Building distance learning for the Geographic Information Systems

Efthymios - Spyridon Georgiou[a]*

[a] *Freelancer Spatial Planner, Koukaki, Athens, 11741,Greece, efthimios_georgiou@yahoo.gr*

*Efthymios - Spyridon Georgiou

Abstract:

This paper refers to the online learning program in Geographical Information Systems, especially in QGIS. The course is a modern and innovative solution to teach map science. Teaching adult learners is a process a little different from underage pupils and students. The trainees have completed the basic training. They have previous experience. In other words, similar, their educational characteristics and needs are different both as students and as trainees. For a QGIS training program to be successful, flexibility and pluralism to the modern requirements of the trainers an important factors the adaptation. The structuring of a teaching program requires an understanding of pedagogical principles.

For example, the learner needs to encourage and motivate his students. Encouragement contributes to improvement, a spirit of cooperation, to sustainable and enjoyable teaching. The typical way of education is to achieve the expected results. A framework of open thinking, discussion, and individual improvement. For example, a learner needs to show who the correct way is and what the wrong way is.

The purpose of the paper is to show the professional digital environment. The pandemic era is an opportunity for distance learning. The goals are learning the fundamentals of cartography and supporting and encouraging adult learning. Each participant works on relative objects. They need to the point instructions and enjoy their time. Summarize the course's purpose creativity by spending time and learning the software.

 E-learning promotes specific requirements and good teaching practices in various regions in Europe. Firstly, the digital classroom building became the certified adult trainer has the main objects the direct communication via Zoom "https://zoom.us/" and Microsoft teams. The networking contact became via the platform "https://www.instateacher.gr/". The platform is mentioned by important sites and newspapers, for example, "Kathimerini", "CNN GREECE", "Athens Voice", and "In.gr".

Secondly, the methodology by teachers uses the online platform "Instateacher" to create a networking environment. In the end, the program takes the fundamentals of the teaching. The trainees inform about the role and the goals of the learning program. Moreover, the program builds the philosophy around the support, tailored to the requirements of each trainee.

In continuous, the age range is at least 23 years, they are male and women, and the profession is young professional engineers, secondary school teachers, and postgraduate students. The training program's operation is based on the timetable and the expected objectives. Also, the methodology is based on the online connection, which is 1-2 times each week. The teaching had shared the learner's screen and guided the command line and the descriptive and spatial table of QGIS. The benefits and the results have a significant role in personal development.

The central questions that frame the educational program are: What benefits of independent teaching as a certified adult educator? What are the advantages of distance learning? How is it essential to adopt good practices to the requirements of each trained person? The central questions are the compass and the building elements of the teaching program. Typically, with suitable methods and techniques, it is significant that the course is pleasant and creative and that the learner feels that he is spending time and money feeling good with his choice.

The methodology teaching has the following steps: The creation of maps, with the function of printing. Understanding the commands, the main menu, the descriptive and spatial table, and the layers are also. The first stage is to introduce or

create the shapefiles. The two main types of shapefiles are the vector and raster datasets. Vector data is classified into three main categories points, lines, and polygons. Each point has its symbolism and its meaning. For example, perhaps the population of random cities is needed, and we will have signs as symbolism. The size of each point increases depending on the number of citizens.

Also, the significant reference is the level of coordinates, which shows the (X, Y) of each country or region and even the global coordinate system. There is a relation with the data we choose the corresponding that needs to have better accuracy. Also, for coloring, we distinguish the most presentable and approximate in realistic reality. The creation of labels, insertion of new fields in the attribute table, editing, plug-in, export image, and pdf are some principles that the trainee needs to know. In the second phase, there is the function of printing, which present the final map. The scale is in the form of a bar and the words. The main objects are a symbol of the North, the orientation, the coordinate system, an image of the region, the legend, the title, and the manufacturer, purpose to become presentable and innovative.

The final map is significant to be understood by a large audience, simple and clear to the information. The science of cartography is a complex field of knowledge. The trainee's knowledge is classified into two categories at the cognitive and technical levels. For example, for a map of the change in the urban fabric, the trainees need to understand the symbology and color depiction and the varied and different levels of spatial and descriptive tables. In this way, a presentable, attractive map description affects the audience.

The results are creating maps, exporting images, learning commands, finding secondary data, and making raw data. Finally, the results are the creation of applications. The teacher was asking for an Online assessment after the end of the tutorial.

References

Official Website, https://www.instateacher.gr/ [last accessed: 31/5/2022]

Official Website, https://zoom.us/ [last accessed: 31/5/2022]

Official Website, https://www.qgistutorials.com/en/ [last accessed: 1/6/2022]

Certificated from University Aegean, "Training and Lifelong Learning Center", Adult Instructor Training: number 286

Certificated from ESRI Training MOOC Going Places with Spatial Analysis, 6 Weeks

Certificated from ESRI Training Going Places with Spatial Analysis View Description, April 13 to May 25, 2022