


Trying to keep in touch with Nature during the COVID-19 pandemic: an experience from the University of Trento

Maria Giulia Cantiani 

Department of Civil, Environmental and Mechanical Engineering, University of Trento, Italy.

How to cite: Cantiani M.G. 2024. Trying to keep in touch with Nature during the COVID-19 pandemic: an experience from the University of Trento. In: 10th International Conference on Higher Education Advances (HEAd'24). Valencia, 18-21 June 2024. <https://doi.org/10.4995/HEAd24.2024.17237>

Abstract

Italy was one of the Western countries more seriously affected by the COVID-19 pandemic. To counter the outbreak, government resorted to different types of precautionary measures and restrictions. Education, at all levels, from nursery school to university, also suffered the repercussions of the pandemic, with the halt of classroom attendance and the move to distance learning. At the University of Trento, where I teach Ecology, the second semester of the 2019–2020 academic year took place entirely via online teaching, while in the following academic year it was possible to resort to a blended modality. The paper illustrates the initiatives I used to facilitate interaction between students and to set up a mutual dialogue between students and teacher, with the aim of creating a sense of community and of bringing students, isolated and shut up in their homes, into contact with the natural environment.

Keywords: COVID-19 pandemic; lockdown; distance learning; nature

1. Introduction

At the beginning of 2020 Coronavirus Disease (COVID-19), first identified in Wuhan, Hubei province, China, rapidly spread all over the world, quickly becoming a global pandemic. To counter the outbreak, national governments resorted to different types of precautionary measures and restrictions, such as social distancing, the use of protective masks, mobility restrictions and the shutting down of main economic and industrial activities with the exception of essential businesses (Atalan, 2020, Wilder-Smith & Freedman, 2020). Education, at all levels, from nursery school to university, also suffered the repercussions of the pandemic, with the halt of classroom attendance and the move to distance learning, in most countries and for long periods of time. Citizens, forced to adopt a “new normal” lifestyle, (Uchiyama & Kohsaka, 2020) were heavily affected, not least psychologically (Davico et al., 2021), with consequences on mental health that are still not exhaustively highlighted even today, especially as regards young people.

Italy was one of the Western countries more seriously affected by the pandemic, which lasted from February 2020 to February 2021. The first wave, from approximately end February to July 2020 (159 days), was particularly severe, and was followed by a second wave, lasting from August 2020 to end February 2021 (206 days) (De Meo et al., 2022). During the first wave, the lockdown and quarantine measures in place were extended by approximately 50 days, while during the second wave the Italian government, following weekly assessments by the Italian Ministry of Health with the support of Regional Prevention Departments, colour-coded the country's regions according to their risk factor, the colour red representing those regions where the number of positive cases and the virus circulation was particularly high. During the first lockdown in 2020 and in the red regions in 2021, public green areas inside Italian cities were closed due to the restrictive measures imposed by social distancing, forcing people to stay at home. If, in early March 2020, sports activities and walking or cycling in public urban green spaces was allowed, alone or in the company of members of one's household, by the end of March, the rapid increase in COVID-19 positive cases led the government to forbid walking farther than 200 m from home, permitting households to leave their home only for serious and urgent reasons (De Meo et al., 2022).

In such a situation, with schools closed throughout the country during the first lockdown and in the red code regions during the second lockdown, teachers and students had to deal with a truly challenging task. At the University of Trento, where I teach, the second semester of the 2019–2020 academic year took place entirely via online teaching, while in the following academic year it was possible to resort to a blended modality, with around 50% of the students present in the classroom and the remainder connected from home. While distance learning, on the one hand, constituted a precious tool that allowed students and teachers not to interrupt the educational process, on the other, it confined people to their own homes, producing a whole host of new problems with which we had to deal, not least the difficulty encountered by students in interacting with each other and with the teacher. Added to this, in the case of disciplines relating to the forestry–, agricultural–, and environmental sciences, or environmental engineering, there was an aggravating circumstance: the physical distance from the main object of study, that is, the natural environment.

Practical field exercises have always constituted one of the characterizing aspects of the Ecology course that I teach in the third year of the Degree Course in Engineering for the Environment and Territory of the University of Trento. Students ask, already on the first day of term, whether there are fieldtrips planned, and when (Cantiani, 2019). In the 2018–2019 academic year, in particular, a "Summer school on forest management and ecosystem services" had been successfully tested, which created numerous expectations in the students of the following year, who suddenly found themselves stuck at home instead, two days after the start of lessons.

The paper illustrates the initiatives I used to facilitate interaction between students and to set up a mutual dialogue between students and teacher, with the aim of creating, despite everything, a

sense of community. In fact, the creation of a lively community is a crucial prerequisite for an effective educational process, in any area of knowledge (Lugaresi, 2023). Another of my desired aims (and one that in the end proved intimately connected with that mentioned above) was to bring those young people, isolated and shut up in their homes, into contact with the natural environment. This ambitious goal required a great deal of imagination and a significant ability to adapt both on my part and on that of the students, and was obviously pursued with diversified approaches over the two academic years involved, corresponding to the two waves of the pandemic.

2. Strategies to overcome constraints consequent to the pandemic

During the first wave of the pandemic, the University of Trento decided to suspend lessons before the end of the first week of courses. A few days later, students and teachers were informed that teaching activities would continue online. The solutions proposed were: online lessons in synchronous mode or online lessons in asynchronous mode. However, as a result of the obvious organizational difficulties, the suggestion was to try, at least in a first phase, the asynchronous mode, for which precise instructions were given. During the second wave of the pandemic, at the University of Trento it was possible, in the second semester, to hold lessons in the classroom, in blended mode. Naturally, students had to respect social distancing (seats were assigned at the beginning of the course and had to be maintained) and both students and teachers were required to wear protective masks during class hours. Furthermore, between lessons there was an obligation to air the classroom. Since the lessons were held in blended mode, it was necessary to equip the classrooms with the necessary IT tools; this required a major organizational effort on the part of the university staff in charge. With everything perfectly ready before the start of lessons, those students who wanted—or were able—to do so began following lessons in person while the rest did so from home, asking questions, interacting with their classmates present in the classroom, and participating actively in lessons: a great progress compared with the previous academic year!

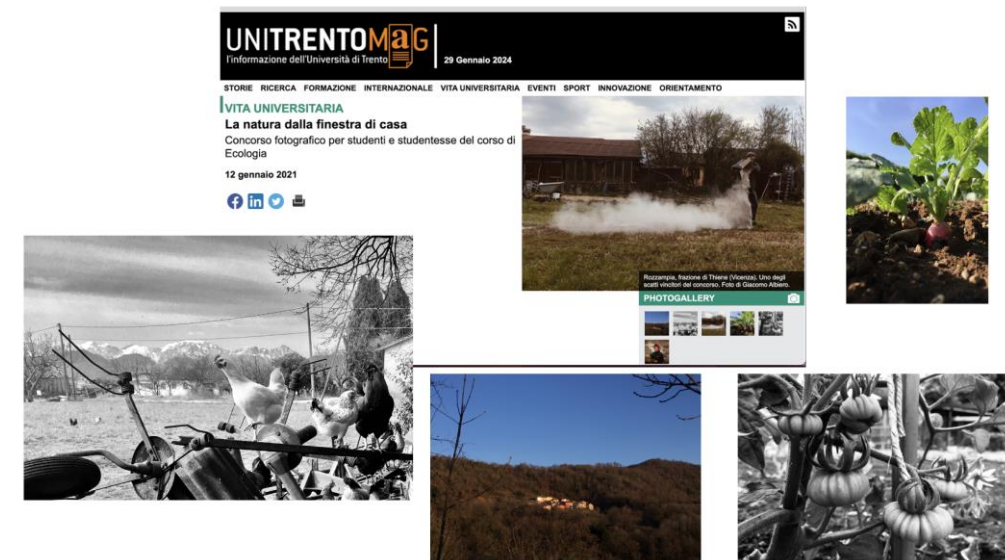


Figure 1. shots of the competition's winning photographs

2.1. Experiences from the academic year 2019–2020

When I suddenly found myself confined to my room, pensively staring at the computer screen, my first concern was how to encourage my students to connect with the natural environment. In normal conditions, an activity, very much appreciated by the students, was what I had called "a hop outside the classroom": short walks in the park surrounding the faculty to observe the phenological aspects of the vegetation, first in winter habitus and gradually with the changes that occur with the onset of spring. This is an excellent exercise for learning to observe. The ability to observe is an important yet often underestimated aptitude, indispensable for understanding phenomena and processes in the surrounding world (Walker, 2019). It must therefore be encouraged, especially in students who will have to deal with environmental problems in their professional future (Cantiani, 2019). I had opted for asynchronous lessons, and continued to enrich the presentations with photographs taken from my personal archive, but it was not enough. Suddenly, an idea struck me; to launch a photography competition entitled "Nature from the window of my house": anyone could look out of the window, or go down into the garden, or walk the 200 meters allowed, in order to document the seasonal transformation of the vegetation or to immortalize meteorological manifestations in the form of an image, such as wandering clouds or stormy skies. The students took up the challenge with enthusiasm and actively participated (in Figure 1, the winning shots and the announcement made by the university magazine).

The desire to involve students more actively and create the conditions for fruitful interaction led me to rethink the possibility of still proposing the seminar on forest management and ecosystem services (which I had initially decided to cancel). I then proposed various activities, to be carried out through group work. Everyone was free to choose depending on their personal interest. I met with the students in small groups, on the platform Zoom, to analyze the work in progress. Finally, the results of the various activities were shown to everyone in plenary meetings.

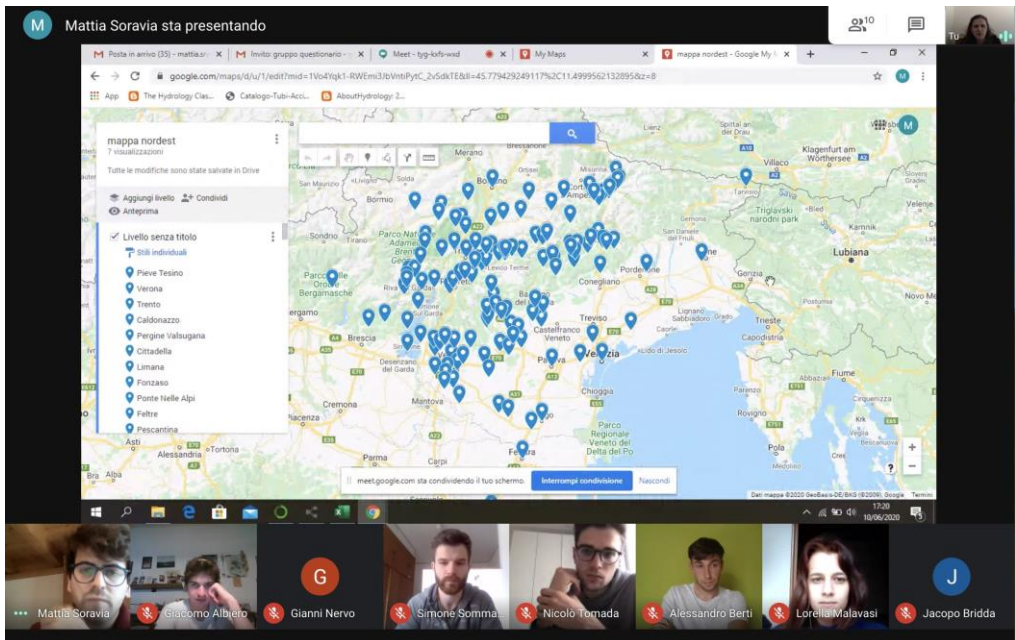


Figure 2. screenshot taken during the final plenary meeting

One of the proposed activities consisted of a survey on the perception of forest management conducted through a questionnaire developed by the students, appropriately guided, and submitted online to relatives and friends. From June 6, 2020, the start date of the survey, to June 14, the final date, 460 people were contacted, with a complete response rate of 86%. The methodological approach and the results of this experiment were described in a publication (Cantiani M.G. & Cantiani P., 2021), publication in which the names and photographs of the students involved can be found (in Figure 2, a screenshot taken during the online final plenary meeting).

Another activity consisted in the creation of a virtual herbarium, made up of the forest species that students are required to learn about at the end of the Ecology course. Each participant chose a species to focus on in relation to their area of residence, took photographs, and described the

geographical characteristics of the location. The herbarium, consisting of a set of cards containing photographs and descriptions of each individual species (see Figure 3) was then made available to all students and is still used today to prepare for the exam.

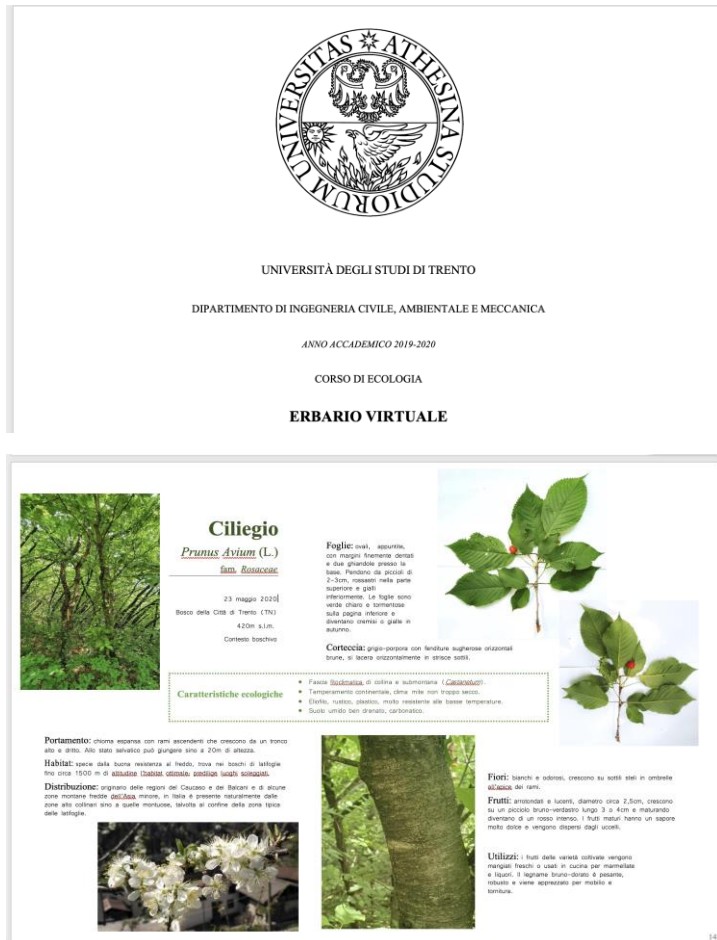


Figure 3. card from the virtual herbarium

2.2. Experiences from the academic year 2020–2021

Finding yourself face-to-face with another person again, despite the impediment of a mask, was wonderful. Blended teaching, nevertheless, posed its own problems; first of all, the risk of "losing" those students who followed lessons from home.

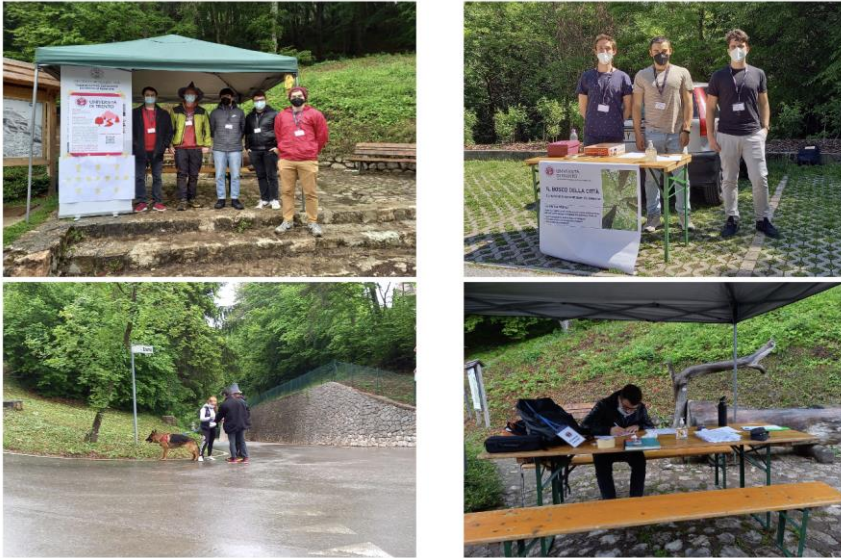


Figure 4. moments during the interviews

I thought it might be useful to get students to reflect on just how important urban green areas and peri-urban forests are, especially to be better able to deal with periods of crisis such as those we were experiencing. Being in contact with Nature has a positive impact on physical and mental health, helping reduce stress and anxiety. (De Meo et al., 2023). But are people aware of this? And how did the use of green areas change at the time of the COVID-19 pandemic in Italy? In order to answer these questions I decided, together with the students, to carry out research through a protocol discussed and developed collaboratively. Those students who followed the lessons from home developed a questionnaire, administering it following the example of the students from the previous year. Those students who attended in person, instead, carried out direct interviews with visitors to some popular forests located around the city of Trento (Figure 4). Talking to people, exchanging opinions with the teacher, discussing matters with peers, trying to untangle the results of the survey, and finally presenting them in plenary sessions was without doubt an excellent exercise, and one that gave the students a new key to understanding the world around them.

2. A few conclusions

The outcomes of these experiences may be considered positive, even if it is not easy to make an objective evaluation. The methodological approach was adopted under the pressure of necessity and urgency and not previously designed. However, some elements allow an assessment to be made: the very positive marks given by students to the course in the annual evaluations, the high number of theses in ecology I was asked to be tutor for and the fact that some of the

initiatives taken during the pandemic, such as the photography competition, are still offered to students today and highly appreciated by them. But perhaps the most important lesson that can be learned from this educational experiment concerns the fact that an empathetic attitude, even in critical situations, can be strongly motivating and promote effective learning.

References

- Atalan, A. (2020). Is the lockdown important to prevent the COVID-19 pandemic? Effects on psychology, environment and economy-perspective. *Annals of Medicine and Surgery*, 56(8), 38-42. <https://doi.org/10.1016/j.amsu.2020.06.010>
- Cantiani, M.G. (2019). How to Teach Ecology to Students of Environmental Engineering. *5th International Conference on Higher Education Advances (HEAd'19)*, 703-710. DOI: <http://dx.doi.org/10.4995/HEAd19.2019.9124>
- Cantiani, M.G. & Cantiani P. (2021). Didattica a distanza e studi forestali. Esperienza necessariamente alternativa alle esercitazioni in bosco. *Sherwood. Foreste ed Alberi oggi*, 251(2), 37-40.
- Davico, C., Ghiggia, A., Marcotulli, D., Ricci, F., Amianto, F. & Vitiello B. (2021). Psychological impact of the COVID-19 pandemic on adults and their children in Italy. *Frontiers in Psychiatry*, 12(3), 572997. doi:10.3389/fpsy.2021.572997
- De Meo, I., Becagli, C., Cantiani, M.G., Casagli, A. & Paletto, A. (2022). Citizens' use of public urban green spaces at the time of the COVID-19 pandemic in Italy. *Urban Forestry & Urban Greening*, 77, 127739. <https://doi.org/10.1016/j.ufug.2022.127739>
- De Meo, I., Alfano A., Cantiani, M.G. & Paletto, A. (2023). The Impact of the COVID-19 Pandemic on Citizens' Attitudes and Behaviors in the Use of Peri-Urban Forests: An Experience from Italy. *Sustainability*, 15, 2852. <https://doi.org/10.3390/su15042852>
- Lugaresi, N. (2023). *Comunità d'aula. Per una didattica gentile e responsabile*. Milano: Ledizioni Ledipublishing
- Uchiyama, Y. & Kohsaka R. (2020). Access and use of green areas during the COVID-19 pandemic: green infrastructure management in the "new normal". *Sustainability*, 12(23), 9842. <https://doi.org/10.3390/su12239842>
- Walker, R. (2019). *The art of noticing*. New York: Alfred A. Knopf
- Wilder-Smith, A. & Freedman, D.O. (2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of Travel Medicine*, 27, 1-4. <https://doi.org/10.1093/jtm/taaa020>