEEDS

While the situation of Vertova slightly differed from the other five, all the workshop's groups were able to identify the core of their challenges only when they got their hands on the job. No previous description of the challenge, accurate as it might be, could outline the real issues and obstacles that each of the workshop's groups came across in the process, and resolved. This proved to be linked to the identification of the DMOs' and the learners' needs, particularly those that were not stated from the beginning and, rather, implied in the process.

Future directions

Likely to be the first CBL case study research in an Italian tourism HE degree program, this project undeniably proves that delivering very much needed digital products for tourism is a task that may be addressed in a CBL framework, to strengthen the very much needed – and often lacking – relationship between universities and professional work. It presents, however, some serious limitations.

First, the project's methodology was largely improvised, as problems were addressed and solved one by one when the designer and the learners came across them. The range of specific questions to be faced – from the choice of the best graphic software to normalize a repository of pictures, or the best app to provide guidance, to criteria to improve a georeferenced dashboard delivering data about web reputation – was so wide that the chapter would become excessively long and technical, should it detail all solutions adopted, the reasons why they were adopted, and the individual processes involved.

Second, the question about the learners' evaluation was not quantified. The evaluation was totally qualitative, as may be checked from the recordings of the workshop's meetings available at https://drive.google.com/drive/folders/1hgWHIDN-ZBmXmgpLBgK_fHIOh5bKlNZ5

Yet another limitation is about the background scenario, which cannot be easily replicated and tested elsewhere. The close relationship established between the UniBg and the DMOs in the Italian Alps results from a mature master's degree course in tourism and many years of cooperation between the university and the tourism territories around. Not only, the successful outcomes of the workshop depended on the degree of mutual engagement demonstrated by the parties involved. Furthermore, this chapter does not analyse the motivations of the DMOs nor does it measure to what extent these affected the outcomes of the CBL course, which may be a research topic on CBL in tourism HE in the future.

As for the University of Bergamo workflow, the workshop which this chapter reports about is scheduled to be replicated in the 2021-2022 academic year. According to the workshop's methodology, more implied needs will be identified and addressed for the challenges to be met. More generally speaking, a discussion on whether and how to include CBL as a standard component in curriculum planning for tourism HE would be welcome. Tourism is a spatial activity, for which classes and Problem-Based Learning simply do not suffice.

CONCLUSION

Tourism HE is seldom associated with CBL in literature. Reporting on a territorial workshop held at the University of Bergamo – the European epicentre for the unfolding pandemic – in the academic year 2020-2021 provides an opportunity to further advance the scrutiny and propose to include CBL as a standard component in curriculum planning for tourism HE.

The workshop involved six groups of learners, who cooperated with local stakeholders and their organizations for three months and a half. The learners addressed the organizations' challenges and identified their needs in terms of web strategies and sharing guidelines. In the end of the workshop, they delivered new digital products for data analysis, local actors' involvement, web content management, social communication, guests' guidance, and overtourism management. Their outputs were recognized as professional outcomes and adopted by the organizations.

An interesting discovery made during the workshop was that some unexpected needs that emerged in the process proved to be fundamental. In other words, it was only when the challenges were practically addressed that the actual needs and the cores of the challenges were identified. Considering this point – in the light of the original ISO definition of quality – may perhaps contribute to propel the discussion about what CBL is. Perhaps a differentia specifica of CBL is the ability to identify implied needs by learners in a hands-on approach. The identification of implied needs improves the quality of any process.

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Additional Reading

The mentioned paper by Conde et al. (2017) provides food for thought about learning analytics (LA) tools in CBL, a topic that the authors do not cover here.