



The emotional perception of landscape between research and education

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Abstract

The paper presents the laboratory activity put at the heart of the action training based on the idea of Geography as a science, whose holistic dimension fosters individual knowledge of the outside world and, at the same time, facilitates the understanding of human interaction with it. The didactic activities were performed basing them on an e-Learning methodology via the Moodle platform, a technology adopted in the e-Learning Lab of the Faculty of Educational Sciences at the University of Salerno. The laboratory involved 234 students – enrolled in the third year of the Primary Educational Sciences Degree – randomly divided into 26 groups. The investigation conducted through the laboratory availed of images that, far from being a mere instrument, involved higher cognitive processes, essential for the completion of a significant training process.

The methodology adopted and the creation of a virtual learning environment are completely in line with the constructivist pedagogy that considers cooperation, collaboration, sharing and negotiation of purposes and meanings as key drivers for a really effective teaching. Through the lab experience, the learners were allowed to investigate a lived-acted space by identifying landscape elements symbolizing certain emotions. Making use of a photo-elicitation technique, the research helped them to gain a greater awareness of the landscape as a result of the interactions between man and nature, and turned out to be an effective tool for knowledge construction and training.

Keywords: Constructivist Learning, E-Learning, Emotion, Landscape, Moodle Platform, Photo-Elicitation

1. Introduction

Teaching geography is often laborious. The students may find it not very enjoyable when they come to learn a list of physical and human phenomena, or a synthesis of encyclopedic information with quantitative-qualitative data of places and inhabitants. Indeed, the pivot of geographical knowledge, to be included into didactics, consists in disclosing an explanation-comprehension of different places and the phenomena occurring in them, together with the mutual relationships between populations and places and, therefore, in trying to feature distribution, structure and underlying meanings of every scale of world regional diversity (Corna Pellegrini, 2008; Haggett, 1993).

The methodology applied to this didactic path is based on active geography, which is no longer adaptive to a particular environmental datum and/or an established socio-spatial order, but to a transforming geographical space, namely a “geography of becoming and being” (Trono, 2006, p. 171) and “to communicate the message about new geography education in a smart and modern way” (van der Schee, 2012, p. 12).

The idea underlying this research is that the teaching of geography must interlace with everyone’s experiential reality in order to play its true function, that of gaining knowledge on the environment, but also providing a path to enrichment, self-knowledge and knowledge of others (Sensini, 2012).

Therefore, a key focus of the research is the landscape-emotion relation. The European Landscape Convention states: “landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”. Here perception is meant as an intangible characteristic, but also a source of emotions that encourages the student to develop his/her ability to comprehend the emotional values related to the place of life (Castiglioni, 2012). Although the term “landscape” is well known, the meaning attributed to it may differ from the scope of the reasoning and the point of view from which it is observed, as well as the sensitivity, education and specific interests of the observer, who may take into consideration the landscape itself. This may be an opportunity to innovate conceptual

frameworks and to stimulate useful reflections applicable to their living environment (Franceschini, 2007). Finally, legitimizing a methodological approach centered on the active observation of landscapes, the technique of photo-elicitation is adopted to claim a connection between landscape and emotion, which is accomplished by visual factor (landscape picture) and emotional interaction, and also by cultural encoding deriving from the subjective experience of the viewer. In this learning path, the individual experience becomes collective (group) experience through the sharing and acceptance of the emotion generated by selected landscapes.

The hermeneutical function of landscape in a pedagogical context is also worth highlighting, regarded as “emotional education” (learning to “read” or to detect the emotional sign in landscape) and cognitive aspect leading to a deeper understanding of natural and anthropogenic aspects.

2. Landscape-emotion

In the age of globalization – whether here or elsewhere – the sensory experiences (the internal reverberation) are landings that help perceive the space where we live. Covering a landscape, a space, means to take our past and our experience in the world, with all the visions (and emotions) that are part of our cultural background, almost as a map of our values. According to Nussbaum’s meaning, emotions: “shape the landscape of our mental and social lives. Like geological upheavals in a landscape” (Nussbaum, 2003, p. 1). They manifest “in relation to” an object, but also embrace the person’s own commitment to the object and make them see their object as invested with value or intrinsic worth (Nussbaum, 2003, pp. 30-33).

Our culture determines emotions as structures subject to the individual’s public and private relationships, which inspire actions and encourage emotional participation in the community we belong to (Oatley, 2007).

Among the extensive bibliography on landscape, a piece of work by Eugenio Turri (1998) has been considered, suggesting the metaphor of landscape as a “theater” in which people play the role both of the actor and of the

audience towards landscape. The actor constructing landscapes and the audience observing, enjoying them, are inseparable and essential for the construction of a proper relationship with the places of life, recognizing a “priority to the homo figurants on the homo faber” (p. 11). He argues “that it is no coincidence that the best characters, aesthetically most celebrated, that best express harmonization between human work and natural forms are those in which man shall be assigned an important function as a spectator” (p. 17).

The core concept is represented precisely by the relationship between landscape and emotion. The emotions in the geographical meaning pertain to “phenomena, objects, places and terrestrial individuality” since they promote emotionality and emotion for the human soul (Ruocco, 2010). Indeed, as the scene of our existence, the landscape is an inseparable part of the reconstruction of our living experience. Our experience of the world takes place in a ceaseless oscillation between external landscape (pertaining to geographic sciences) and internal landscape (whose external part is a reverberation): a complex interplay between perception and sign, as well as a continuous encounter between the former and the latter (Socco, 1996).

Merely reduced to its biological essence, the attraction exerted by landscapes on man (the aesthetic moment, related to the ability to perceive, feel, live an emotion) is a confirmation of his being in communication with the world. It is a kind of imperative and vital communication, which finds its daily motivations in nature’s silence as well as in urban street roars. However, a question arises: are natural landscapes – places which are outside the human world – far more fascinating to men than man-made landscapes, where they express their ability to build environments depending on given needs?

Looking at a landscape is never a naive contemplation. It is a rather highly selective process, where an observed reality is filtered through feelings and emotions – choosing the information received consciously or unconsciously – and is re-edited with all the observer’s visions and cultural background, using a personal map – shaped in and with the individual – and changing representations into

symbols. The place is finally re-created as a heterogeneous set of elements through archetypical images with strong emotional and emotive meanings. As early as the moment of perception, the mirror of our territorial consciousness comes into play, the act of observing the landscape reflects our action, our living and acting in the territory (Dupont, Antrop and Van Eetvelde, 2015; Plutino, 2010).

All of us have an inner cartography given by perceptions of the physical world we live in. There is an “another” space made of memories, emotions, unconscious, which is revealed to the individual while crossing or being in front of open spaces. The individual cannot inhabit the territorial reality “without thinking of the image of this reality” (Raffestin, 2005, p. 84).

This rediscovered occurrence is inscribed in the emotional geography: “a different type of approach (physical and mental) that the observer puts in viewing, attending, perceiving and enjoying the landscape, also assuming its great natural and / or anthropogenic variability” (Gregori, 2010, p. 66). It is also a new way of thinking about geography theorized by Anderson and Smith (2001, p. 2) in their editorial: “the human world is constructed and lived through the emotions. [...] recognizing the emotions as ways of knowing, being and doing in the broadest sense; and using this to take geographical knowledges – and the relevance that goes with them – beyond their more usual visual, textual and linguistic domains” (2001, p. 3). They also highlight “an awareness of how emotional relations shape society and space” (2001, p. 5). Afterwards, other researchers have welcomed this “emotional breakthrough” (Bondi, Davidson and Smith, 2005), taking into account the “emotional space”, (Davison and Smith, 2008; Bondi, 2005; Bruno, 2006; for Italian geography see works by Gregori, 2006, 2007, 2009) where: “Emotions compose, decompose, and recompose the geographies of our lives” (Smith, Davidson, Cameron and Bondi, 2009, p. 10).

The geographical emotions activate the ability to see the landscape from an unconventional perspective, and also to gain intangible values that exalt a geo-emotion-knowledge dimension of the landscape.

3. Methodology

The pedagogical paradigm here adopted is based on the constructivist learning theory – which operates a subjective construction of meaning – developed on active learning and intense social interactions, namely, essential ingredients to qualitatively maximize any type of educational path. In particular, basing it on a methodology suggested by Jonassen (1994, 1998) greater effectiveness has been given to i) knowledge construction rather than reproduction; ii) contextualization rather than abstraction. Moreover, both reflection and reasoning have been encouraged to let the knowledge construction derive from context, content and cooperation.

The geography lab activities were carried out via e-learning (Holmes and Gardner, 2006; Calvani and Rotta, 1999; Carletti and Varani, 2007) supported by the Moodle platform, technology used in “modules” – designed to complement the learning objectives of many undergraduate courses in geography and related social and environmental sciences (<http://www.aag.org/cs/cgge/modules>) – in The Center for Global Geography Education (CGGE).

Technology made it possible to respect and emphasize learners’ individuality within an independent but at the same time engaging space-time dimension, in a learning community rich in stimuli. From this perspective, learning became a way of searching, selecting and organizing information, used to respond to cognitive questions, to solve problems and complete tasks.

The geography laboratory was intended as targeted research, a recognition of the territory, an autonomous investigation conducted according to shared rules. It provided multiple purposes: enriching the subject with knowledge complexity, fascinating minds for a given event or phenomenon, capturing and holding the individual’s curiosity, stimulating students’ interest in discovering, as well as getting them involved into action, and becoming the protagonists of cognitive and operative experiences which are crucial for

their human and professional education.

This is a “geographical perspective” that led the learners to seek and find a meaning to their lived and acted space, and that, at the same time, helped them to represent their “geographical being” in the world (Vallega, 2004, p. 438). Through a landscape exploration – as a product of mutual influence between nature and human community – the individuals also build their inner “space”, triggering a virtuous circle where the landscape is a cultural construction contributing to the individual’s identity-making process.

In this experiment, the teacher has the role of “facilitator” of the learning process. The model adopted by the laboratory radically changes the role of the teacher (Donnelly and McSweeney, 2009) with respect to traditional university teaching, meant as a repository, a “bank capital” of knowledge and practices.

As far as contents are concerned, the laboratory was structured with disciplinary objectives of: 1) recognizing the capacity of a landscape to be the generator of emotions in oneself and in others; 2) identifying and describing all elements in a landscape; 3) detecting intangible aspects that characterize the landscape; 4) understanding the diverse values of a place.

The laboratory, which involved 234 students – enrolled in the third year of the Primary Educational Sciences Degree – randomly divided into 26 groups, was designed as an extended task consisting of closely interconnected individual and group activities, each of them allowing groups to complete the assigned task.

The research was conducted relying on the adoption of a method of knowledge elicitation based on images called Photo-Elicitation (i.e., one of the most widely known and frequently used techniques using images, photos but also videos, paintings or any other type of visual representation and asking the informants to comment on them), in order to collect more qualitatively complete data compared to those obtained by using other forms of enquiry.

Photo-elicitation represents one of the core components of our laboratory activity, and discussions and sharing among the focus groups revolve significantly around the images. It is assumed that through photo-elicitation the images observed, the meaning(s) we attribute to them, the emotions they arouse in the observer, and the knowledge they elicit generate insights that do not necessarily or exclusively correspond to those obtained in verbal enquiry. A pivotal aspect of such an approach is not so much studying the images, as analyzing how informants respond to them, attributing personal and social meanings and values (Ruby, 1995). Also Barthes (1981) stresses the polysemic quality of images, i.e. the fact that they have many potential meanings and interpretations.

The laboratory activity provided two phases with different objectives.

In an initial stage of the individual work, the students were asked to comprehend the basic emotional geography theme through a video, linked on the platform, which showed them its essential lines. Subsequently, another key goal of the first stage, aimed at explaining the concept of landscape (and the difference between landscape and view). This step involved the students in a specific web research (using different photography social network sites such as Flickr, Universo fotografico, Allposters, Google Images) with the aim of choosing four landscape images to be associated with four emotions, three of them assigned by the teacher (anger, sadness, love-joy) and a fourth one chosen by the students (Figure 1).

The second phase revolved around a group activity and set further objectives. Through constructive on-line discussions, the students had to negotiate on the four landscapes representative for the group, and to highlight the single elements of a landscape that contribute to making it meaningful from an emotional point of view. Then creating an “emotional map” (synthetic image of landscapes purposed to representation-identification at an intimate level

of a personal emotional landscape) making it possible to show the occurrence of natural symbols and human artefacts in an emotional grid, which motivated the choice of such a single landscape element (Figure 2).

In creating the map, the students were not provided with rigid and binding schemes but were rather asked to freely perform their creative and original choice within the group, with regard to the most fitting technological and organizational solution for describing the content.

4. Results of laboratory activity

The analysis and interpretation of the final work produced by the students involved in the various phases of the laboratory highlight the significant and original features of our research, based on the meanings they attributed to either the images given to them or the ones they chose freely.

Their feedback to all the images allowed us to explore the intentions of the students / informants more intensively when they picked out their pictures, and the meanings they attributed to each one, in an effort to understand their relationship with the themes.

The above remarks lead us to emphasize, that the picture must be considered not a point of arrival but of departure in exploring students’ understanding and perceptions.

In the specific case, for example, the comments contained in the final laboratory work, show an interest that can be classified into two sets of values:

- denotative aspects: what does the image depict? “built environments” (‘church’, ‘square’, ‘school’, ‘sport’, ‘home’, ‘outer’, ‘shop’, ‘other’) or “natural environments” (‘green’, ‘detail’, ‘garden’, ‘rural area’, ‘desert area’, ‘mountain area’, ‘sea-water’);
- connotative aspects: why is the image chosen?): personal relationship, collective identity, social relationships, functional value, aesthetic value, ecological value.

The screenshot shows a web interface for an eLearning Lab. At the top, there is a banner with the text "elearning_lab" and "Università degli Studi di Salerno - facoltà di Scienze della formazione". Below the banner, there is a navigation bar with "eformazione" and "Laboratorio di geografia: la geografia emozionale". The main content area is titled "Indice degli argomenti" and lists three topics:

- 1 La geografia emozionale**: La geografia emozionale racconta paesaggi naturali ed urbani, aperti e chiusi, come atmosfere dell'animo.
- 2 Il paesaggio geografico**: Il sentimento che si prova di fronte ad un paesaggio attiene alla natura dell'uomo o alla sua cultura?
- 3 Le emozioni e la geografia**: I luoghi possono provocare forti reazioni emotive. L'osservazione dei luoghi quanto è influenzata dalle emozioni? I paesaggi incidono nella formazione della mappa emozionale?

The page also includes a sidebar with navigation options like "Attiva modifica", "Impostazioni", and "Ruoli", and a calendar for May 2010.

Figure 1. Laboratory Home Page created by the teacher.
Elaboration on eLearning Lab data.

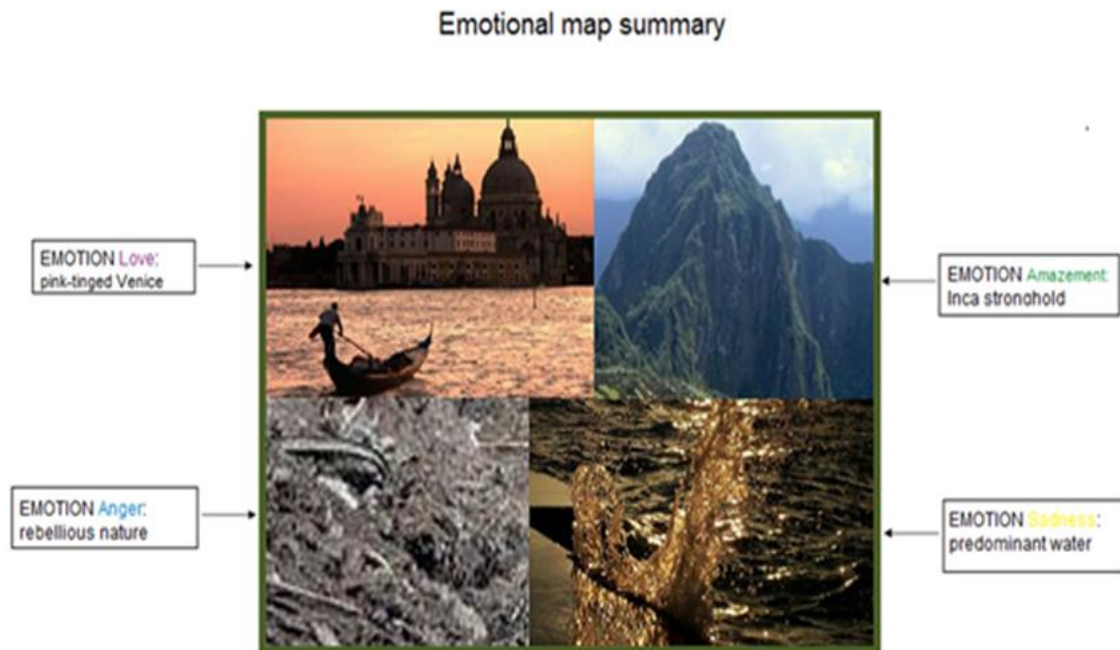


Figure 2. Emotional map summary: Inca stronghold: amazement; Water: sadness; Venice: love; Landslide: anger. Elaboration on eLearning Lab data.

Regarding the above categorization, and especially the denotative aspects, the selection of images privilege landscapes in which predominantly natural environments are combined with built up environments, to denote the close interaction between man and nature and the awareness of a growing, controversial and often irresponsible relationship between environment and artefact.

The choice of primary elements is significant such as water, land or even light, sunset, which depending on the context take on different and conflicting meanings.

This leads us to analyze the connotative elements and therefore the perception elicited by a given landscape, as well as possible reasons behind the selection of a picture and the value attributed to it.

In this respect, we notice a choice strictly linked to the immediacy of the image, understood both as aesthetic value, for example, the Venetian Lagoon, and as functional value and collective identity, e.g. pictures of building

speculation, and the ecological and social value as in some photos depicting environmental disasters.

To this end, it is interesting to compare what the images show and the frequency with which certain elements in the images recur, together with relevant comments from the affective-emotional standpoint, namely to specific emotions such as sadness, love, amazement and anger.

In Figure 3 there are tables reporting examples of the final work presented by the students involved in the laboratory through the eLearning platform.

In the experience of our laboratory, it is also worth mentioning how photo-elicitation played a major role in promoting a comfortable space for discussion, in breaking down relational barriers, in generating insights into students' cognitive frameworks and their relationship to the group, and in producing answers or comments much more related to the "their immediate social and emotional sphere".

The laboratory experience proved doubly positive in terms of the implementation of the dictates of cooperative and collaborative learning and for exposing students to a geography that can add value to their living in a “space” also refining the geographical jargon from the conceptual point of view. The creation of a fully “networked” and highly inclusive learning environment, allowed everyone to develop his or her skills without causing emotional tension or activating the so-called emotional filter.

In fact, in this teaching method, the teacher is able to create a tailor-made “space” to meet the learners’ needs, where they can be freer, more responsible and more respectful of others’ work.

Analyzing the log files, 242 teachers’ interventions were recorded in the communication, aimed at supporting group activities, to guide and/or stimulate observations, while favoring heuristic processes, and privileging real investigatory situations for them to build problem-solving processes. The action of tutoring and scaffolding by the teacher, stimulated students’ collaborative reflection and oriented their outcomes both collectively and individually. The technological support was perceived as an integral part of the “cognitive environment” which aimed to modify learning and thinking processes (Varani, 2001). At every stage of the activity, collaborative work between students and teacher (No. 9,398 interventions from students and No. 2,450 from the teacher) was promoted, activating an accurate process of planning and/or design of all didactic segments. The teacher, checking the group’s activity in a continuous and unobtrusive way, managed to calibrate the rhythm with which conceptual artefacts were being created.

The new teacher is not only regarded as a guarantor of the quality of teaching materials but especially as a moderator of debates and discussions, guidance counsellor for students to

reach deeper analysis levels, and cognitive and motivational support in all the proposed activities. Indeed, this was a goal that the students attending the course achieved autonomously, although with the constant presence of the teacher coordinating and guiding them.

The sense of responsibility and autonomy they were entrusted with also produced some interesting and unexpected results:


- *peer-tutoring*: group N, for instance, having defined a possible pattern or structure in a clear and detailed way, decided to make their work available to other online groups, welcoming a further task assigned by the teacher to draw up a document with an analytical and detailed explanation of the procedures for others to use;


- *creativity*: the final works presented some diversified and original organizational structures, technological solutions and graphic techniques, which are emblematic manifestations of all forms of creativity;

- *active participation*: the intensity of relations occurred in some groups culminated with the implementation of operating segments that went beyond their assigned duties, and the creation of videos, presentations and documents useful for an in-depth scientific examination;

- *positive interdependence*: there were actions of reciprocal support, praise and encouragement within the groups able to maximize the success of all the members, in a community and non-competitive perspective, thus enhancing the value of competences and distinguishing skills.

During the Geography lab, the Forum section assumed different functions: firstly, it was presented as a primary communication tool for task completion.

	Student:	Review:	Group emotional comments
 <p data-bbox="309 577 448 599">Emotion: Love</p>	Montefusco Maria	<p data-bbox="733 312 997 485">This landscape represents a beautiful view of St. Maria della Salute Church at sunset. I have chosen this picture as a symbol of love because of personal memories connected with Venice, namely the city of love <i>par excellence</i>.</p>	<p data-bbox="1013 312 1359 437"><i>The sunset is what strikes me most in this image. The colors are warm and soft. The gondolier seems like he is sailing towards his sweetheart on the wings of love. St. Maria della Salute</i></p> <p data-bbox="1013 459 1359 825"><i>The picture fits our task as a perfect synthesis (or nearly so, not wanting to consider the consequences and the inconvenience of the phenomenon of 'high water') between natural and anthropic elements. It demonstrates how man has been able to shape the lagoon, making it one of the most admired in the world and at the same time how he managed to adapt themselves to one of the most unconventional environments. Colors are warm water flows sweetly and the gondola boat is like ploughing it — wishing to reach his love, as suggested above.</i></p>
	Website source: www.google.it		<p data-bbox="1013 825 1359 1041"><i>I disagree with you. Venice is a romantic place but also one of the most polluted city. There is a terrible smell along the canals and I can hardly understand how people can live there. This is probably why always fewer tourists are attracted to gondola rides! No wonder that the plague struck it in the past.</i></p>

Picture evaluation chart with group emotional comments			
	Student:	Review:	Group emotional comments
 <p data-bbox="294 1763 474 1785">Emotion: Sadness</p>	Brenca Tiziana	<p data-bbox="733 1289 997 1742">Water is the predominant element in the earth's crust as well as in our lives. So it seems to be in this picture. There are vast stretches of water molded by light providing symmetrical balance to the other elements of the landscape, which appears as surreal, fascinating, almost mysterious. An abstract world, emerged or submerged in water, but also projected into an ordinal landscape geometry, apparently a deserted place, in spite of human settlements like the pier. The picture makes me feel a sense of melancholy and loneliness, because there is no life and time seems to stand still. A never ending moment.</p>	<p data-bbox="1013 1267 1175 1289"><i>Simply beautiful...</i></p> <p data-bbox="1013 1332 1359 1591"><i>Hi, I fully agree with Tiziana, this picture is really beautiful; it expresses the beauty of the Venetian lagoon at its best. The sunset with its warm colours and the presence of clouds chasing each other, convey a feeling of pleasant melancholy. Also, the splash of water that hits the mainland is very suggestive; metaphorically it could reflect the encounter between man and nature.</i></p> <p data-bbox="1013 1591 1359 1731"><i>It is such a stunning picture, the sea, the sky, the water colours and details may seem deceptively simple elements, but instead they perfectly represent the indescribable sense of the image.</i></p> <p data-bbox="1013 1731 1359 1806"><i>Amazing! Looking at it I can feel as if time had stopped! Everything around is still while the sea keeps moving.</i></p>



 <p>Emotion: Amazement</p>	Student:	Review:	Group emotional comments
	Grimaldi Elena	At a first sight the picture conveys amazement and greatness. This site has survived centuries for us to admire, as an evidence of their population' skillfulness and culture. A monumental construction which appears to be almost intact, undamaged by weather and natural disasters. Machu Picchu is a fortress, a stronghold, dwelling on the Southern Peruvian Andes and is one of the most spectacular archeological sites in South America. The Inca ruins are located 2,430 meters above sea level. Its architecture is arranged on wide parallel terraces around a vast central square, connected by numerous stone stairways.	<i>I agree with you, this picture gives me a great sense of amazement, perhaps arousing both from the beauty of this construction and the population's ability. As it would be while in front of Egyptian pyramids, whose building was only due to men's work, bare hands and no technological equipment.</i>
	Website source: www.google.it		<i>I agree with you on the sense of amazement in front of such beauty and skillfulness.</i> <i>Other places like this make me feel a sense of amazement and astonishment: Egyptian pyramids and Paestum temples. They bear witness to man's ability to create such a stunning construction from the past, far from mod-</i>
 <p>Emotion: Anger</p>	Student:	Review:	Group emotional comments
	Grimaldi Elena	May 5, 1998: mud was the undisputed master and ruler of the mountain. The mud flowing down the mountain with unheard power and violence ever, swept away everything in its path, men, women, old and sick. Red like blood, it came to the doors and knocked down the house walls, bringing people to their knees after they had devastated with irrational actions the same mountain from which it was coming down. It is apocalyptic scenery which arouses anger. Man stupidly behaves like a superman, they sometimes settle down on dangerous or unsafe territories, neglecting the power of nature that cannot be controlled.	<i>I agree with you. This picture gives me a deep sense of anger. Let us think of the many people who lost their lives, houses, everything of a sudden. No time or chance to realize what they were going through. All that pain due to man's negligence, which disrespectful of nature, use and exploit it indiscriminately. Common sense would have avoided all that suffering.</i>
	Website source: www.google.it		<i>This image strikes me with a deep sense of anger. I see the dark mud covering everything like a flood. The place is deserted and the houses are about to fall down. This scenery reminds me very sad memories connected to that tragic event that still today touches the heart of many people coming from that area.</i>

Figure 3. Tables reporting emotional comments expressed by group I¹ on landscape images. Elaboration on eLearning Lab data.

¹ Group I was composed of the following students: Tiziana Brenca, Mara Bruno, Giuseppina Siano, Fortunata Gallucci, Maria Montefusco, Marianna Di Riso, Patrizia Zoppo, Elena Grimaldi, Marta Porfidia, Giuseppina Salvati.

Here is an example of directions given to the groups:

Choices in the forum will give rise to the following:

- i. Negotiation of chosen images and associated emotions;*
- ii. Identification of a landscape element that better represents your emotion.*

At the end of all discussions, each group will have to submit two documents of landscape analysis and observation:

- iii. In the first document, introduce four images of the selected landscape and the emotions associated with it, motivating the emotional association;*
- iv. In the second document, include an image for every single “natural element” specifically representing an emotion; repeat for all four emotions.*

Secondly, the forum was conceived as an area including the following functions: from space for comparing different perspectives to the history of discussions, from the room for exchanging and sharing documents and resources to the work and collaboration environment.

The discussions in the forum supported a collaborative knowledge construction, involving the learner in a cognitive, social and emotional dimension, and resulting as being relevant for their learning. Indeed, the final stage of the work presentation showed evidence of learning progress.

The laboratory actually aroused appreciation among the peers both in terms of learning and geographic content. Eventually, the learners addressed a variety of messages through the platform:

- message n. 1

“I agree and recommend another geography lab for next term!”.

- message n. 2

“Thank you for this challenging task, for the organization, and the helpfulness and steady support! Thank you so much especially for the emotions we shared!”.

- message n. 3

“This lab has been a wonderful experience and has allowed me to get to know the people I worked with. I could investigate such an important topic like emotions, express my point of view and get to an agreement with others. I wish to thank everyone for your collaboration and engagement, which brought us to create these works, but most of all, our professor, who gave us this opportunity for the first time!”.

Finally, as far as the geographical aspect is concerned, the students achieved the pre-determined goals, i.e. a) identification and description of elements in the landscape; b) identification of the intangible aspects that characterize it (emotions); c) understanding of different values of a place; as also reflected in the comments extracted from their works reported below (Figure 4).


PICTURE	EMOTION	GROUP	COMMENT
	Anger	F	"Man refuses to understand that there are natural borders which must not be trespassed. Building houses in dangerous places, causes hydrogeological instability which, apart from the natural ones, are connected to the geomorphology of each territory, and are especially connected to human actions, due to building of new infrastructures. The uncontrolled urbanisation and fire hazards increase these instability phenomena".
	Anger	H	"Picture taken in Campania, it reflects degradation, disrespect and poor protection, which we are forced to live with...A feeling of anger and impotence but also a willingness concretely to change and act, sensitizing new generations to love and respect nature".
	Amazement	I	"This conveys amazement, greatness. Surprising is the population's ability and skills able to perpetuate their traces and culture over the centuries through this monumental construction. Surprising is also the fact that it is still intact and undamaged to weather, even though located at 2280 metres above the sea level. It includes a series of terraces built around a central square, and connected to them through numerous stone stairways".
	Anger	P	"...at the degradation, at the gap between rich and poor, unliveable places and earthly paradises, between periphery and city centres, skyscrapers, which look like they want to move away, and favelas".
	Anger	R	"Skeleton of a monster which violates the nature, a wild man-made artefact disrespectful of time and space, son of building speculation".
	Fear	R	Tsunami - Finally nature shakes off all the anthropic elements, undresses and gets its revenge...The mountain, like a wounded giant, wakes up, and man pays for their faults and negligence.
	Anger	T	Internment camp - "Fences, watchtowers, rail tracks; the welcome of the arch at the entrance is spoiled by the sharp structure of the building, while the fog hides the landscape".
	Sadness	T	"Man as the author of the destruction of a heavenly corner and as the victim of their same actions...We hear about greenhouse effect, global warming, melting glaciers, though the powerful of the earth keep talking of these dangers, its protection concerns all of us".
	Anger	U	"The risk of destroying the ecosystem...the intention of man to impose his laws to nature...it sometimes causes destruction or ecosystem alteration, thus provoking serious consequences for the entire planet population".
	Amazement	U	"Centuries-old olive trees as an evidence of how the power of nature combined with man's action can create artworks...the tree trunk takes suggestive shapes which nature has modelled in time together with man pruning".

Figure 4. Geographical comments to pictures. Source: elaboration on eLearning Lab data.

5. Conclusions

The didactic activities performed by the students of the Faculty of Educational Sciences at the University of Salerno – randomly divided into 26 groups – were part of a training activity on the study of Geography. The latter is seen as a holistic science fostering the comprehension of human interaction with the outside world and helping to represent such knowledge and awareness through a correspondence between images and values, landscapes and emotions.

The laboratory model envisaged the creation of a virtual learning environment, whose didactic activities were based on an e-Learning methodology via the Moodle platform, a technology adopted in the e-Learning Lab.

The methodology applied to this learning path was based on active geography, an approach that takes into account the experiential and subjective dimension of the constructivist paradigm that encourages knowledge construction through observation of the context.

The connection between landscape and emotions, was therefore investigated by referring to the emotional geography, using 4 landscape images (including one proposed by the learners), and adopting a technique of photo-elicitation.

All the objectives that this research set out to reach were attained through the two phases of the laboratory activity, which were conveyed into a process of knowledge construction and exploration of the relation landscape-emotion, in knowledge sharing via the virtual learning environment, and eventually, in the creation of an “emotional map”.

The effectiveness of knowledge sharing and collaboration among the groups of students involved in the laboratory, has revealed interesting elements such as autonomy, active participation and creativity, while confirming the importance of the teacher in their other role of “facilitator” of the learning process.

It can therefore be said that the laboratory experience has led to positive results both in terms of the pursuit of educational objectives, and the development of the cognitive, social and emotional sphere of the learners, which we consider of great importance for learning

(Taylor and Larson, 1999; Chung and Moore McBride, 2015).

This experience can be also seen as an initial phase of a larger project on the landscape enabling one to predict, – as Turri says – the ability to “learn to act”, to attain a sense of protection and responsibility towards it.

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